LIVING PROGRESS REPORT

2019

Hewlett Packard Enterprise

A MESSAGE FROM OUR CEO

In our world of rapid change and mounting global challenges, the role and responsibility of a corporation have never been more important. Global leaders are asking themselves what their organizations can do to guide society toward a more sustainable future. It's a particularly critical time for technology companies; innovation has the potential to solve society's toughest challenges and to improve lives at scale.

A MESSAGE FROM OUR CEO

It's humbling to consider the social and environmental challenges that lie ahead. As I write this message, the most pressing issue we face globally is the COVID-19 pandemic. While the full impact of COVID-19 is still unknown, we have established a framework to **assess** the ongoing developments and their potential impacts; to **address** our business operations and the needs of our people; and to **adapt** our technologies and approaches to help organizations around the world navigate through the difficulty. Against this framework, our priorities are clear: to protect our team members; to innovate for our customers; and to rise to the challenge of supporting our communities. We are proud to be called upon to help address this global crisis, from enabling medical clinics to supporting telework and remote education to powering scientific research.

Meanwhile, we must not lose sight of mounting global risks such as climate change, cyberattacks, food security, and more.

Despite the challenges that lie ahead, I am optimistic. I see the transformative power of technology at work every day. The explosion of data from the edge is reshaping markets, disrupting every industry, and advancing the way we live and work. I view data as the great untapped resource, the new currency, capable of revealing new solutions and creating new sources of prosperity.

HPE is at the center of unlocking the potential of data, helping our customers develop the solutions that grow their businesses and take society a step closer to a sustainable future. We call this the new digital frontier, and I am proud that HPE has a central role in delivering its potential.

As CEO, I have three key priorities—culture; customers; and innovation.

CULTURE

As many companies are discovering, particularly during this challenging time, our team members are HPE's greatest asset. My team and I have been obsessively focused on engaging team members and establishing an ongoing and robust dialogue with them. Our most recent employee engagement scores are up 18% year-over-year. I attribute this to deliberate actions we have taken to enhance the appeal of HPE as a long-term career employer in a highly-competitive market for talent.

We remain committed to attracting, retaining, and advancing diverse talent through our unconditionally inclusive culture. Notably, we now offer one of the most generous parental leave programs in our industry—six months of paid parental leave after the birth or adoption of a child. I'm proud that we are demonstrating that great workplaces value family and home life; however, it's not just pay and benefits that motivate our team members and attract the best in our industry. It's also the opportunity to be part of significant, purpose-driven work. HPE teams are transforming the world with their inventions and powering our customers' efforts to solve major human and environmental challenges.

What could be more rewarding than helping a customer cure a serious disease, or transform its factory to eliminate waste?

To help win the war for talent in tech, we are combining our people-first approach with exciting work opportunities that accelerate social impact to make HPE a standout place for talented individuals to build careers.

CUSTOMERS

We are a customer-focused business, designing our products and services to empower our customers to operate sustainably and efficiently, gaining maximum productivity from their IT investments.

This year, we announced HPE's plan to become the world's leading edge-to-cloud platform-as-a-service company by 2022, which will deliver big benefits for our customers. Our entire portfolio will be available through a range of subscription-based offerings which can be managed as a service. This is financially and environmentally efficient, eliminating the wasted infrastructure and processing capacity inherent in most customer-owned IT portfolios.

Our customers need to handle more data than ever before and be free to deliver insights from the explosion of data. This requires fresh thinking about how we store, protect, and process information. For example, our cutting-edge data center services are saving 25,000 metric tons of carbon emissions and $10 million in energy costs annually for an electronics manufacturer in South Korea. And our industry-leading secure servers helped a U.S.-based healthcare company recover from a significant data breach and protect itself from future threats.

Our sustainability capabilities are a strategic differentiator in customer relationships, helping our customers to achieve their business and sustainability goals simultaneously. We estimate that customer engagements with our growing sustainability organization resulted in approximately $585 million in net revenue this year.

A MESSAGE FROM OUR CEO

INNOVATION

In the new digital frontier, data is mined as a resource, and we are deeply engaged in helping our customers across many business sectors tap this potential to advance sustainability. Our acquisition strategy focuses on highly innovative companies in this field. For example, our 2019 acquisition of global supercomputing leader Cray puts us in a leading position to serve the high-performance computing market and its fast-growing exascale segment. We also acquired MapR, enabling HPE to offer a complete portfolio of products to drive artificial intelligence and analytics applications.

Designed with Memory-Driven Computing principles, HPE Superdome Flex is enabling a German data analysis company to handle the massive genomic datasets needed to develop more productive food crops. These innovations will be critical to increasing crop yields, which are a central challenge for future sustainable food production.

In modern manufacturing, downtime is often due to complex machinery failures. But what if a factory could self-improve, diagnosing its own faults before they become critical? A customer reached out to us to develop a machine learning solution for its factory to predict failures before product quality was impacted. The system we co-created analyzes data from 15 million product images a day to avoid shutdowns and wasted product.

These are just a few of the ways we are putting data to work to improve processes, transform efficiency, and reduce environmental impact. I am tremendously proud of our proven success delivering on our purpose to advance the way people live and work. I am honored to be part of a Board of Directors which is not only diverse in ethnicity, gender, and thought, but which also understands the importance of long-term value creation. As we transform our business to become the edge-to-cloud platform-as-a-service company, we will keep sustainability and purpose at the heart of our business strategy to guide our long-term success.

Regards,

Antonio Neri
President and Chief Executive Officer

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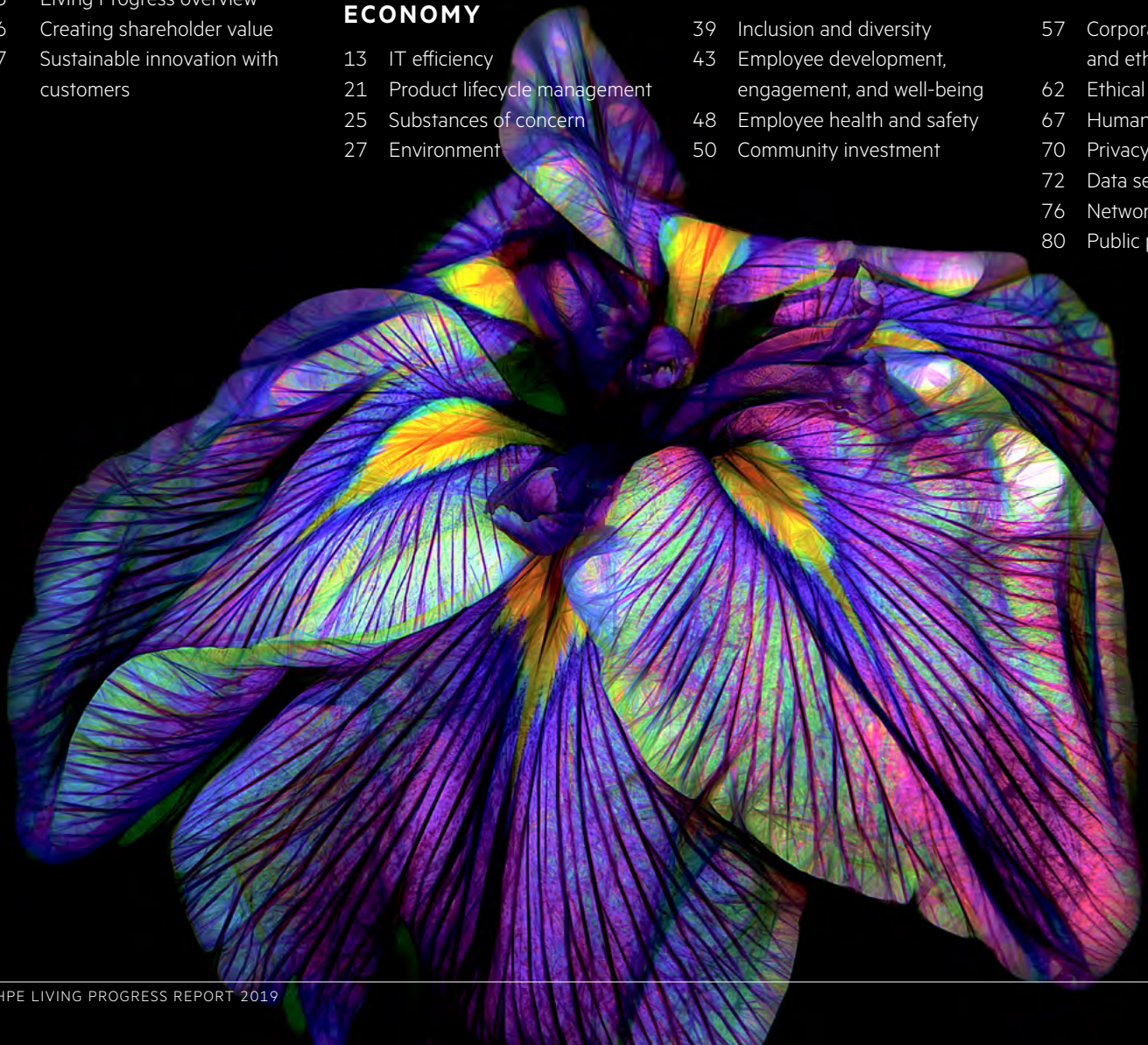


Complete 2019 data and statement of assurance can be found in the 2019 Data Summary

LIVING PROGRESS OVERVIEW

A NEW DIGITAL FRONTIER

The explosion of built-in intelligence, hyper-connectivity, and data from the edge is reshaping markets, disrupting every industry, and transforming how we live and work.

Almost anything humanity does can be made more efficient by harnessing technology. Answers to some of society's most pressing challenges across medicine, climate change, space, and more are buried in massive pools of data. HPE unlocks this potential for our customers—this is the promise of the new digital frontier.

Like oil, gas, and minerals, the extraction of data requires energy. In fact, Information and Communications Technology (ICT) already consumes nearly 10% of electricity[1] globally. We realize that current IT is not capable of serving a world where increasingly everything computes.

Organizations are looking for the fastest, most efficient way to maximize the value extracted from the global data resource, making sustainable IT decisions increasingly vital.

By developing a sustainable IT strategy, organizations can lower the environmental impact of IT infrastructure, while addressing aspects of social responsibility such as human rights and responsible manufacturing of IT products.

HPE'S TRANSITION TO AN AS-A-SERVICE BUSINESS MODEL

Focusing on customer challenges and outcomes, while eliminating redundant IT capacity, is at the core of HPE's transition into an as-a-service company by 2022. This means we will offer our entire portfolio through a range of subscription-based, pay-per-use, and managed IT-as-a-service offerings.

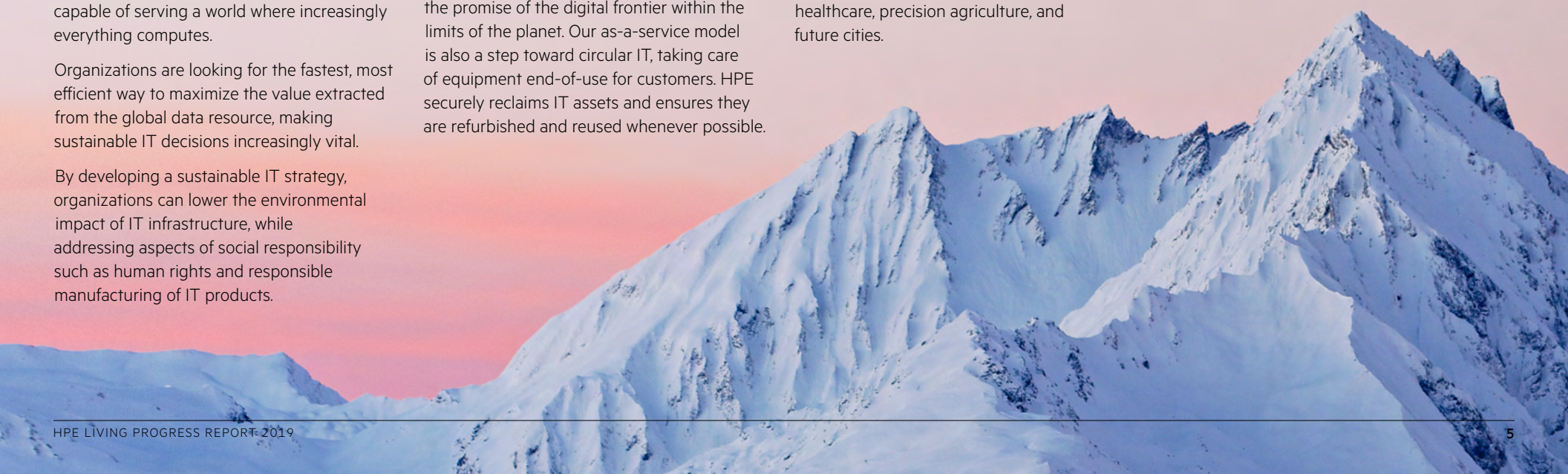
Traditionally, many customer-owned IT systems are significantly underutilized, with spare data storage and processing capacity. This is financially and environmentally inefficient. Our as-a-service model means our customers use only the capacity they need. Matching capacity to demand reduces the environmental impact of their IT—a step toward achieving the promise of the digital frontier within the limits of the planet. Our as-a-service model is also a step toward circular IT, taking care of equipment end-of-use for customers. HPE securely reclaims IT assets and ensures they are refurbished and reused whenever possible.

LIVING PROGRESS

Our 60,000-strong workforce is rallied around an enduring purpose—to advance the way people live and work.

Living Progress is our plan to apply the innovation engine of HPE to create sustainable IT solutions that meet the technology demands of the future. Our commitment to environmental, social, and governance (ESG) performance is integrated into our business strategy. ESG increases our competitiveness and resilience, differentiating us in the marketplace by helping customers achieve their financial and sustainability goals.

We are also partnering with customers to apply our technologies to create new market opportunities and reimagine mega-sectors including industrial intelligence, global healthcare, precision agriculture, and future cities.



CREATING SHAREHOLDER VALUE

BUSINESS BENEFITS OF SUSTAINABILITY

Our sustainability program has a demonstrably positive effect on our bottom line: we win business and attract investment by demonstrating the benefits of sustainability and of HPE's leadership to our customers and investors. Our sustainability credentials strengthen customer relationships and provide an advantage in new business tenders. We also leverage our reputation to support talent acquisition and retention, and to ensure ongoing access to global markets.

Building customer relationships

We continue to invest in new ways to connect with our current and potential customers on sustainability. Customers are often not fully aware of the synergy between optimizing their IT solutions and simultaneously achieving their business and sustainability goals. Our sustainability engagement technologists in Asia, Europe, and North America demonstrate how our IT efficiency and circularity capabilities benefit their operations, deliver cost savings, and overcome their business challenges.

The level of interest in sustainability from private and public sectors continues to increase, with more than 1,200 inquiries received by HPE per year. In addition, in 2019, our sustainability engagement included 102 one-to-one customer meetings, and 67 multi-customer forums with customers representing $3.2 billion in revenue.

We estimate that these engagements helped drive approximately $585 million in net revenue, an increase of 88% over the previous year.

"Rather than just sending our products to a recycling facility, utilizing HPE Asset Upcycling Services enables us to extend the life of our assets. This is critical for meeting our sustainability goals and reaffirms our commitment to be good global citizens."

RENEE CORDOVA LOTTES,
CIO PLATFORM MANAGEMENT, STRATEGIC INITIATIVES LEAD, ACCENTURE

Attracting investment

We work hard to attract investors who are motivated by environmental, social, and governance (ESG) performance. HPE aims to be fully transparent in meeting investor requests for ESG information. Since investors' detailed information specifications differ, we prioritize the ESG rating organizations and reporting standards that influence the largest investments and are most respected in their field.

Focusing on the top 12 organizations, we systematically assess feedback from investors and ranking organizations, aiming to improve our scores year-over-year. HPE is included in the following rankings in 2019:

- Dow Jones Sustainability World Index (DJSI): eight consecutive years; sector leader in 2019 (100th percentile)
- Sustainalytics: 80/100 score (96th percentile)[2]
- CDP Climate A List: seven consecutive years (98th percentile)
- MSCI ESG: AA ranking (89th percentile)[3]
- EcoVadis: Gold level recognition (99th percentile)
- FTSE4Good Index Series: fourth consecutive year

MEMBER OF Dow Jones Sustainability Indices In Collaboration with RobecoSAM

SUSTAINALYTICS

CDP A LIST 2019 CLIMATE

MSCI ESG RATINGS AA (CCC B BB BBB A AA AAA)

GOLD 2019 ecovadis CSR Rating

FTSE4Good

SUSTAINABLE INNOVATION WITH CUSTOMERS

HPE empowers our customers to grow their businesses and meet society's need for sustainable solutions. Organizations that tap the potential of new data resources for the good of society—finding cures for disease, engineering low-carbon industry, or multiplying access to public services—will be the winners in the new sustainable economy.

At the same time, we achieve these leaps in performance at a lower cost and with reduced environmental impact from IT.

ULTRA-LOW CARBON, LOW-COST DATA CENTERS

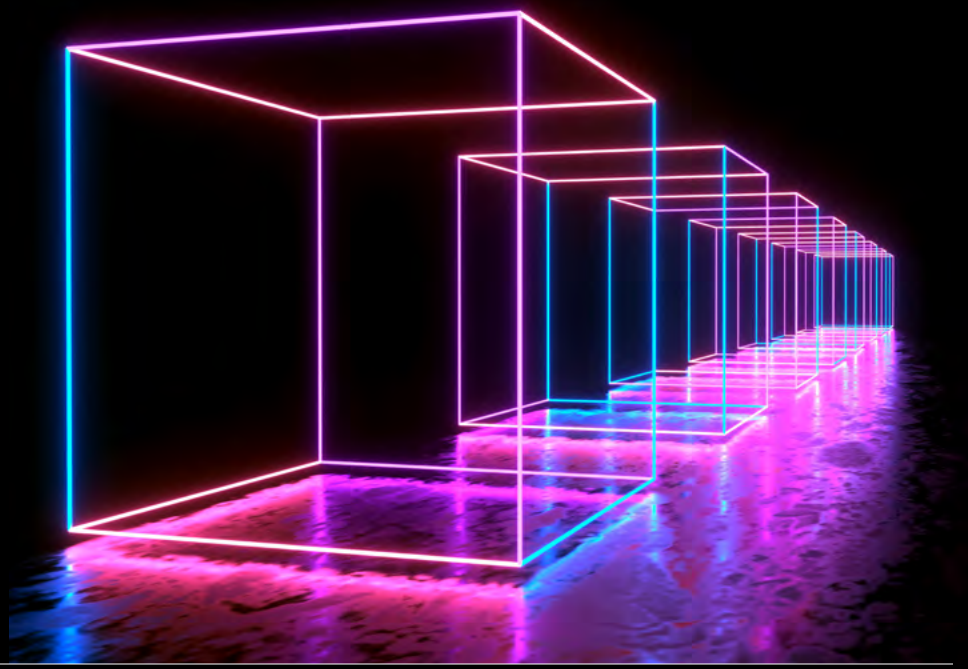
Customer needs

A major Asian electronics company required state-of-the-art energy efficiency attributes to be designed into its new mega supercomputing data center. Our customer's specification included minimizing energy and water use, and reducing their carbon footprint, without compromising the performance required for their intensive research and development data-simulation needs.

HPE solution

HPE's design featured cutting-edge technology to deliver a power usage effectiveness (PUE) of 1.15, 25% lower than comparable facilities. The ultra-low PUE was achieved by implementing significant free cooling during the colder months of the year, with conventional power supply minimized.

Compared to a traditional data center, this design will result in an annual site reduction of 25,000 metric tons of carbon emissions, 400 million gallons of water at the source, and $10 million in site energy costs.



ACCELERATED CROP YIELDS TO MEET GLOBAL FOOD DEMAND

Customer needs

Meeting the world's need for food production will require a significant increase in crop yields over current levels. The twin challenges of population growth and climate change make this a pressing sustainability issue.

Traditional plant breeding has long been used to improve crop yield and resilience, but is a slow and imprecise science. Now, German IT data analysis company Computomics is applying genomics science to help plant breeders accelerate plant development. To achieve this, Computomics needs a high-powered data analysis system, at a cost affordable to their agri-business customers.

HPE solution

HPE's innovative solution to the technical and cost challenge was a HPE Superdome Flex Server. HPE Superdome Flex allows multiple servers to be connected as one, delivering the terabytes of memory needed at an affordable price. Computomics can now assemble the massive data sets needed and provide unique genomic data insights to their clients.

Our partnership with Computomics is just one example of our Tech Impact 2030 initiative, launched in collaboration with the World Economic Forum in June 2018. Tech Impact brings together industry, technology, academia, and government to solve key societal challenges, focusing on agriculture and healthcare.

INTELLIGENT FACTORIES ELIMINATE THEIR OWN WASTE

Customer needs

Since the dawn of the industrial revolution, engineers have been improving factory efficiency, reducing waste, and optimizing product quality. But what if a factory could self-improve? HPE customer Seagate Technology, a global leader providing data storage and management solutions, reached out for technical support with building a factory that fine-tunes itself, avoiding downtime and waste due to defective products.

HPE solution

HPE pulled together a wide range of resources to enable Seagate to optimize manufacturing using converged edge systems and artificial intelligence (AI) analytics. The system co-created by Seagate and HPE analyzes 15 million product images per day, employing edge technology to interpret the data in real-time and identify quality imperfections before they become quality failures. This machine learning capability automatically adjusts manufacturing processes to correct functions that are going out of specification. Fixing problems before they manifest is the key to avoiding costly plant shutdowns and wasted product thanks to preventing quality issues.

KEEPING CUSTOMERS SAFE FROM DATA HACKERS AND CYBERCRIMINALS

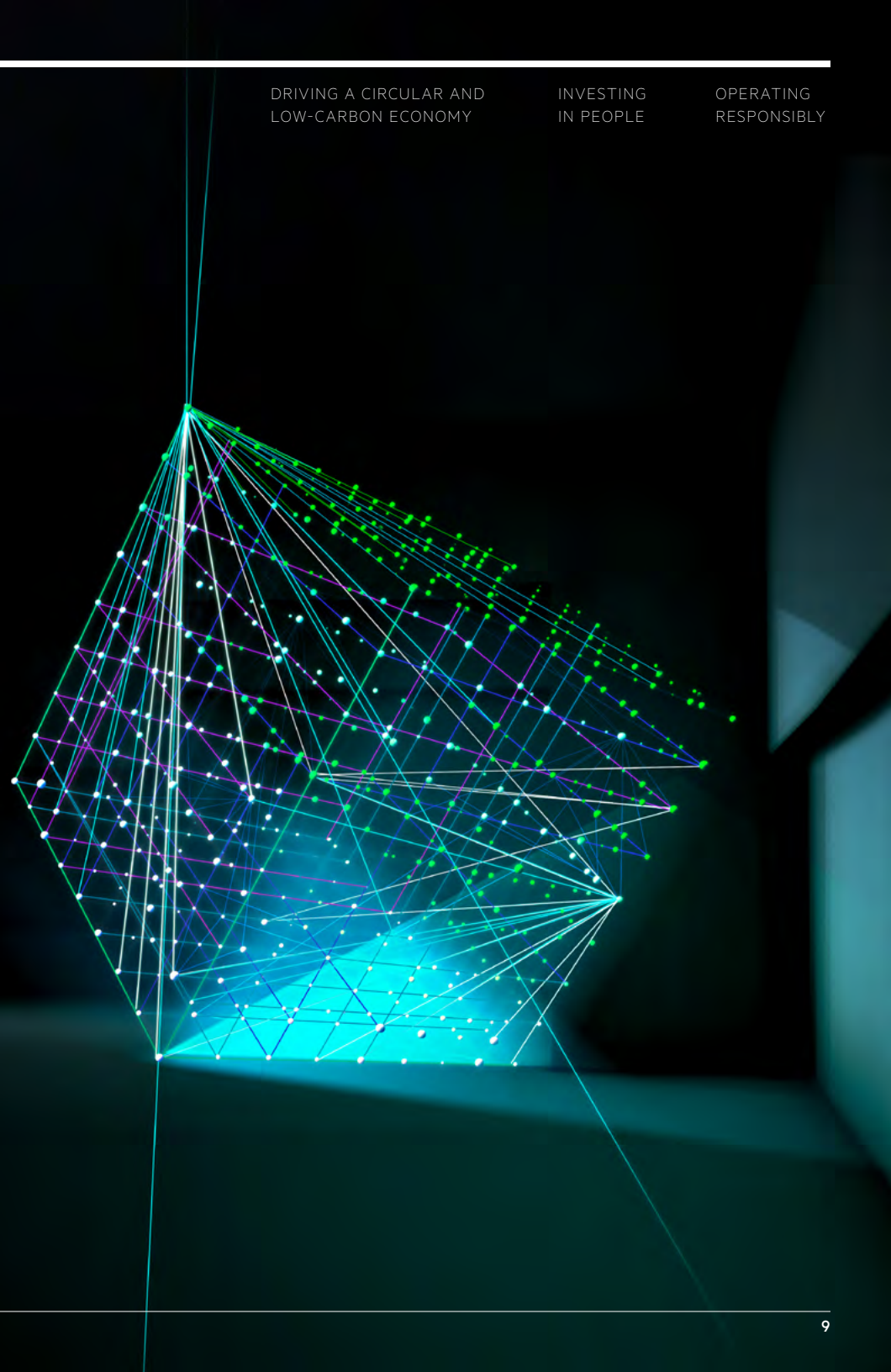
Customer needs

A large healthcare provider experienced a ransomware attack that incapacitated 80% of its IT function within a matter of hours, infecting their data center and end-user equipment. To enable urgent business recovery, the company needed to rapidly replace its entire IT architecture with new, secure technology.

HPE solution

The healthcare company turned to HPE in its time of need to restore its ability to serve patients, recover its reputation, and most importantly, prevent a recurrence. HPE installed the latest ProLiant Gen10 servers, which feature state-of-the-art cybersecurity protection/detection capabilities. This healthcare company's data center is now powered completely by HPE server equipment.

Better protected, the company was able to reassure its customers and its cybersecurity insurer that their systems were secure. In sharing their experience, they strongly recommended other companies to implement state-of-the-art cybersecurity technology and training before a damaging attack.



EXTENDING THE LIFE OF IT EQUIPMENT FOR A CIRCULAR ECONOMY

Customer needs

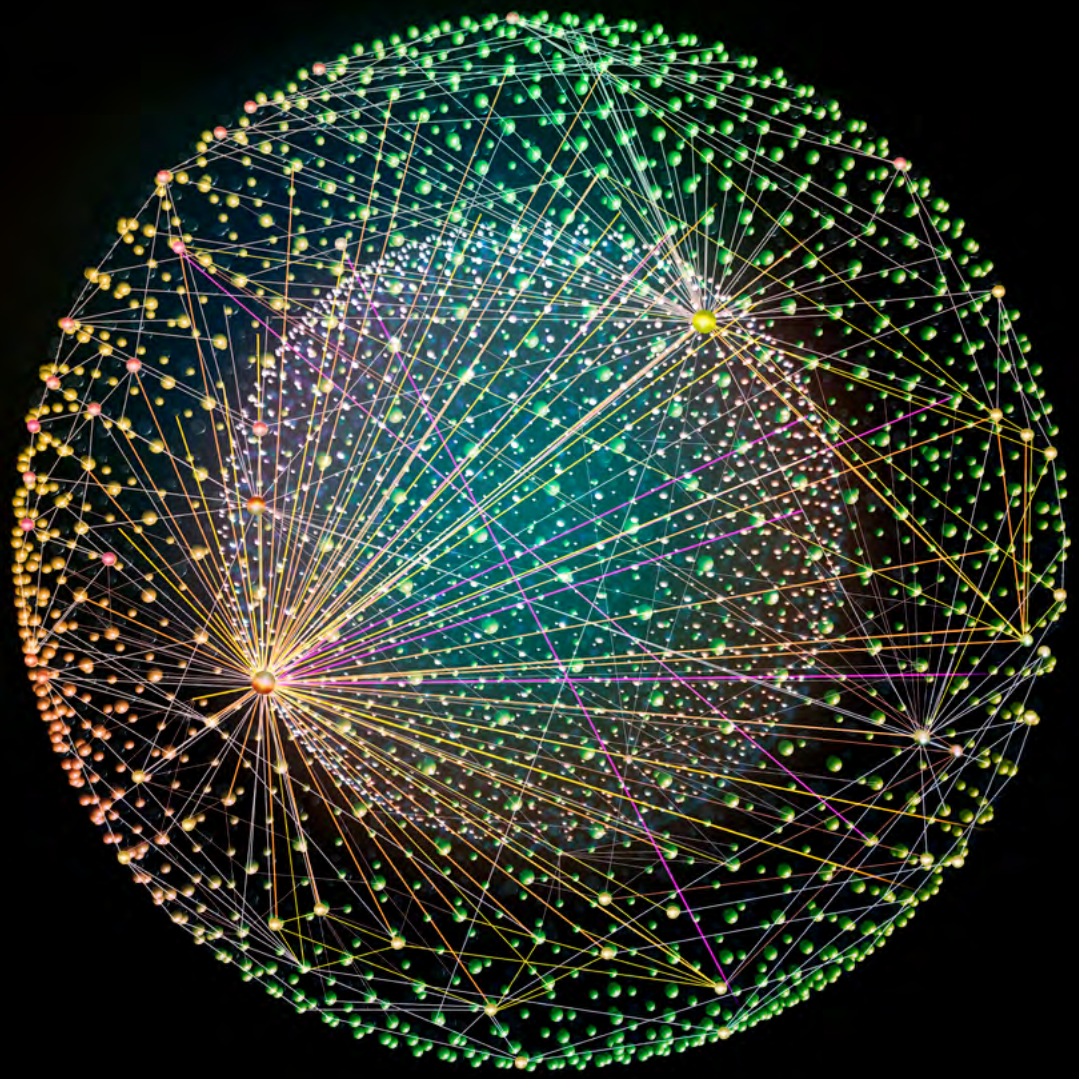
The Council of the London Borough of Enfield in North London, UK, prioritizes sustainability across its local government operations, including IT. As part of ongoing upgrades to its IT architecture, the council needed a circular environmental solution complete with data security for their end-of-life IT equipment.

HPE solution

Working with UK reseller and recycling partner XMA, HPE provided a solution that not only solved the customer's immediate need but also provided extra funds for the Council.

XMA teamed with HPE Financial Services to provide a circular economy approach to Enfield's challenge by employing HPE Asset Upcycling Services. HPE Financial Services takes out the existing hardware, securely removes data, then expertly refurbishes the equipment at our Technology Renewal Center in Scotland, and returns it to market. This minimizes e-waste from the customer's IT function and returns value from the sale to the council.

This circular economy approach has become an opportunity and differentiator for XMA as well, helping secure business pursuits by showing IT departments how they can contribute to corporate sustainability goals while solving dilemmas around end-of-use equipment.



01
DRIVING A CIRCULAR AND LOW-CARBON ECONOMY

We are developing transformative solutions that enable our customers to reap the benefits of growing connectivity while lowering costs and minimizing the environmental footprint of IT. HPE considers the complete lifecycle of our products and solutions, from shifting toward the use of renewable energy and reducing resource extraction, to fighting energy and IT waste through innovative solutions and business models. Together with our customers, we unlock the power of data to solve environmental challenges.

IN THIS SECTION

IT efficiency

Product lifecycle management

Substances of concern

Environment

IT EFFICIENCY

HPE technology is setting records for performance while delivering an ever-lower carbon footprint. Our new technology solutions give our customers an advantage over competitors and dramatically reduce the environmental impact of their IT.

OUR RELENTLESS PURSUIT OF IT EFFICIENCY

The global growth of the internet is coupled with increasing carbon emissions and environmental impact—a reality the IT sector must face. Innovative technologies are disrupting this trend, allowing the digital economy to thrive, while minimizing negative impacts. HPE is seizing the sustainability opportunity by developing solutions that optimize customer operations, while simultaneously pioneering novel, ultra-efficient compute technologies.

As the corporate sector takes action to reduce its climate and resource impacts, the growing demand for low-carbon products is an increasing focus for HPE sales and innovation. We support our customers with high-performance, energy-efficient IT. In doing so, we reduce the environmental impact of our products and services, which represents more than two-thirds of our global carbon footprint.

In 2019, efficient IT products and services represented nearly $7.7 billion in revenue at HPE.

In 2019, efficient IT products and services[4] represented nearly $7.7 billion in revenue at HPE, enabling our customers to compute at the highest levels while exhausting the least amount of resources possible. We approach efficient IT using the following framework:

- **Energy efficiency**—delivering an optimum level of power, storage, and connectivity with the lowest input of energy possible, spearheaded by our Design for the Environment (DfE) program
- **Equipment efficiency**—maximizing IT processing power and storage capabilities with fewer IT assets
- **Resource efficiency**—engineering products to work efficiently within data centers while requiring the least amount of support equipment and staff for power conversion, cooling, and resiliency

In addition, we minimize environmental impacts across the product lifecycle through our circular IT programs, reducing total cost of ownership for our customers.

Optimizing IT with HPE GreenLake

By 2022, HPE will offer its entire portfolio as a service with a range of subscription, pay-per-use, and consumption-driven technology offerings. Our as-a-service model benefits customers by providing access to best-in-class technology while managing and optimizing their entire IT estate. Providing infrastructure as a service has the potential to reduce the environmental impact of IT by cutting the amount of IT equipment needed, as well as the resources required to power and cool equipment. This potential is further magnified when offering efficient IT solutions, such as composable infrastructure, through a consumption-based model.

HPE offers hybrid cloud solutions as a service through HPE GreenLake, which provides infrastructure, workloads, and hybrid cloud services with the added benefits of metering, monitoring, and capacity management. It brings existing equipment to the highest levels of utilization and helps customers avoid the costs and depreciation of idling equipment. Many companies struggle with on-premises capacity planning, with 67% overinvesting in storage.[5] With HPE GreenLake, we help customers right-size and optimize their IT, enabling them to accomplish more while realizing economic and environmental savings. HPE GreenLake customers benefit from 30% capital expenditure savings, on average, by eliminating the need for overprovisioning.[6]

Launching in 2020, HPE GreenLake Central is our advanced software platform that empowers customers to manage their entire hybrid estate as a service with a single control plane. This lowers costs and risks while providing greater efficiency and control.

Investing in Breakthrough Technology

In 2019, HPE invested $1.8 billion in research and development. Our innovation roadmap includes breakthrough technology to dramatically expand computing capacity without increasing power consumption, building on a long history of innovation in low carbon technologies.

Hewlett Packard Labs researchers aim to disrupt the industry with alternative technologies including photonics, exascale, and Memory-Driven Computing. Through photonics, our engineers are designing new circuits that process information using light instead of electrical charges. The next frontier in high-performance computing is exascale—computing a billion billion calculations per second. To reach exascale, we need to move more data using less energy. To solve this problem, we are developing Memory-Driven Computing, a revolutionary new architecture that is built around memory rather than processors and solves problems thousands of times faster than a conventional computer. Once realized, these innovations will dramatically accelerate processing while using less energy than current compute technologies.

Beyond these breakthrough technologies, the rise of edge computing will drive efficiencies as customers process data where it is generated, rather than in data centers. Computing at the edge reduces internet bandwidth usage and eliminates the energy-consumptive process of transporting data. In 2018, HPE announced we would invest $4 billion in edge technologies and services over the next four years.

HPE shares our expertise to advance computing. Our research and development work to accelerate energy-efficient supercomputing has garnered several awards, including the 2019 NASA Exceptional Technology Achievement Medal, which was awarded to HPE Chief Technology Officer, Artificial Intelligence, Dr. Eng Lim Goh for his experimental work with servers aboard the International Space Station. In addition, HPE Fellow and Chief Architect at Hewlett Packard Labs Kirk Bresniker represents HPE on the World Economic Forum Global Future Council on Quantum Computing, a group of experts focused on how technology can transform industry and benefit society.

$1.8B
IN R&D INVESTMENT

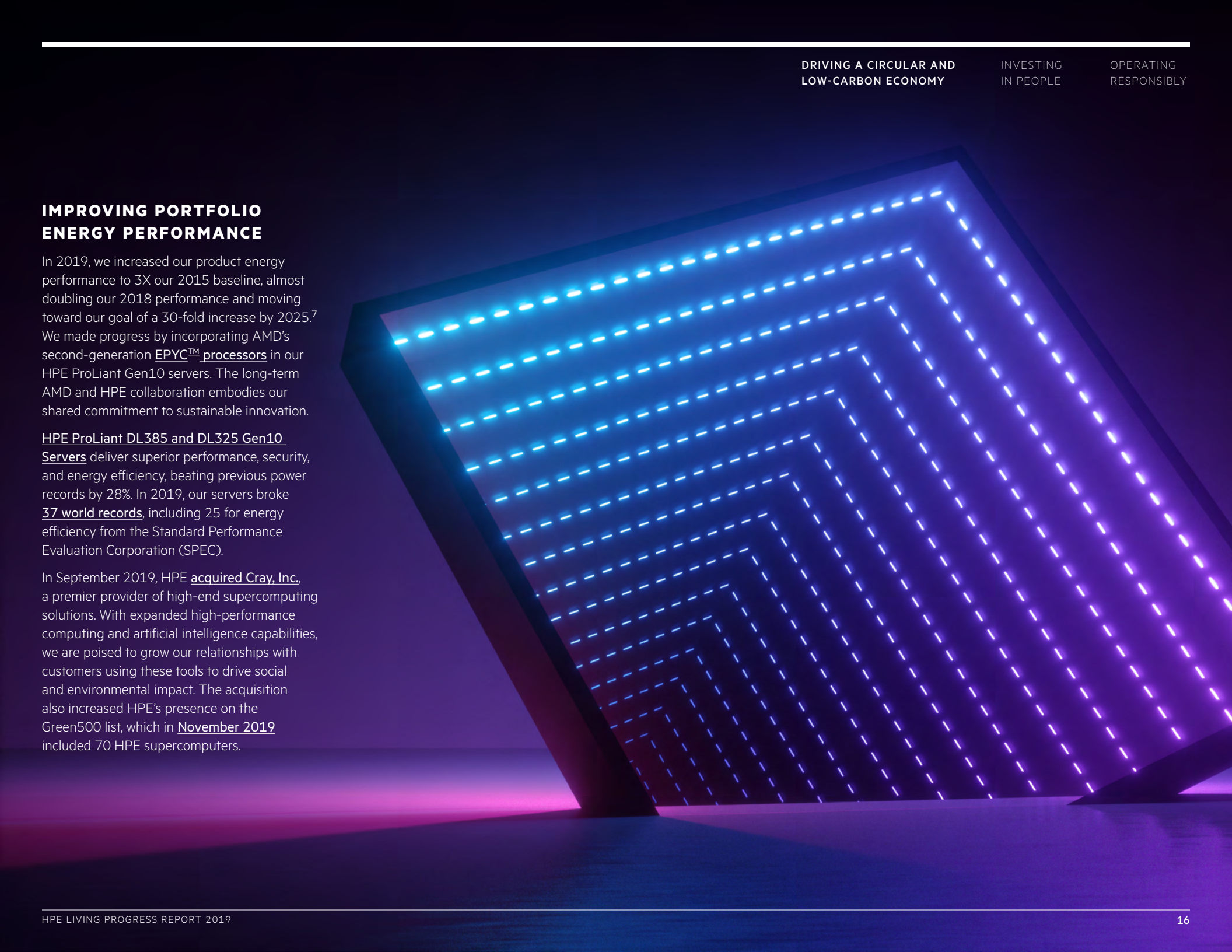
$4B
IN EDGE TECHNOLOGIES

IMPROVING PORTFOLIO ENERGY PERFORMANCE

In 2019, we increased our product energy performance to 3X our 2015 baseline, almost doubling our 2018 performance and moving toward our goal of a 30-fold increase by 2025.[7] We made progress by incorporating AMD's second-generation EPYC™ processors in our HPE ProLiant Gen10 servers. The long-term AMD and HPE collaboration embodies our shared commitment to sustainable innovation.

HPE ProLiant DL385 and DL325 Gen10 Servers deliver superior performance, security, and energy efficiency, beating previous power records by 28%. In 2019, our servers broke 37 world records, including 25 for energy efficiency from the Standard Performance Evaluation Corporation (SPEC).

In September 2019, HPE acquired Cray, Inc., a premier provider of high-end supercomputing solutions. With expanded high-performance computing and artificial intelligence capabilities, we are poised to grow our relationships with customers using these tools to drive social and environmental impact. The acquisition also increased HPE's presence on the Green500 list, which in November 2019 included 70 HPE supercomputers.



ACCELERATING DISCOVERY AT THE NOTRE DAME CENTER FOR RESEARCH COMPUTING

University of Notre Dame researchers make world-changing discoveries at the multidisciplinary Center for Research Computing (CRC). The Center's technology infrastructure runs computational simulations for academics advancing the fields of climate change, cancer research, and other critical issues. At the end of 2018, the CRC installed HPE ProLiant DL385 Gen10 Servers with AMD EPYC processors, giving the center a 25% to 50% performance boost through increased memory capacity, bandwidth, and processor cores. With the solution in place, Notre Dame researchers can collect and analyze larger sets of data faster than ever before.

CASE STUDY

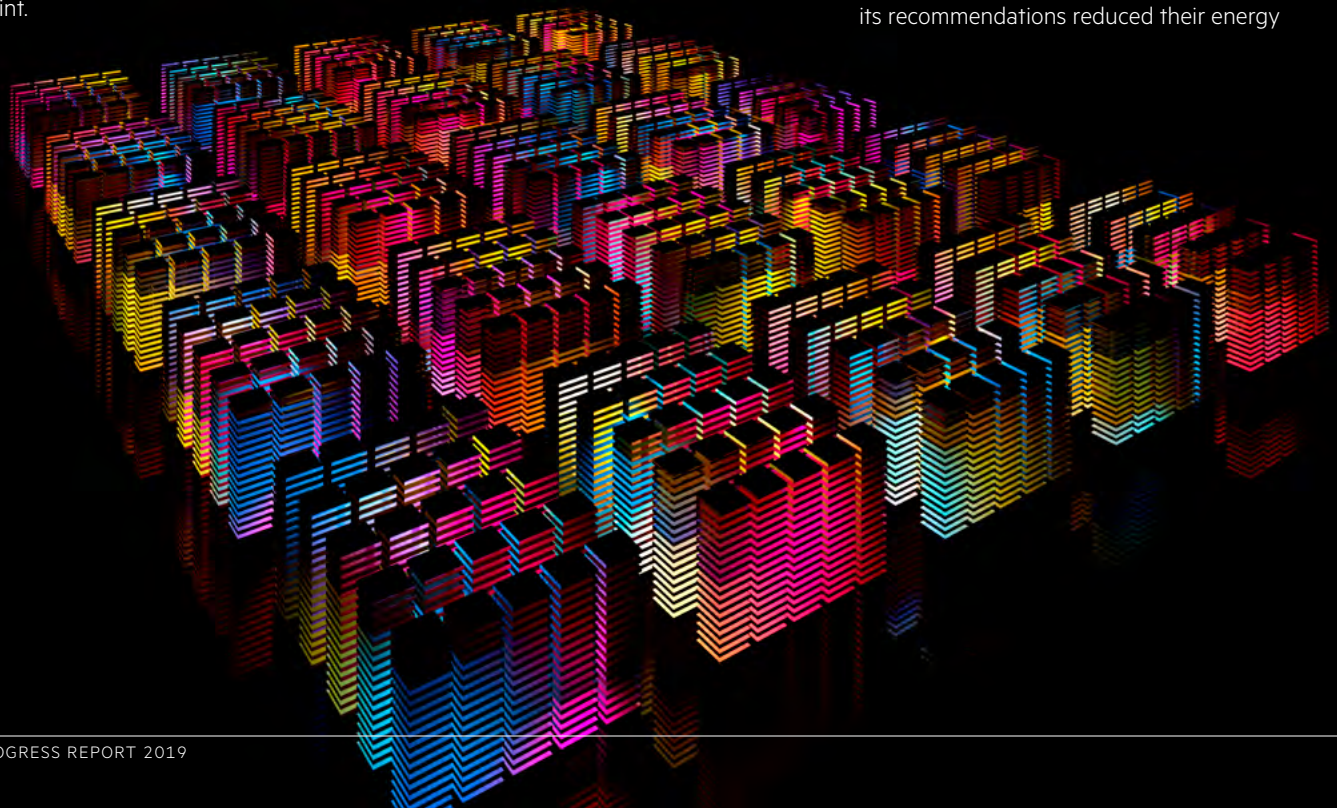
SHRINKING DATA CENTER FOOTPRINTS

Data centers are the infrastructure behind the internet, which doubles in size every two years. As the digital universe expands, so do the physical and environmental footprints of the world's energy- and resource-consuming data centers. After significant initial improvement, the industry average power usage effectiveness (PUE) of data centers has stalled. By implementing more efficient data center technologies, companies can improve performance, save space, and most importantly, reverse the trend of an ever-increasing IT carbon footprint.

In 2019, we introduced HPE Primera with HPE InfoSight. This new platform combines superior storage hardware with artificial intelligence to optimize data center performance and drive operational efficiency. With Timeless Storage for HPE Primera, customers can keep on-premises storage architecture up-to-date through periodic, non-disruptive technology refreshes, extending the life of storage hardware, offering a more predictable cost structure, and lowering the total cost of ownership.

Beyond our products and services, we advocate for industry-wide improvements in data center efficiency and measurement of sustainability objectives. In 2019, HPE partnered with digitalswitzerland, companies, academia, and the Swiss government to launch a first-of-its-kind data center efficiency label. The Swiss Data Center Efficiency Label applies an advanced calculation methodology to provide a holistic view of energy use. It includes all sources of energy supply, consumption, and reuse. The label is designed to decarbonize data centers by helping operators reduce their energy consumption. In 10 pilot cases, data centers that adopted the label and its recommendations reduced their energy between 50 to 70%, with five of the pilot users employing carbon-neutral energy sources.

The label will evolve in step with technology to account for the full impact of digital infrastructure. Given that 75% of enterprise data will be processed outside of centralized data centers by 2025,[8] the Swiss Data Center Efficiency Label will also consider ICT infrastructures at the edge going forward.



CUTTING TELECOM'S FOOTPRINT IN THE MIDDLE EAST

HPE secured a three-year contract with a large telecommunications leader in the Middle East to assess the operations and maintenance of their 274 data centers and technical offices. In 2019, we initiated the project, which will include developing facility energy-use profiles, evaluating key performance indicators, and documenting guidelines for electrical, mechanical, and air management. Additionally, HPE will conduct in-person workshops to train staff, ensuring best practices are translated into action. This data center-as-a-service project is expected to produce multi-million-dollar energy savings and reduce emissions by hundreds of thousands of metric tons compared to the base case.

CASE STUDY

TRANSFORMING IT FOR DANFOSS' SUSTAINABILITY ENGINEERS

In 2019, we expanded our three-decade partnership with Danfoss, a firm whose engineering solutions make equipment and infrastructure more energy efficient. With the company's growth, Danfoss's R&D teams—whose tools include multi-physics simulations, machine learning, and AI—required upgraded technology. Working with HPE, Danfoss is undertaking a multi-pronged digital transformation.

New data centers, located at the company's Danish headquarters, feature a suite of HPE hardware, software, and services that enable high-performance computing and energy-efficient storage. By implementing HPE technologies, Danfoss will reduce significant data center energy consumption. Danfoss's own technologies, which can reduce the energy demands of data center cooling by 50%, will also be deployed on-site.

CASE STUDY

PRODUCT LIFECYCLE MANAGEMENT

We're maximizing environmental and financial savings across the IT lifecycle by designing for the environment, shifting to consumption-based models, and transitioning to a more circular economy.

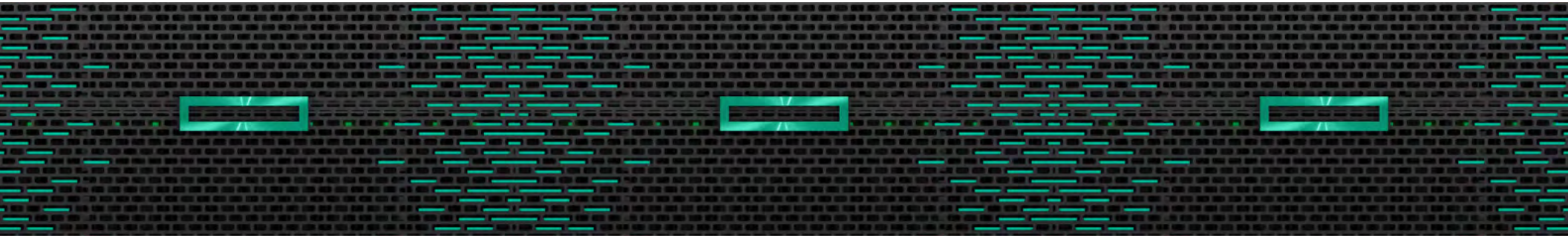
The technology sector has an enormous opportunity to decouple economic growth and development from the consumption of finite resources through a more circular economic model that keeps products, components, and materials at their highest utility and value, and in-use longer. Our circular economy program creates sustainable solutions to accelerate our customers' digital transformations in the era of technological disruption, driving more efficient use of energy and materials, and enabling customers to manage and extend the life of their IT assets in a secure, compliant, and environmentally responsible manner.

Read more about our approach to the circular economy.

SHIFTING TO A MORE CIRCULAR SERVICE MODEL

As enterprise IT moves beyond rack-and-stack commodities to virtualized and containerized workloads, hardware must seamlessly transform to meet evolving needs, functions, and workloads—leading to the emergence of as-a-service environments. Not only do these environments offer optimized flexibility and improved resiliency, shifting to service-based models is among the most significant ways HPE can evolve sustainable IT for our customers. By providing infrastructure as a service, we can minimize material consumption and increase operational efficiency while offering financial savings. In addition, by maintaining chain of custody of IT assets, HPE relieves our customers of the burden of asset management and disposition, and can ensure that assets are renewed and reused whenever possible.

Our IT-as-a-service offering, HPE GreenLake, is already the fastest growing offering at HPE.[9] Recognizing these trends, we're shifting our entire portfolio to be available as a service by 2022.



LIFECYCLE APPROACH TO DESIGN

We take a holistic approach to our products and solutions, mitigating environmental and financial costs across our value chain. A key aspect of this approach is our Design for Environment program, which began in 1992 and has continuously evolved over nearly 30 years of innovation.

The program has three main priorities:

Design for energy efficiency

HPE continually improves the energy effectiveness of our products and solutions, lowering operating costs, reducing water consumption associated with energy cooling, and limiting greenhouse gas emissions. We quantify the carbon footprint of our products through the Product Attribute to Impact Algorithm (PAIA). HPE was a founding member of this cross-industry tool along with MIT, Quantis, and several industry peers. This partnership has strengthened our ability to engage customers, as we provided 22 product carbon footprints (PCF) to customers over 2019—a 700% increase in customer interest around carbon footprinting from FY18. HPE continually strives to raise compute power, drive efficiency, and lower the carbon intensity of our solutions.

A large part of how we ensure energy and resource efficiency through our solutions is by helping our customers leverage our technology efficiently. That's why HPE developed Power Advisor, a complimentary online tool that enables customers to quantify the total energy consumption of HPE products and anticipate future demands.

Learn more about our approach to efficient IT.

Design for materials innovation

We include environmental and financial criteria in materials innovation across our value chain, helping our suppliers, customers, and partners dematerialize their IT solutions, using fewer raw resources and lowering their environmental impact.

By 2050, the world's oceans will, by weight, contain more plastic than fish.[10] Although HPE uses only small amounts of plastic in our products, we recognize the importance of addressing the plastic pollution epidemic. We integrate regrind plastics into our products, minimizing our virgin plastic consumption. During 2019, HPE invested in a pilot evaluating the suitability of post-consumer recycled (PCR) resin as a replacement for new, non-recycled plastic for HPE servers. Because optimized enterprise IT continually runs at higher capacity than consumer hardware, extensive piloting is essential to ensure materials such as recycled plastic are safe and reliable. Looking ahead, we're assessing the results for future production of suitable parts.

Design for longevity and recyclability

We extend the longevity and increase the recyclability of our products, starting at the design phase.

Our products are designed to be easily repaired, upgraded, or reused to extend their useful life. To facilitate this, we provide guidance on self-repair and upgrades, including spare parts availability. If a product or a part is damaged beyond repair or has no resale value, it is sent to our recycling processes, where material can be returned back to a product cycle by way of material commodity recovery.

We utilize the internationally accepted standard IEC 62635 for calculating the recyclability of electronic products. In fact, our products are at least 90% recyclable, on average. For example, our HPE ProLiant DL380 Gen10 2U rack server is 98.53% recyclable and representative of our DL server family. Additionally, our HPE Synergy 480 Gen10 Compute Module is a blade server for converged data centers, representative of our Synergy server family, and is 98% recyclable. As converged hardware, HPE Synergy offers additional material reduction because it incorporates the optimum performance of multiple pieces of hardware within one rack.

We also design for disassembly, ensuring materials are both safely and easily broken down to minimize waste.

Learn more about our material composition and the recyclability of typical HPE products.

PACKAGING INNOVATION

Our commitment to accelerating the transition to a circular economy extends to our packaging. Because enterprise IT products require protective packaging, we're innovating how to balance sustainable materials, creative design, and more efficient logistics with hardware safety and financial savings. In fact, our packaging stewards increased the use of plant-based and recycled content, decreased plastic content and optimized shipments, resulting in nearly $1.1 million in cost savings for 2019.

For the sixth consecutive year, our team in Singapore was awarded a Singapore Packaging Agreement (SPA) STAR Award in the Commercial Environmental Sustainable Packaging category. This award recognized their innovative re-design of the cushion materials from low-density polyethylene (LDPE) foam to a new 100% recycled molded pulp for networking switches, offering financial savings of 14% over LDPE foam.

Shaped by our customer engagements in 2019, our 2020 outlook includes partnering with our customers to deliver products packaged safely within sustainable materials, shipped in the most efficient way, with a renewed emphasis on offering bulk and consolidated options.

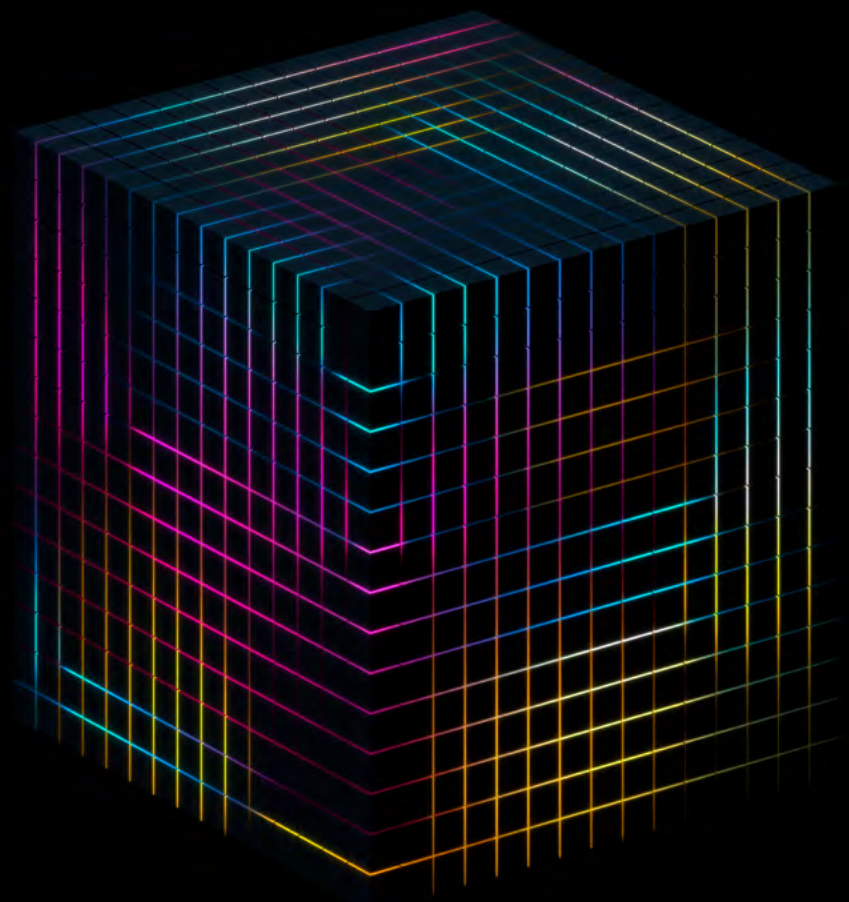
MARKET ACCESS

Offering eco-label qualifying products across our portfolio makes sustainable IT purchasing easy, enabling businesses to meet social and environmental qualifications in their procurement criteria. Many HPE products meet eco-label standards such as the Electronic Product Environmental Assessment Tool (EPEAT), ENERGY STAR®, China SEPA, 80 Plus, and the China Energy Conservation Program (CECP).

In 2020, we will look to expand our eco-label portfolio to the European market as TCO Certified and Blue Angel open certification for enterprise IT product categories.

Building upon our leadership in co-developing the new EPEAT standard for servers, we continue to support additional qualifications to improve the efficiency of IT hardware. HPE provides an IT Eco Declaration for every new product to help customers and other stakeholders understand its sustainable features and attributes, including disassembly instructions and extending product life offerings.

Research and cross-industry collaboration continues to increase the number of qualifications and third-party organizations certifying enterprise products. Due to the complexity of sustainable IT guidelines, HPE recommends general sustainable purchasing criteria in our Sustainable IT Purchasing Guidelines.



EXTENDING PRODUCT LIFE

HPE leads by example, refurbishing both our customers' and our own retired IT equipment through our state-of-the-art Technology Renewal Centers (TRCs). Of the nearly 4 million assets returned to our TRCs in 2019, 88% were given new life, and only 12% were sent to recycling. Our circular economy program enables customers to unlock trapped capital in IT assets and find new use cases for IT, reducing environmental impact while offering financial savings. This is particularly valuable for enterprise technology, as it continues to retain value after first use.

We offer multiple programs across our global markets to encourage participation in the circular economy, including:

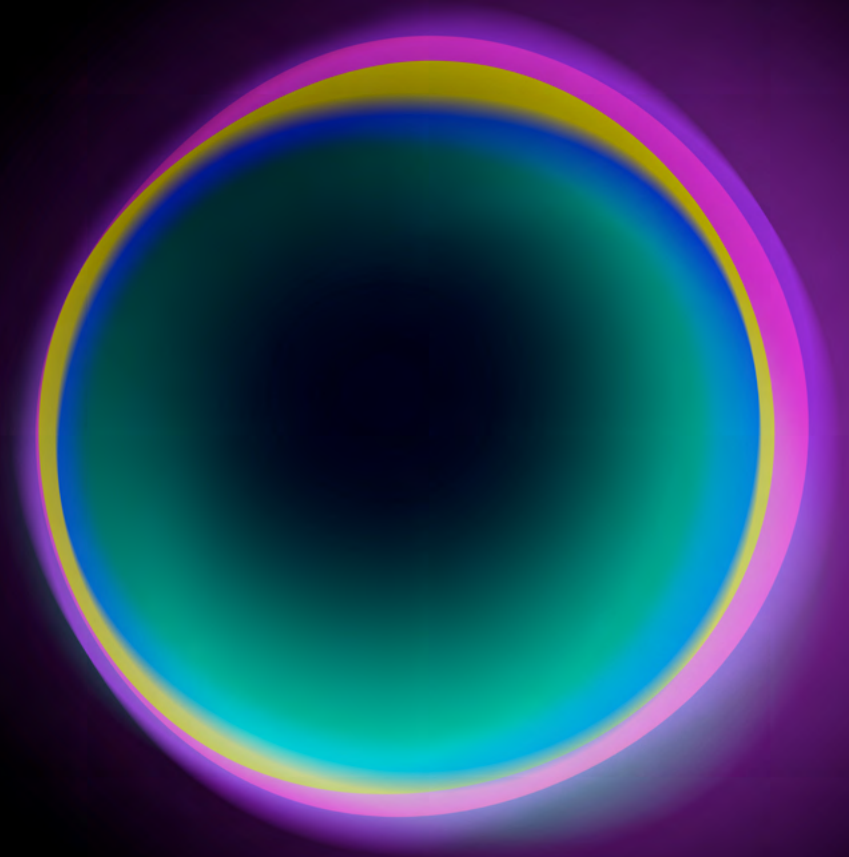
- **HPE Renew**—Offers a comprehensive portfolio of completely remanufactured products with the same reliability and performance of new HPE products with at least 15% financial savings.[11]
- **HPE Asset Upcycling**—Provides customers with IT equipment removal, data overwriting, and asset-level tracking in an environmentally responsible way. Additionally, HPE provides customers with the true market value of their assets for reinvestment in new IT initiatives.
- **HPE Certified Pre-Owned**—Extends the life of legacy systems through reliable, certified pre-owned IT equipment. The entire HPE inventory is available and includes products released from 18 months up to 25 years ago. Innovation can be accelerated by freeing up budgets historically dedicated to maintaining legacy and/or non-revenue generating systems.
- **Hardware recycling**—When end-of-use refurbishing of hardware and components is not an option, we assist HPE customers with end-of-use recycling of HPE brand server, storage, and networking devices, and similar products manufactured by other brands. Other computer hardware is accepted on a case-by-case basis. The services extend to nearly 60 countries.

Of course, all of our circular economy programs uphold our stringent security practices, from disk drive wiping to securely destroying drives and other storage devices through physical shredding and metal-recovery smelting. We also audit to ensure no counterfeit technology is returned to the market.

We help customers track progress toward their business and sustainability goals through the HPE Circular Economy Report. This report enables customers looking to quantify their IT infrastructure's contribution to sustainability and environmental reporting. These reports demonstrate the number of returned units that were remarketed and recycled responsibly, as well as calculate the carbon, energy, and landfill waste savings achieved. Launched in 2019, we received requests from more than 60 customers to calculate the carbon, energy, and landfill waste savings achieved through our circular economy programs, totaling 324,194 metric tons of CO_2e avoided, 1,177,083 MWh of energy saved, and 24,734 metric tons of waste diverted from landfill.

SUBSTANCES OF CONCERN

We minimize human and environmental health risks across our portfolio by conducting frequent assessments of materials and imposing our own restrictions in advance of regulations.



ASSESSING AND RESTRICTING SUBSTANCES IN OUR PRODUCTS

As a global technology leader, we're committed to ensuring that materials used throughout our design process are safer for human and environmental health, without compromising on cost or performance. We take a precautionary approach to substances, replacing legally permitted materials when scientific data have established a potential risk and a lower-risk alternative is technically and commercially viable. Through implementing our materials analysis into our Design for Environment program, we've also improved the recyclability of our products, helping us transition to the circular economy. Read more about our product lifecycle management.

Our material assessment is a continuous process, with more than 100 substance assessments to date. In 2019, we extended our commitment to promote safer chemical use across our value chain by certifying an in-house chemist as an Authorized GreenScreen® Practitioner. This certification further enables effective communication with suppliers and customers to uphold the Clean Production Action's GreenScreen® for Safer Chemicals standards. Learn more about our material restrictions, disclosures, and declarations in our General Specification for the Environment.

In addition to our supplier engagement on material restrictions, we collaborate with industry peers, local and regional governments, and trade associations to better understand current and upcoming trends. These efforts prepare our business, and our customers, to anticipate new and emerging regulations. We are members and active participants of the Information Technology Industry Council (ITI), a global policy and advocacy organization. Through our work with ITI, we collaborate with industry peers on topics including green procurement and product stewardship, share best practices, and work collectively toward the goal of materials innovation and sustainable product development.

Halogens and Phthalates

The environmental and health effects of halogenated compound flame retardants and plasticizers containing phthalates have been under increasing regulation across the technology sector. While most regulatory action has occurred in the consumer space, where plastics and cabling are more common, we advocate to include a number of chemicals in future EU Restriction of Hazardous Substances (RoHS) legislation for enterprise IT, including polyvinyl chloride (PVC) and brominated flame retardants (BFRs) from electrical and electronics equipment. Restricting these substances where technically feasible would substantially accomplish the regulation's goal of eliminating chlorine and bromine from electronics products. Since July 2007, we have restricted all PVC and BFRs from the external case plastics in HPE branded products.

As of 2019, 99.9% (by weight) of HPE Primera storage units are now low-halogen, with only a handful of small components that have not been transitioned. In addition, we've transitioned more than 60% of the components in HPE 3PAR storage through gradual design improvements at each design cycle, starting with converting printed circuit boards and preferentially selecting low-halogen components when cost parity allowed.

When technically feasible, we will continue to phase out other uses of BFRs and PVC to meet market demands and customer expectations, taking into account product lifecycles.

Regulatory requirements

HPE meets regulatory and compliance requirements for our products, components, and owned equipment everywhere we operate. We also move beyond current regulation to drive informed legislation that contributes to the protection of people and the environment.

This year, we evolved our promise to customers by implementing an internal, voluntary goal to meet all substance restrictions of the EU RoHS legislation outside the EU (as well as the European Free Trade Area of the European Economic Area) six months ahead of every legal compliance date worldwide for virtually all HPE branded new products, except where it is widely recognized that there is no technically feasible alternative.

Our goal is to meet all substance restrictions of the EU RoHS legislation six months ahead of every legal compliance date worldwide.

Read more about our Regulatory and Eco Declarations, including safety data sheets.

MANUFACTURING PROCESS SUBSTANCES

Technology manufacturing involves chemicals and materials absent from the final product that can cause human and environmental health hazards when handled. To ensure safety, we uphold material innovation with our suppliers, providing them with a full list of restricted substances and clear guidance on suitable alternatives.

Through the HPE Supplier Code of Conduct and continued supplier engagement, we disseminate our requirements to our suppliers and track supplier compliance. During comprehensive Social and Environmental Responsibility (SER) audits at our suppliers, auditors will review materials restrictions programs and ensure that there is a formal compliance process in place during the procurement and manufacturing phase.

ENVIRONMENT

We believe that the global transition to a low-carbon economy presents a business opportunity. Our environmental strategy helps guide our business decisions to ensure we maintain resilient operations while minimizing our impact on the planet.

BUILDING A CLIMATE-RESILIENT BUSINESS

As a technology company, HPE has a key role to play in responding to climate change, both through transformative efficiency gains and building our capacity to adapt. The scale of the climate crisis is more visible than ever—disrupting communities, business operations, and economies around the world.

For the first time ever, the World Economic Forum's Global Risks Report indicates that the five global risks with the highest likelihood are environmental, with all presenting significant consequences to the global economy.
As a company and an industry, we face climate-related risks such as compromised supply chains and infrastructure, which have the potential for significant business impacts. Over the past year, we have taken preliminary steps to increase our operational resiliency through site selection and infrastructure investments that mitigate physical risks from climate change.

At HPE, we recognize the imperative to minimize our industry's environmental footprint, as well as the opportunity to position ourselves as a business and technology leader enabling a low-carbon economy. Our solutions-focused approach to IT innovation, including plans to offer our entire portfolio as a service, enables our customers to reduce the environmental impacts of their IT infrastructure without jeopardizing performance, and to make data-driven decisions that improve the sustainability of entire sectors. For instance, we are partnering with our customers to develop multiple low-carbon technologies for data centers, smart factories, energy grids, and other production sectors.

In 2019, HPE embarked on our second climate scenario analysis based on the recommendations of the Task Force on Climate-related Financial Disclosures[12] (TCFD). Our second TCFD analysis considers a range of social, technological, economic, environmental, and political trends shaping the future of our business and industry.

Full disclosure from our 2019 analysis can be found in our TCFD index.

We continue to align ourselves with a wide range of alliances and partner organizations that support commitments under the Paris Climate Agreement, such as We Are Still In and the World Economic Forum's Alliance of CEO Climate Leaders. In addition, we encourage government policies that align with climate science and follow technical and economic projections of what is necessary and feasible to achieve a 1.5°C future.

HPE publicly stands for market-based mechanisms with clear, transparent, and consistent price signals such as setting a price on carbon. We further support the adoption of clean renewable energy supply across all industries through our participation as a founding member and board member of the Renewable Energy Buyer's Alliance (REBA), whose mission is to unlock the marketplace for all nonresidential energy buyers to lead to a rapid transition to a zero-carbon energy future. HPE is also a member of the RE100.

Get the data behind our environmental footprint in the Data Summary.

ENERGY AND GREENHOUSE GAS EMISSIONS

Emissions reduction targets

Our strategic goals help minimize our environmental footprint across our entire value chain, ensuring we focus on those areas where our impact is greatest.

HPE was the first IT company to set science-based targets (SBTs) to reduce greenhouse gas (GHG) emissions across the value chain, including our operations and supply chain. Our climate goals are approved by the Science Based Target initiative and align with the recommendations of the internationally recognized Paris Climate Agreement to limit global average temperature rise to well below 2°C from pre-industrial levels in order to substantially reduce the risks and effects of climate change.

In June 2019, HPE responded to a call from global leaders challenging CEOs to set ambitious targets for their companies in line with the Intergovernmental Panel on Climate Change (IPCC) findings that global temperature rise must be limited to 1.5°C, rather than 2°C, to avoid the worst impacts of climate change. HPE was among the first global companies to reset our operational science-based emissions reduction target to align with a 1.5°C trajectory.

Additionally, HPE set a new target to reduce absolute emissions from our transportation logistics by 35% by 2025, compared to 2016.

Our work to reduce GHG emissions and climate-related risks continues to be recognized by reputable organizations. For the seventh consecutive year, in 2019, HPE received the highest ranking from CDP,[13] placing on the Climate "A" List and was recognized as a leader in supplier engagement.

2025 CLIMATE GOALS

By 2025 Reduce absolute manufacturing-related GHG emissions in our supply chain by 15% compared to 2016 levels

In 2018[14] We reduced emissions by 2% compared to 2016 levels

ON TRACK

By 2025 Enable 80% of our production suppliers (by spend) to set science-based targets

In 2018[14] 22% of our manufacturing suppliers (by spend) set science-based targets

ON TRACK

By 2025 Minimize operational GHG emissions by 55% compared to 2016 levels

In 2019 We reduced our emissions by 47% from 2016 levels

ON TRACK

By 2025 Source 50% of total electricity consumption in our operations from renewables

In 2019 We sourced 41% of our operational electricity from renewables

ON TRACK

By 2025 Reduce absolute emissions from transportation logistics by 35% compared to 2016 levels

In 2019 We reduced emissions by 29% compared to 2016 levels

ON TRACK

By 2025 Increase the energy performance of our product portfolio 30X compared to 2015 levels

In 2019 We increased the energy performance of our product portfolio 3X from 2015 levels[15]

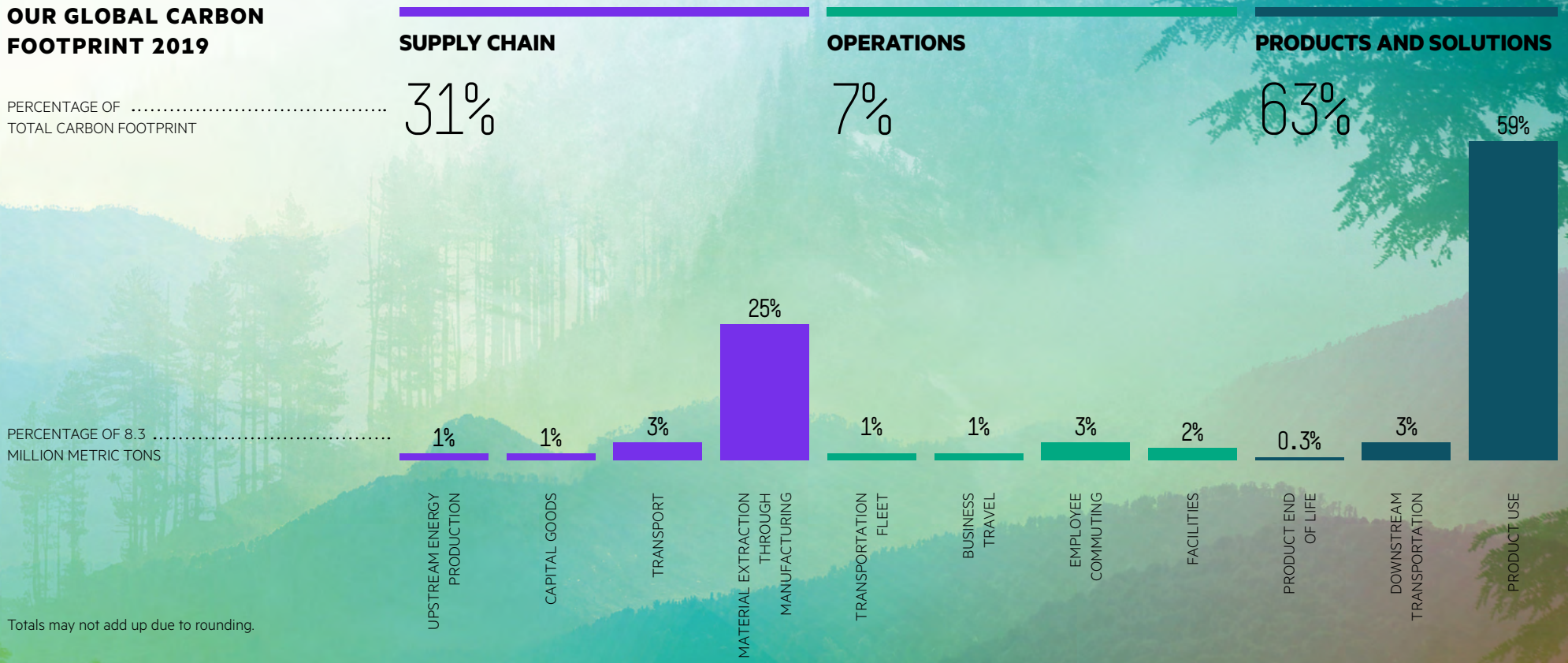
ON TRACK

Carbon footprint

In 2019, 94% of our GHG emissions resulted from the manufacture and use of our products, making it a business imperative to design more efficient IT solutions and to partner with our suppliers to reduce impacts in our supply chain.

Our operations accounted for only 7% of our total emissions, however, we remain committed to reducing our energy use by procuring renewable electricity where possible, improving our building energy efficiency, optimizing the logistics of our products, and minimizing impacts from workforce commuting and business travel.

OUR GLOBAL CARBON FOOTPRINT 2019



Totals may not add up due to rounding.

Energy use and greenhouse gas emissions in our supply chain

We continue to work with our suppliers and industry peers to set industry-leading standards to aggressively reduce the climate impacts of our supply chain. With nearly 11 years of insight into our supply chain GHG emissions, we have a responsibility to share our experiences and best practices with our suppliers. We classify our suppliers into three groups, based on the services they provide HPE:

- **Production**—manufacture and assemble products, provide materials and parts
- **Nonproduction**—provide services, such as staffing and telecommunications
- **Transport**—provide transport in support of our logistics requirements

Our primary focus is on our production manufacturers, including final assembly and strategic commodity suppliers, with whom we have a direct contractual relationship.

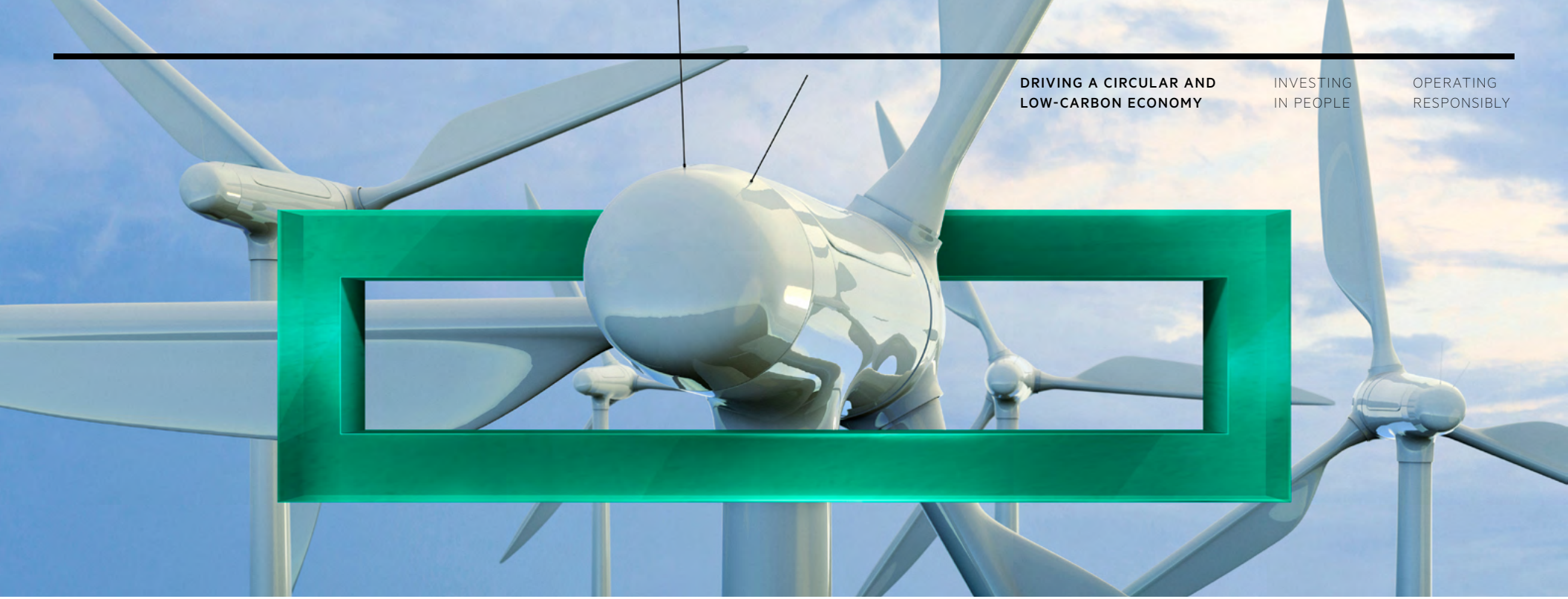
In 2017, HPE became the first company to create a comprehensive, science-based supply chain management program to reduce the impact of our manufacturing suppliers.[16] We partner with our suppliers, providing training and tools, with the aim to have 80% of our production suppliers, by spend, set their own science-based targets (SBTs) by 2025. As of 2018,[17] 22% have set Scope 1 and 2 targets that track with climate science, and 55%[18] have committed to set SBTs in the next two years.

HPE is also committed to reducing absolute manufacturing-related GHG emissions by 15% from 2016 levels by 2025. As of 2018, our manufacturing suppliers reduced emissions by 2%, for a total reduction of 19,714 metric tons of CO_2e, compared to 2016 levels.

Most recently, HPE set forth a five-year strategy to increase our suppliers' accessibility to regional renewable energy markets. We continue to collaborate with industry-wide alliances and organizations that help transition the support to large-scale renewable energy projects. In 2019, we joined the Supply Chain Advisory Board of the REBA. Through the Supply Chain Advisory Board, HPE is able to disseminate information—such as webinars, trainings, supplier roadmaps—to our suppliers, helping to aid access to renewable energy in their respective regions.

Our comprehensive Supplier Code of Conduct sets out guidelines to help suppliers reduce the environmental impact of their activities. HPE supports our manufacturing suppliers by offering capability-building programs focused on low-carbon strategies that eliminate barriers to participation and increase accountability. Through our capability-building programs, we are enabling suppliers to become early actors in setting emissions reduction targets and preparing their businesses for future climate policies, regulations, and increasing stakeholder demands. In collaboration with our nonprofit partners POINT380 and BSR, HPE hosted three webinars in 2019 to guide our suppliers on how to set and achieve best-in-class SBTs. More than 60 of our suppliers joined these webinars. Through our supply chain climate change program, we hosted direct and customized one-on-one engagements with 51% of our manufacturing suppliers, by spend.

In 2019, HPE also partnered with industry peers to launch customized supply chain data management software, created and hosted by POINT380. The goal of this software is to track progress toward supply chain emissions reduction goals by providing company-specific supplier emissions data. Through the launch of the platform and customizable dashboards, HPE suppliers have access to their own data and are able to track their own progress toward their publicly stated goals.



Energy use and greenhouse gas emissions in our operations

In 2018, HPE set a new target to reduce operational emissions by 55% by 2025 compared to a 2016 base year. Our operations used 723,119 MWh of energy in 2019, down 8% compared to 2018. To meet our target, we will continue to invest in renewable energy, prioritize building efficiency projects, and optimize our transportation modalities.

Renewable energy

In 2019, HPE sourced approximately 268,266 MWh of renewable energy, representing 41% of our global electricity consumption, a 4% increase relative to 2018. Our goal is to source 50% renewable electricity in our operations by 2025 and to procure 100% renewable electricity in the long term. To reach these goals, HPE's hybrid approach to renewable energy combines various procurement mechanisms, helping to strike a balance between costs, availability, and adding new renewable energy to global grids. As of 2019, HPE is sourcing 67% of our total renewable electricity from the Americas, 19% from Europe, Middle East, and Africa, and 14% from Asia Pacific and Japan.

HPE signed two new renewable energy contracts in 2019. First, at our Houston campus, we signed a 10-year agreement with Constellation Energy to develop an off-site solar farm. The new solar farm will be operational by January 2021, saving nearly 43,700 metric tons of emissions annually.

Second, at our San Jose headquarters, we opted to participate in the city's Community Choice Energy program, saving approximately 183 metric tons of emissions. In the upcoming year, we will continue to seek similar opportunities at our other regional offices, including in Guadalajara and Mexico City.

Building efficiency

Our facilities account for the largest portion of emissions from our operational footprint. HPE owns and operates facilities around the world and energy efficiency is embedded in our corporate real estate strategy. We conduct energy audits at several facilities on an annual basis and implement energy retrofit projects, integrating the latest efficiency technologies. In addition, we monitor changes in consumption patterns in order to identify and implement efficiency opportunities. We also continue to push HVAC set points in order to maintain a healthy balance between efficiency and occupant comfort.

In 2019, we implemented 15 capital expenditure projects at our facilities, including LED lighting upgrades, Variable Frequency Drives (VFDs), Fault Detection Diagnostics (FDD), and AC optimization. Altogether, these projects yielded savings of approximately $752,000, reducing our operational energy consumption by 6,222 MWh. The most significant projects took place at our offices in Chippewa Falls, Fort Collins, Colorado Springs, Singapore, and Aguadilla.

HPE also participates in local utility-based demand-response programs to help balance the supply and demand of electricity during peak hours to keep local energy grids stable and minimize dependency on coal-fired power plants. As of 2019, two HPE sites participate in demand-response programs, with plans to expand participation to four additional sites in 2020.

In 2019, HPE conducted 15 operational projects that reduced energy demand by 6,222 MWh and saved approximately $752,000.

HPE has maintained global certification to the International Standards Organization (ISO) 14001 Environmental Management Systems (EMS) standard since 2004. As part of our continuous improvement, in 2019 we added two new sites that are primarily focused on server product design and development, for a total of 10 certified sites.

Transportation modalities

A commitment to reducing emissions remains a criterion for HPE product transport providers. As a result, in 2019 HPE set a new target to reduce absolute emissions from our transportation logistics by 35% by 2025, relative to 2016. As of 2019, we have reduced emissions by 29%. This decrease in emissions is due to three major components:

- We achieved significant carbon savings through air-to-ocean conversions, mostly driven by our Aruba Networking business, which has a 65% transition goal.
- We achieved savings by reducing the amount of empty truck miles for one of our major surface routes by 45%. HPE established a partnership with a logistics service provider to optimize shipments for U.S.-based transportation lanes, reducing miles from the network.
- A new U.S. trade direct program, introduced in late 2018, reduced the amount of "empty miles" in the HPE network.

In 2019, HPE set a new target to reduce absolute emissions from our transportation logistics by 35% by 2025, relative to 2016.

In instances where customers participate in our product take-back programs through HPE Financial Services, we consolidate all returned products onto groupage carriers to ensure we do not ship small shipments to our Technology Renewal Centers, helping minimize the carbon emissions associated with transport.

In 2019, HPE joined the Sustainable Air Freight Alliance. The goal of this alliance, whose membership includes shippers, forwarders, and airline carriers, is to establish a standardized methodology for reporting carbon emissions resulting from aviation and to pursue innovative technologies for future reduction.

Whenever possible, we use virtual collaboration tools in place of team member travel and encourage a flexible workplace environment, allowing team members to work remotely upon management approval. When travel is necessary, we work with our team members and transport providers to support sustainable travel practices such as incentivizing rideshare programs and requiring the use of approved car rental size classifications. We regularly replace company vehicles to update our fleet with better fuel-efficiency and engines.

Our auto fleet transformation program aims to:

- Progressively remove diesel-powered engines from HPE's fleet and replace with unleaded petrol
- Implement hybrid and electric vehicles as choice options in mature EV infrastructure markets
- Optimize the total cost of ownership

WATER

Climate change has direct impacts on water scarcity and use. Droughts are getting longer and more severe, rising sea levels are threatening fresh water sources, and there are more record-breaking levels of precipitation falling on some cities. Our water infrastructure will not meet the needs of our future, resulting in half of the world's population living in water-stressed areas by 2025.[19]

HPE believes we can play an important role by working with our customers and partners to leverage our technology and develop solutions. We are currently developing a company-wide water strategy to help guide our next steps. This strategy will focus on:

- Reducing water vulnerability of HPE facilities, team members, and suppliers by 2030
- Decoupling water from HPE's energy use
- Increasing water literacy through meaningful partnerships

Water footprint

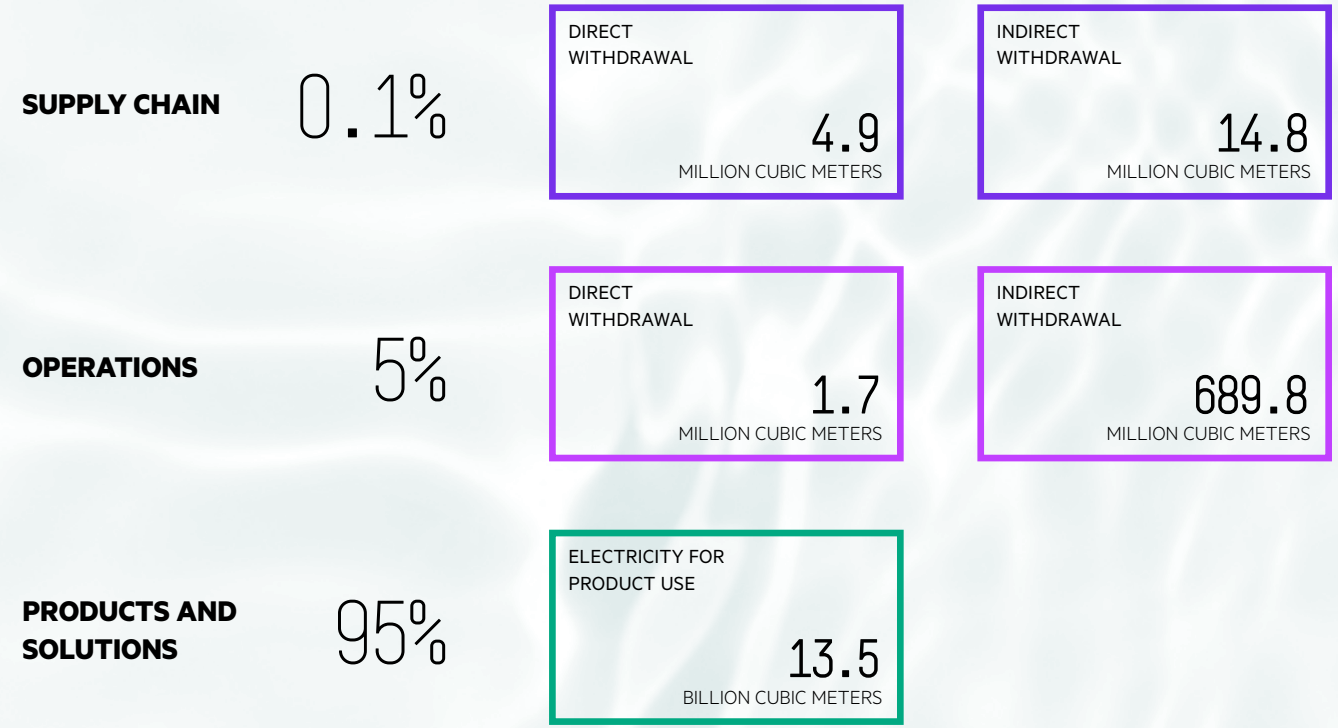
Vast amounts of water are consumed during the production of electricity and the majority of our water footprint is attributed to this energy-water nexus.[20] For that reason, HPE publishes indirect water withdrawals associated with electricity in addition to direct withdrawals.

The majority of HPE's water footprint is related to the electricity associated with the use of our products (95%), and the energy needs of our operations (5%), including the consumption related to power generation and infrastructure cooling.

OUR GLOBAL WATER FOOTPRINT 2019

PERCENTAGE OF
14.2 BILLION CUBIC METERS

Totals may not add up due to rounding.



Managing water across our supply chain

Managing the use of water in our supply chain is essential to the future of our business and planet. We completed a supplier water-risk assessment to facilitate the creation of new KPIs and capability-building programs for our first-tier suppliers. The assessment leveraged public data made available by the World Resources Institute Aqueduct tool and the WWF Water Risk Filter, in addition to information provided by other organizations, to help inform a scientific understanding of conditions of water basins where our suppliers operate.

We support suppliers by providing clear expectations, prescriptive guidelines, and helpful tools to raise awareness of our requirements for water stewardship as part of our Supply Chain Responsibility (SCR) program. As of 2019, 39% of our production suppliers set water-related goals.

Moving forward, we plan to conduct more capability building with suppliers, especially those who are located in water-stressed regions, focusing on water management and resiliency. Through partnerships within our own operations and with external peers, we will work to restore and rehabilitate watersheds in areas where HPE, and our suppliers, operate. Addressing water risk based on the context of the region is key to developing solutions to water access and availability.

Managing water vulnerability in our operations

In 2019, our operations withdrew 1.7 million cubic meters of water, a decrease of 15% from the previous year. While HPE is not a large water consumer compared to other industries and companies, we are expanding efforts to improve water management in locations that face water-related risk. Although HPE's facilities have withdrawn less water year-over-year since 2017, our consolidation of facilities in regions that experience high water stress has resulted in an increase of water withdrawal from these regions. Using the World Resource Institute's Water Aqueduct tool, we calculated that from 2017 to 2019, HPE's water withdrawals from high water-stressed regions decreased from 23% to 20%, and our total water withdrawals decreased by 22%.

HPE discloses our performance and water management approach annually through the CDP water program and achieved a B score in 2019. Simply reducing our facilities water withdrawals is not enough to manage the water challenges of the future. For this reason, we have created an internal water strategy working group to address issues of vulnerability with a focus on our highest priority regions.

We recognize that the location of electricity generation has a direct impact on local water supplies, and that water shortages have led to power outages in water-stressed regions.[21] This increases the risk of disruptions to our operations, as well as those of our suppliers and customers, and to our workforce and their communities. For that reason, HPE is working to align both our renewable energy and energy-water nexus strategies. In India, for instance, we have brought renewable electricity to the grid in a carbon-intensive and water-stressed region with a 45 GWh solar farm open last year, which will avoid 100 million cubic meters of water withdrawal annually by not using electricity from the grid.

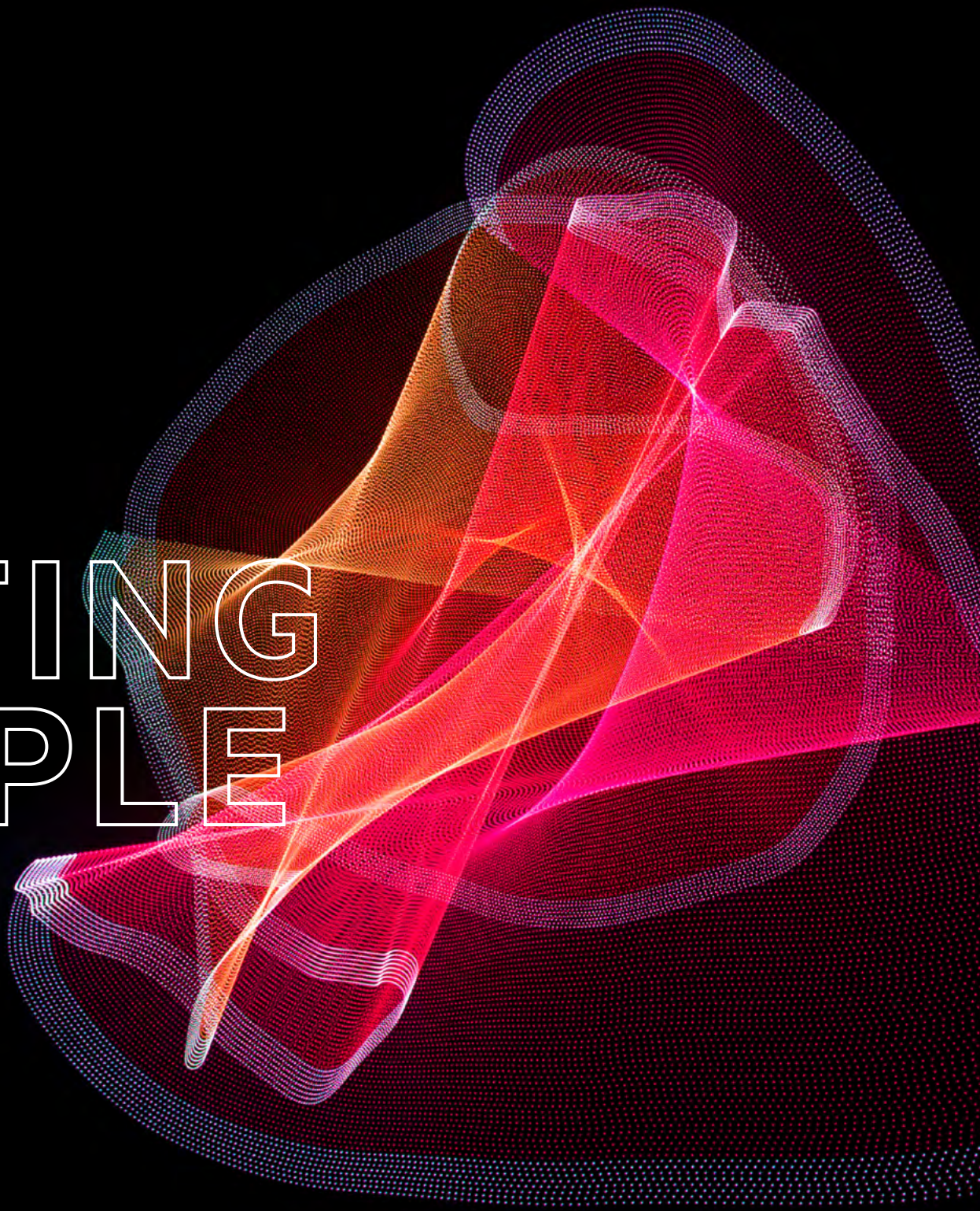
WASTE

In 2019, HPE increased our total annual waste diversion target from 83% to 87%. In our first year reporting toward this new target, we are pleased to announce we achieved an 87% diversion from landfill. We generated a total of 8,257 metric tons of waste, which is a 38% decrease relative to 2018.

Waste from our operations consists primarily of nonhazardous recyclables and electronic waste as well as limited hazardous waste, such as lead-acid batteries, which accounts for only 1% of total waste generated.

While the waste generated from our offices is insignificant compared to other parts of our business, we are investing in resources and programs that will help foster a workplace culture that empowers team members to be mindful of their own waste footprint. By the end of 2020, we plan to put in place a strategy to phase out single-use plastic products from our global regional offices. Additionally, in 2019, HPE partnered with the Las Vegas Sands properties to track waste diversion at our annual customer and partner tradeshow, HPE Discover Las Vegas. Through joint efforts, we were able to divert 74% of waste from landfill.

02
INVESTING IN PEOPLE



Our people are our greatest asset. We are committed to being unconditionally inclusive to capture the ideas and perspectives that fuel innovation and enable our workforce, customers, and communities to succeed in the digital age. When our team members succeed, our company thrives—making employee engagement a priority. By harnessing the potential of our technologies and our team members, we can be a force for good.

IN THIS SECTION

Inclusion and diversity

Employee development, engagement, and well-being

Employee health and safety

Community investment

INCLUSION AND DIVERSITY

We drive business impact and market differentiation by investing in diverse talent and advancing inclusion across our value chain.

FOSTERING BELONGING IN THE WORKPLACE

At HPE, we achieve our purpose by creating a workplace that values our people, enabling us to better understand and meet the needs of our customers and communities. Our strategic impact areas are:

- **Talent**—we provide equitable opportunities to recruit, retain, and develop talent that fuels our innovation
- **Workplace**—we are unconditionally inclusive in the way we work and celebrate individuality
- **Marketplace**—we represent diversity when we go to market and foster inclusion across our partners
- **Reputation**—we take a stand as being a force for good in our communities

Over 2019, we achieved new heights of engagement among all of our workforce, enabling us to collaborate and win together. Although our workforce diversity representation outpaces the tech sector, we recognize we need to constantly improve and uphold an annual goal to increase the representation of both women and ethnically diverse talent by at least 1% year-over-year.

Over the past year, HPE increased our female workforce at every level worldwide, including technical and executive roles. We also increased our representation of underrepresented minorities of U.S.-based Asian and Hispanic team members. See the 2019 Data Summary for comprehensive employee demographics data.

EMPOWERING OUR PEOPLE

We believe that inclusive environments empower team members, fostering a culture of innovation. This starts with our leaders. In 2019, HPE led strategic educational campaigns and trainings for people leaders and senior technologists to foster a culture of inclusivity across the business. Following the program launch, 25% of our leaders underwent inclusive leadership training in the first quarter of 2020, and we're continuing to train leaders throughout the year. This program provides ongoing resources and toolkits to ensure we're building an unconditionally inclusive workplace.

This year, we also developed the Women on Boards Leadership Program for top executive female talent at HPE.

Learn more about how we invest in our leaders.

Employee resource groups

Our workforce rated 2019 as the most engaged they've been since HPE was founded. This is due in part to our employee resource groups (ERGs). ERGs are volunteer communities of employees that purposefully come together to build an even more inclusive culture at HPE by activating our strategic impact areas. Over the past year alone, we saw an 18% growth in the number of ERG chapters. These chapters represent 46 countries and nine constituencies—Hispanic, veterans, pan-Asian, Disability, multicultural, Black/African American, LGBTQIA+, generational, and women.

Members of these groups benefit from a diverse network, unique career-development experiences, access to leadership, opportunities to drive company goals in differentiated ways, and a greater connection to our shared purpose. More than one-third of our workforce is actively engaged in our ERG program through continued initiatives, events, and programming, and more than half of our workforce participated in the 430 major ERG events hosted around the world in 2019.

Our ERGs even partner together to host signature annual events including Lunar New Year, Diwali, Hispanic Heritage Month, Black History Month, International Women's Day, PRIDE month, and more.

More than one-third of our workforce is actively engaged in driving our ERG program, and more than half of our workforce participated in 430 major ERG events around the world in 2019.

INVESTING IN DIVERSE TALENT

We recognize our responsibility to help mitigate the underrepresentation of women and minorities in the technology industry. HPE was named in the Bloomberg Gender Equality Index for the first time in 2020, and was identified as a trailblazer on Equileap's Global Gender Equality Report for our new flexible work-life benefits, which include six months of paid parental leave.

In 2019, HPE also placed on the Disability Equality Index for the fourth consecutive year and launched Able, a new program to better streamline and improve processes to accommodate team members with all abilities. These efforts include a career transition program tailored to those with different abilities, training workshops to ensure ability-inclusive workplaces, an accessibility office, and a channel of stories from our workforce.

We ensure our diverse team members and our communities are celebrated both inside and outside the workplace. For instance, HPE held our first-ever global PRIDE observance in June, during which we also demonstrated our commitment by sharing our rainbow-colored HPE Element branding externally for the first time. Our team members joined local parades, including carrying the flag for New York City's Stonewall 50, and celebrated Taiwan becoming the first country in Asia to legalize same-sex marriage. In celebration of HPE receiving a 100% score on the Human Rights Campaign's Corporate Equality Index for the 17th time in 2020, our Chief Diversity Officer called out the power of companies like ours to push for equity and fairness ahead of legislation around the world.

Creating equal opportunity

HPE has a long-held commitment to equal employment opportunity, affirmative action, inclusion, and diversity. HPE maintains policies to ensure equal pay, and we regularly review our pay practices so that team members with the same role in a similar location are paid fairly and equitably. We believe equity must also include fostering equal opportunities, evaluating and addressing biases, and accommodating flexible work. In 2019, we expanded our efforts to support our team members with flexible work and return-to-work benefits through our new Work That Fits Your Life benefits program.

Investing in the development of a more diverse talent pipeline is critical to closing the skills gap our industry faces. We encourage more women and underrepresented groups to enter and succeed in technology careers through a variety of programs and partnerships, including creating tech-enabled learning tools, increasing recruitment activities with historically black colleges, nurturing female talent through internship programs, and providing reskilling to people who have been out of the workforce for an extended period of time.

DRIVING BUSINESS RESULTS THROUGH INCLUSION

At HPE, we believe that our business success is directly tied to the diverse experiences, skills, and backgrounds of our team members and other stakeholders. More diverse companies are 45% more likely to report an increase in market share, and 70% more likely to capture a new market.[22] Our emphasis on driving impact through inclusion resulted in technology learning sessions, product presentations and developments, collaborative events across the tech sector, and differentiated customer engagements such as our Discover More session on women in tech. At our 2019 Discover Las Vegas showcase, we brought stakeholders together across the tech community to manifest our shared responsibility for advancing gender equity, including a session on Men as Allies.

Supplier diversity

Beyond our workforce, we accelerate a more inclusive economy through our supplier diversity program. In 2019, we spent $939 million with small enterprises and businesses owned by women, minorities, and veterans.

Despite smaller spend overall, our percentage of spend with diverse suppliers remained consistent, with small business spend representing 28% of U.S. sales.

In 2019, we spent nearly $1 billion with small enterprises and businesses owned by women, minorities, and veterans.

HPE delivered on increased goals and commitments for small and diverse business inclusion in 2019. Our new mentor protégé program launched for select suppliers, providing a platform and opportunity for diverse supplier industry development and growth. HPE attended national and regional supplier diversity industry events, where we met and educated numerous prospective suppliers on working with HPE. We also collaborated with diverse suppliers on unique ways to unlock value through value-added reseller (VAR) partnerships and created touchpoints across HPE's organizational landscape.

Looking ahead, our focus for 2020 is expanding this program, creating more awareness and accountability while increasing our diverse spend in proportion to more efficient, optimized annual spending dollars. Additionally, we're integrating LGBTQIA+ owned businesses as a targeted diversity indicator.

EMPLOYEE DEVELOPMENT, ENGAGEMENT, AND WELL-BEING

Our learning and development programs create human capital by enhancing the skills of our workforce and supporting them in achieving their career aspirations. This is how we're able to better serve our customers and work toward our corporate purpose.

A NEW CULTURE

At our 2019 December All Employee Meeting, HPE CEO Antonio Neri introduced a new culture blueprint. The blueprint was built over several months of research and executive review, and was heavily influenced by direct feedback from people leaders and team members. It defines the way we work, the way we live, and the way we serve our customers.

INVESTING IN OUR LEADERS

Strong leadership and empowered team members are central to our success. We support the development of new and experienced leaders through our comprehensive leadership curriculum.

In 2019, we launched three new leadership programs:

- **HPE Elements of Leadership**—Hones behaviors associated with HPE's four elements of leadership—Engage, Empower, Evolve, and Execute—to drive business performance and team member engagement
- **Inclusive Leadership**—Helps leaders foster an environment where team members can be their best, leading to increased productivity and commitment
- **Ignite**—Immerses leaders in HPE's purpose, strategy, culture, and behaviors

During the year, we also launched REACH, our enhanced approach to talent management and succession planning for leadership roles. Through REACH, we will build the capabilities of high potential talent to ensure a strong pipeline of future leaders for our company.

In 2019, we implemented a new, continuous feedback approach to encourage ongoing dialogue on performance between leaders and their teams. This approach builds on our formal

biannual review process, where people leaders and team members set goals, discuss career aspirations, and evaluate performance.

We hold our senior leaders accountable for team member success, measured using multiple factors including career growth, rewards and recognition, inclusion and diversity, and pride. These factors are integrated into management goals and tied to executive compensation.

SUPPORTING OUR TALENTED WORKFORCE

HPE CEO Antonio Neri is reshaping the company's relationship with team members by focusing on their experiences, benefits, and career growth. Our learning and development programs—including job rotations, job shadowing, and mentorship opportunities—are key to building a workplace where team members can learn, develop skills, and do career-defining work.

In 2019, we tracked an average of 19.2 hours of development and training programs per employee and 25% of our open roles were filled by internal candidates.

We also provide training opportunities through learning tools including Accelerating U—our self-directed learning platform. It features on-demand, interactive, and mobile access to personalized learning opportunities. The platform contains more than 5,800 courses with more than 870,000 course completions as of 2019. During the year, we expanded Accelerating U onto the LinkedIn Learning platform to provide access to additional web-based learning programs.

In addition to company-wide training, HPE business units offer functional-based training to help team members hone skills specific to their role.

We also support team member development outside of our business. In 2019, nearly 490 team members took advantage of our Employee Development Grant, up from 230 in 2018. This grant supports employees who are pursuing bachelor's, master's, or doctorate degrees. Eligible employees in the U.S.—where student loan debt totals more than a trillion dollars—can also take advantage of our Student Loan Repayment program. In 2019, the benefit provided $1.8 million to more than 800 participants.

Our competitive compensation and benefits help us attract and retain top talent while our recruiting techniques help us diversify our workforce. HPE's employee retention increased year-over-year as voluntary turnover fell from 9.5% in 2018 to just 7.0% in 2019.

PROMOTING TEAM MEMBER WELL-BEING

From behavioral health, to diet and exercise, to financial fitness, our holistic approach to wellness provides team members with resources to help them live happy, healthy lives.

In 2019, we launched Work That Fits Your Life (see **case study**), a new benefit that supports our workforce through work-life transitions by allowing flexibility in where and how they work. The industry-leading benefit includes improvements to our paid parental leave, flexible work arrangements, and return-to-work opportunities.

Our Winning with Wellness program supports our team members across the pillars of physical, financial, and emotional health. The program incorporates in-person and virtual resources such as on-site trainings, wellness websites, publicly available podcast series, leadership videos, and Yammer conversations. We promote all wellness pillars globally, with sites offering tailored programs to meet local needs.

In 2019, we expanded our U.S. behavioral health campaign to all HPE sites. The rollout included the launch of a podcast series and a global wellness page on our intranet. The campaign aimed to:

- Raise awareness about behavioral health challenges
- Create a supportive environment where team members feel safe getting help
- Connect team members and their families to support resources

Throughout the campaign we encouraged our workforce to utilize our free Employee Assistance Program (EAP). EAP provides resources to help team members with needs such as referrals for childcare, assistance for emotional and behavioral health, and critical incident support for sites affected by natural disasters. In the U.S., we also offer several work-life programs such as back-up child and elder care, and support with fertility/infertility issues. In 2019, more sites took advantage of our EAP resources than ever before, including a year-over-year increase in program use of 213% in India and 159% in Europe, Middle East, and Africa (EMEA).

WORK THAT FITS YOUR LIFE

One of the most important ways we can support our workforce is by providing flexibility in work when it's needed the most. Work That Fits Your Life is our progressive benefits program, launched in 2019 to improve the work/life balance of employees and ultimately encourage them to build long-term careers with HPE. Benefits include:

1. **Expanded parental leave**—Globally, we now provide a minimum of six months of paid leave for mothers and fathers after the birth or adoption of a child.
2. **Parental transition support**—Parents have the option to return to work gradually by working part-time for up to 36 months after the birth or adoption of a child.
3. **Retirement transition support**—Employees within one year of retirement can begin working part-time.
4. **Career reboot**—We provide job opportunities and training for people who have been out of the workforce for an extended period of time.
5. **Wellness Fridays**—Employees can leave work early one Friday each month to focus on physical or emotional health or spend time on personal or career development.

"We will retain and attract the best talent because of who we are, how we work, and how we treat our people, which in turn will help our customers and partners thrive."

ANTONIO NERI,
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

CASE STUDY

ENGAGING TEAM MEMBERS

Team member engagement is key to HPE's cultural transformation and we're proud to share that our team members are more engaged than ever before. In 2019, our annual Voice of the Workforce survey engagement score rose to 81%, an 18-point increase over the last two years. Seventy-six percent of our workforce completed the survey, an increase of three points from the previous year.

Of employees that responded, 94% felt they are treated equitably, with respect, and included. HPE leadership will use the results of the survey to inform their action plans, which drive engagement and continual improvement across their organizations.

We have a number of channels to engage with team members and encourage ongoing dialogue globally:

- Connect Now is our internal social collaboration platform for team members to interact with one another
- HPE Insider is our online company news page that provides business updates and spotlights various team member initiatives through engaging content
- All Employee Meetings are live events hosted by Antonio Neri and the Executive Committee that take place in a different country each quarter and are streamed across the globe with team members hosting site-based watch parties
- Global Day of Service is a dedicated day for team members to be a force for good and give back to their communities
- Team Member Appreciation Day is an annual celebration of our talented, diverse workforce

DEVELOPING RESILIENCE THROUGH RESKILLING

The rapid pace of technology innovation is re-shaping today's job market and revealing skills gaps in the technology industry. We are supporting those affected by this transition with the skills they need to succeed in the growing number of tech roles.

In addition, we also provide reskilling to people who have been out of the workforce for an extended period of time. In 2019, our Cyber Security Returnship program in Galway, Ireland, supported 15 tech professionals who were looking to build skills and experience before returning to the workforce. The cohort of 14 females and 1 male met over an 18-week period and built skills through the help of course materials, instructors, and certifications. Following the program, 50% of participants took the next step in their career journey by joining a college-level cybersecurity course.

EMPLOYEE HEALTH AND SAFETY

Our commitment to health and safety protects our workforce and improves productivity. It extends to all team members globally, going above and beyond mandatory protocols to include ergonomics and company-wide health and safety campaigns.

MAINTAINING SAFE AND HEALTHY WORKPLACES

HPE has a culture of safety that applies to every team member and worker. Our environmental, health, and safety (EHS) team sets our expectations on health and safety across HPE sites and those of our suppliers. Our EHS programs promote practices for an injury-free workplace and provide the tools and resources necessary for sites to comply with our Environmental, Health, and Safety Policy.

Our EHS policy and management systems are aligned to industry best practices. As of 2019, we had three sites certified to OHSAS 18001 and 10 sites certified to ISO 14001. In 2020, we will transition the OHSAS 18001 sites to the new ISO 45001 Occupational Health and Safety standard. We will continue to conduct periodic audits at key sites globally as part of our internal assurance program.

In 2019, we implemented an internal EHS risk reporting tool to track relevant regulations and compliance mechanisms across our global sites. This tool gives our EHS team greater visibility into site-specific risks and how they are being addressed. During the year, we also invested in new EHS management software to improve our data collection and measurements.

When workplace injuries occur, we track them in compliance with the International Labour Organization. In 2019, our lost workday case rate[23] was 0.05 and our recordable incident rate[24] was 0.11. Both rates were below U.S. industry standards of 0.1 and 0.2, respectively.

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Increasing engagement and building awareness is key to a safe work environment. We engage team members through our EHS programs, mandatory training during on-boarding, and company-wide campaigns. In 2019, many of our campaigns focused on emergency response and preparedness, including events such as CPR training and PrepareAthon days. During the year, a number of HPE sites were recognized for their strong health and safety practices, including HPE sites in India, Italy, Puerto Rico, Spain, Taiwan, and the United States.

Our Healthy Site Reference Guide, combined with our Global Real Estate Workplace Transformation projects, create healthier workspaces by utilizing safe and sustainable building materials and improving ergonomics. Our new corporate headquarters in San Jose, California, was designed to provide an energizing work environment and features numerous health and ergonomic amenities including a running trail, on-site gym, sit-stand desks, open floor plans, and more.

COMMUNITY INVESTMENT

We're evolving our culture of giving and leveraging technology to drive social impact.

A FORCE FOR GOOD

Building upon our legacy as a pioneer in corporate citizenship, we spent 2019 evolving how we use our unique strengths and skills as a technology leader to drive societal impact. We believe that, together, we can be a force for good, and that technology has the potential to enable greater efficiencies, mitigate social inequities, and drive better solutions to the world's most complex challenges. A key way we accomplish this is through HPE Gives, our global volunteering and giving program.

Our company demonstrates our commitment to HPE Gives through our interrelated, three-fold approach—amplifying the impact of HPE employees, supporting the communities where we live and work, and accelerating social impact in the digital age.

AMPLIFYING THE IMPACT OF OUR EMPLOYEES

We empower our workforce to support the causes that they care about and to give back in a way that is relevant to their lives and their communities. Our team members receive up to $5,000 a year in combined volunteer rewards and donation matching to amplify their impact. Since the inception of our HPE Gives social impact program in 2016, we've contributed more than $25 million and are approaching 1 million hours volunteered by HPE employees.

Since the inception of our HPE Gives social impact program, we've given more than $25 million and are approaching 1 million hours volunteered by HPE employees.

Every employee receives up to 60 hours per year of their salaried time to volunteer, whether on their own, with their peers, or with their families. They can also turn these hours into volunteer rewards to give back to a nonprofit, multiplying their impact.

This investment is not only valuable to the causes supported, but also better retains and develops our talent. Voluntary turnover is 49% lower among employees who take part in HPE Gives. Through our Voice of the Workforce survey, 86% of our workforce reported that the HPE Gives program is important to them—and it shows. Employee participation in HPE Gives is up 109% year-over-year, with 265,000 hours volunteered and $7 million in total giving in 2019, benefiting more than 6,000 nonprofits.

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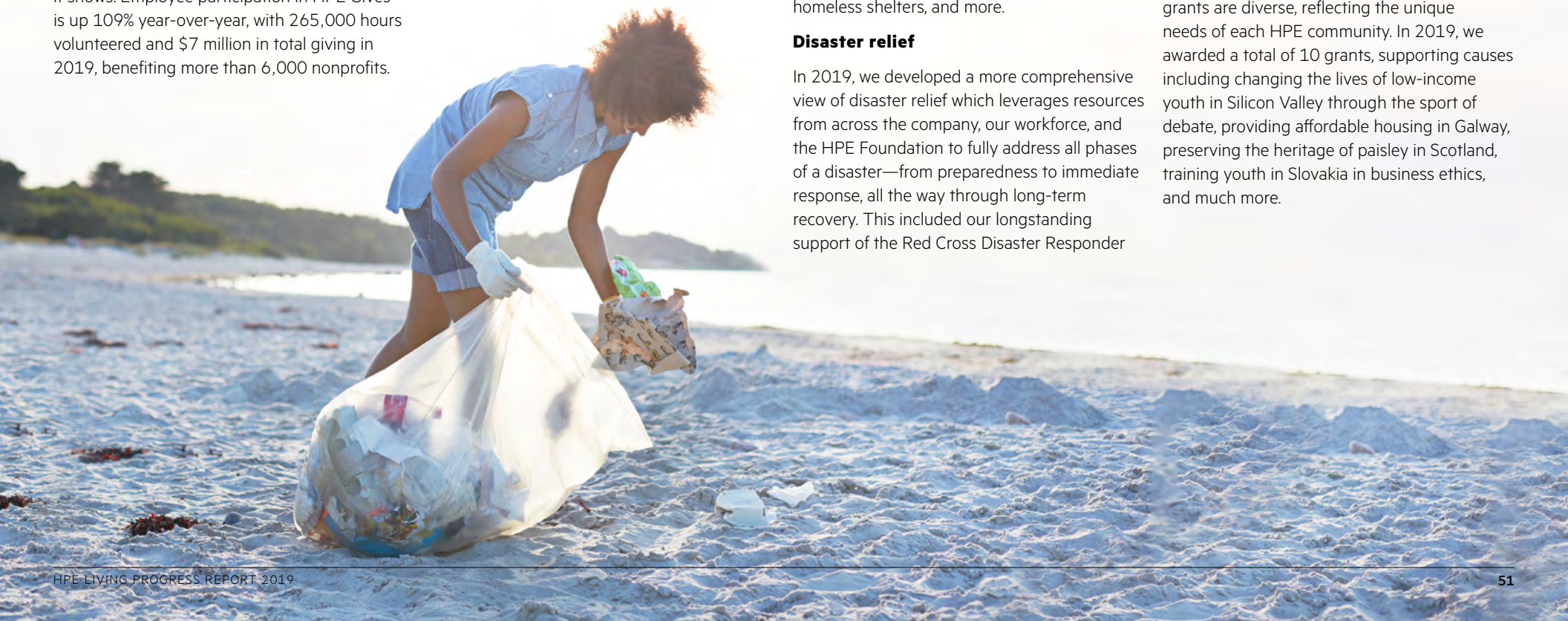


SUPPORTING THE COMMUNITIES WHERE WE LIVE AND WORK

Throughout the year, our employees volunteer with organizations they value, and we actively encourage our people to serve on nonprofit boards. To celebrate our culture of giving, we hosted our second annual Global Day of Service on September 20, 2019, which saw 13,000 employees in 56 countries conduct more than 300 volunteer activities, including cleaning up nature preserves, renovating schools, hosting STEM career fairs, serving in homeless shelters, and more.

Disaster relief

In 2019, we developed a more comprehensive view of disaster relief which leverages resources from across the company, our workforce, and the HPE Foundation to fully address all phases of a disaster—from preparedness to immediate response, all the way through long-term recovery. This included our longstanding support of the Red Cross Disaster Responder Program and a disaster-relief grant for the fire at Notre Dame Cathedral in Paris. To harness the capabilities of our employees, we also launched a virtual volunteering program with Missing Maps in which more than 100 employees mapped 11,000 buildings and 1,553 miles of roads to enable more strategic and effective disaster relief around the world.

Community Impact Grants

Our Community Impact Grants initiative is an employee-nominated grants program providing funding to nonprofits with which groups of employees have meaningfully engaged. These grants are diverse, reflecting the unique needs of each HPE community. In 2019, we awarded a total of 10 grants, supporting causes including changing the lives of low-income youth in Silicon Valley through the sport of debate, providing affordable housing in Galway, preserving the heritage of paisley in Scotland, training youth in Slovakia in business ethics, and much more.

ACCELERATING SOCIAL IMPACT IN THE DIGITAL AGE

Technology has the potential to solve some of the world's greatest challenges. That's why we partnered with Fast Forward for our new flagship initiative, HPE Accelerating Impact (see case study), which engages our employees in supporting technology-driven nonprofits and underscores our focus on skills-based volunteering to capitalize on the diverse skillsets of our workforce.

In addition, as the founding funder of Curated Pathways to Innovation (CPI), the HPE Foundation continued our partnership with YWCA Silicon Valley, Santa Clara University, and Purdue University to improve the representation of girls and minorities in STEM fields through an AI-enabled personalized learning platform. CPI stands out in a crowded STEM ecosystem because it's grounded in research and data, utilizes longitudinal tracking with machine learning to iterate for effective outcomes, and focuses on persistence throughout the STEM career pipeline. At the end of the 2018-2019 school year, our research revealed that CPI significantly increased students' motivation and aspiration in pursuit of computing and STEM, in contrast to national research depicting declines. While this work began at one middle school in San Jose, CPI has now expanded upward to high school and community college, and outward across the Bay Area and into Houston, with plans to enter an additional state in 2020.

These partnerships are key ways we're working to inspire a rising generation of diverse tech innovators and smart digital citizens. In the coming year, we are building on our partnership with CPI to introduce unique HPE-developed tools to augment and accelerate students' STEM journeys. Learn more about how we're supporting the next generation of female cybersecurity experts in data security.

Looking ahead

Our employees have demonstrated the significant impact they can make in local communities when they leverage their skills. That's why we're doubling the volunteer reward rate for pro bono volunteering in 2020. This will further increase the impact of skills-based volunteering, such as the ongoing mentoring and moot courts hosted by HPE Legal with the Silicon Valley Urban Debate League (SVUDL). SVUDL empowers low-income students from underrepresented minorities to unlock the power of their voices to become advocates for themselves, their futures, and their communities. We're also integrating skills-based volunteering into new-hire onboarding and professional development learning and leadership opportunities, ensuring this type of volunteerism is built into our talent pipeline.

Moving forward, we're evolving our approach toward more strategic community investment, partnering with governments and other key stakeholders to give back in a way that better aligns to the needs and priorities of local communities.

HPE ACCELERATING IMPACT

Tech nonprofits, which develop technology for social impact missions, are changing the world for the better. Yet, they frequently struggle to attract funding from traditional philanthropic sources, which lack expertise in technology. Tech nonprofits also do not have access to venture capital funding. In partnership with Fast Forward, a tech non-profit accelerator, HPE created an initiative that embodies our commitment to leveraging technology for good—HPE Accelerating Impact.

This initiative harnesses the power of HPE's greatest resource—our people—by giving them a voice to direct financial support to the causes that matter most to them. In its inaugural year, HPE Accelerating Impact launched a two-week campaign that gave every HPE employee a $25 credit to contribute to one of 31 tech nonprofits. Additional credits and grants were unlocked through gamification.

Nearly 25,000 employees from around the world steered more than $1 million from the HPE Foundation to the tech nonprofits. Company-wide, three tech nonprofits received the most funding—Thorn, which uses artificial intelligence to combat child sexual abuse; Dost Education, a mobile platform empowering low-literacy parents to promote early childhood education; and Medic Mobile, which builds open-source software supporting health workers who deliver equitable care. Our support has helped these organizations positively benefit the lives of more than 300 million people worldwide.[25]

Since the launch of the campaign, HPE employees have provided mentorship and participated in pro bono and skills-based volunteer projects with a number of these tech nonprofits.

CASE STUDY

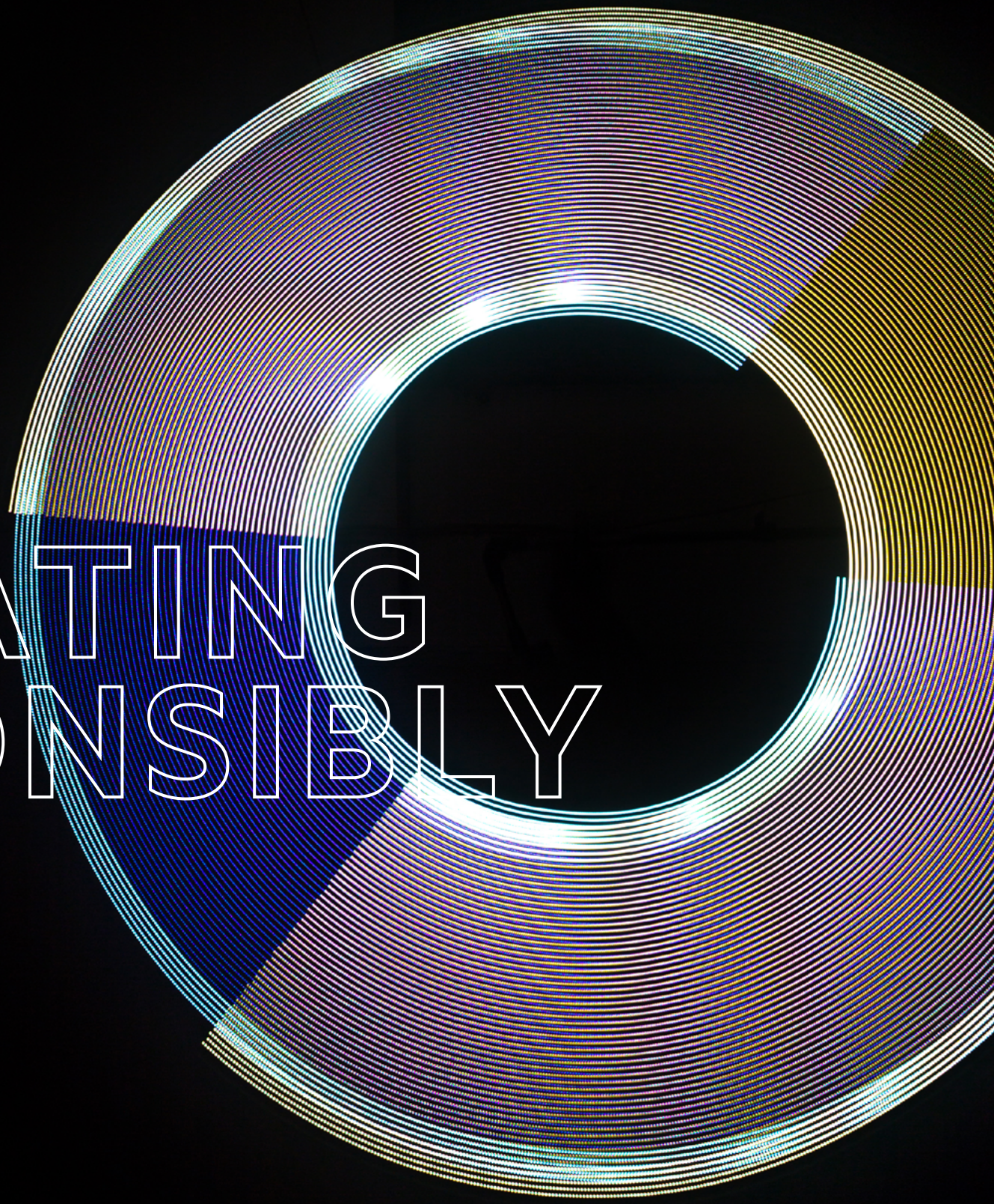
BRIDGING INDIA'S MEDICAL ACCESS GAP

To help mitigate the problem of inadequate access to medical care outside India's urban centers, HPE has created a network of cloud-enabled eHealth Centers (eHCs) that have provided services to more than 1 million people since 2012. Our eHCs are designed to deploy within a standard shipping container and offer remote diagnoses from highly skilled medics at no cost to patients. The eHCs also combine online training materials for remote healthcare workers with diagnostic tools that capture the patients' vital statistics on a cloud-based application.

To support India's target of being tuberculosis (TB)-free by 2025, we've set a goal to screen 50,000 symptomatic patients in 2020. Through this commitment, we hope to target the "Missing TB" cases that would normally go undiagnosed and spread the disease.

CASE STUDY

03
OPERATING RESPONSIBLY



We win the right way, holding ourselves, our suppliers, and our partners to the highest ethical standards. We protect our customers' reputations by upholding human rights, promoting accountability, and building security into everything we do. We share a responsibility to protect people and the environment, and uphold these standards in our innovation principles, business decisions, and procurement choices.

IN THIS SECTION

- Corporate governance and ethical behavior
- Ethical sourcing
- Human rights
- Privacy
- Data security
- Network resilience
- Public policy

CORPORATE GOVERNANCE AND ETHICAL BEHAVIOR

High ethical standards and strong governance are the foundation of our business. Together, our team members and Board of Directors are required to demonstrate behavior and decision making that protect our reputation and the long-term interest of our shareholders.

CORPORATE GOVERNANCE

Oversight

Our approach to governance protects investor interests, reduces fiduciary risk, and propels our business through sustainable innovation. Our CEO and Board of Directors, as well as the Nominating, Governance, and Social Responsibility (NGSR) Committee of the Board, oversee environmental, social, and governance (ESG) issues and are committed to operating HPE in a responsible manner. Through its careful oversight of management and the company, the Board ensures that key ESG policies, such as the HPE Code of Conduct and General Specification for the Environment, align with best practices and stakeholders' interests.

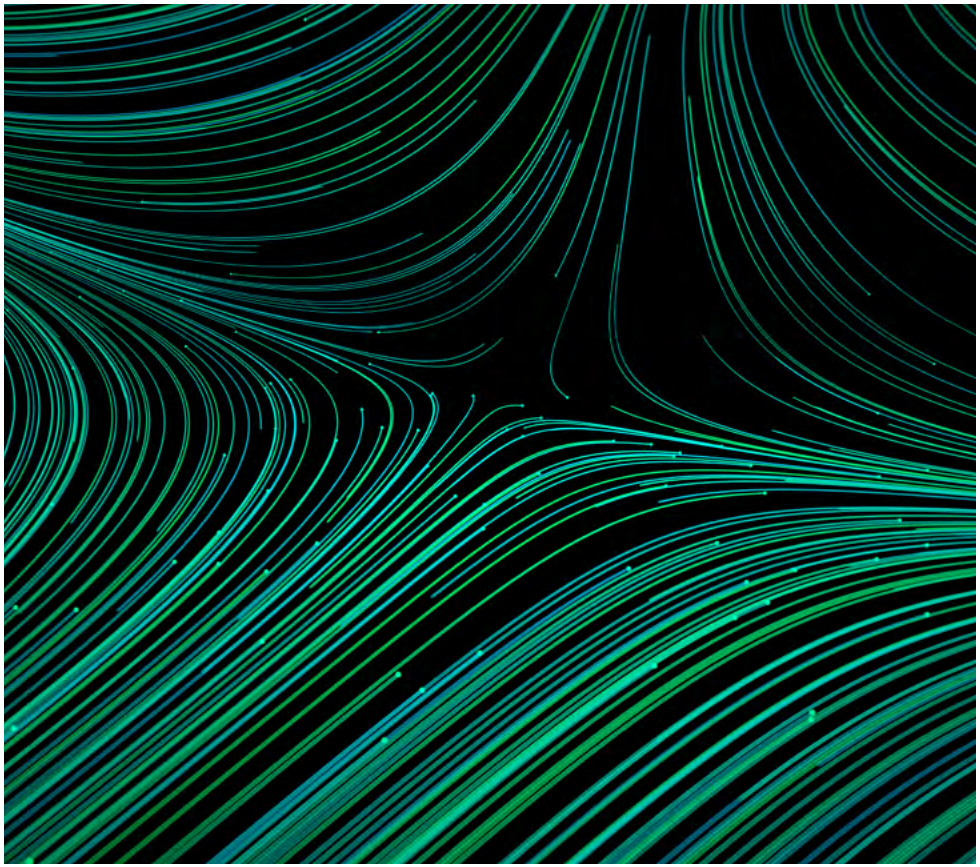
Our Board participates in five standing committees:

- Audit
- Finance and Investment
- Human Resources and Compensation
- Nominating, Governance, and Social Responsibility
- Technology

As of 2019, we have 13 Board members. Twelve members are independent of HPE. Five are women and three identify with one or more diverse groups in ethnicity, race, or nationality. Our Board is one of the most diverse in our industry.

For full details of HPE corporate governance see our Proxy Statement.

54% of our Board members identify with one or more diverse groups.



LIVING PROGRESS GOVERNANCE STRUCTURE

Living Progress governance

Our formal process to manage ESG risk helps to capture opportunities and shield our business—including our operations, team members, and supply chain—from negative impacts. Living Progress resides within HPE Corporate Affairs, and leads the effort to set HPE's ESG strategy by identifying, evaluating, and mitigating ESG risks across a spectrum of issues, from ethical sourcing to climate change. Additionally, business unit and functional groups are responsible for elevating enterprise risks to the HPE Risk Council. The Risk Council meets regularly to review, address, and resolve concerns raised by risk owners.

The Corporate Affairs team communicates with the HPE Board of Directors on sustainability-related issues including risks, impacts, target setting, and resiliency. In addition, Corporate Affairs provides regular updates to the NGSR Committee regarding ESG matters and the company's approach to managing them, specifically matters that pose material risk to the business. In 2019, Corporate Affairs met with the Board twice on sustainability-related issues. In 2020, HPE will conduct further briefings and trainings for the Board to increase their knowledge of material ESG issues.

We link a portion of senior management compensation to ESG factors and reward team members for delivering near-term results and long-term sustainable value. For instance, in order to increase human capital, the HPE management by objectives (MBO) approach includes performance targets for retaining top talent and meeting organizational diversity targets. The Board of Directors' Human Resources and Compensation Committee manages our reviews of executive compensation.

Our Chief Sustainability Officer, a member of the HPE Office of Legal and Administrative Affairs, manages the Living Progress program, which is governed by the following groups:

HPE Board of Directors' Nominating, Governance, and Social Responsibility Committee

- Guides HPE's global citizenship activities, providing strategic direction on policies and programs covering topics such as human rights, privacy, sustainability, and corporate social responsibility
- Identifies, evaluates, and monitors matters that could significantly affect the company's reputation or operations, including social, political, regulatory, and environmental concerns
- Oversees our Political Action Committee, government affairs, and public policy engagement

HPE Executive Council (led by CEO)

- Oversees the Living Progress program

HPE Living Progress Strategy Council

- Evaluates the company's ESG focus areas and priorities
- Provides support from senior leaders across the organization for Living Progress objectives and commitments
- Oversees communication of ESG strategy to internal stakeholders
- Leads materiality assessments, reporting activities, and engages with external stakeholders

Tax transparency

HPE fulfills taxation responsibilities in every location where we operate, and we advocate for tax reform that supports an evolving IT industry in a modern marketplace. HPE's tax affairs are managed to protect the company's wider corporate reputation in line with our overall high standards of governance. HPE maintains appropriate tax controls and documentation processes, which regularly undergo internal audits.

Business continuity

HPE is committed to providing a safe work environment for its team members and ensuring continuity of operations in order to provide seamless service to its customers worldwide. HPE's global Business Continuity Management (BCM) program takes a holistic, enterprise-wide approach in order to ensure end-to-end continuity across the value chain. Under the HPE BCM Policy, business group and global function leaders are accountable for the development, maintenance, and periodic rigorous testing of appropriate business continuity strategies and plans for their critical processes, operations, and facilities. Business Continuity Plans are reviewed annually to ensure rapid, effective recovery, and incident response from events that could have a significant impact on performance, customer expectations, brand, or financial results.

ETHICAL BEHAVIOR

To maintain the highest standards across our dynamic, global workforce, we reinvest in our ethics programs. We expect team members to take responsibility for their own actions and do what is right—behaving with honesty and integrity even in challenging circumstances.

Anti-corruption program

We do not tolerate corrupt behavior, including bribery or kickbacks. We comply with relevant laws in every country in which we do business and, through our anti-corruption program, we clearly communicate expectations to our workforce. Our program includes:

- Policies that provide clear guidance, including the HPE Anti-Corruption Policy and the HPE Global Business Amenities Policy. These documents are available in more than 20 languages.
- Tools and training to help team members identify and avoid potential issues, including the Amenities Approval Tool.
- Process controls to review higher-risk transactions and screen third-party partners. We identify countries at high risk for corruption based in part on Transparency International's Corruption Perceptions Index.
- Support and advice from specialized anti-corruption attorneys and other compliance professionals.
- A transparent, systematic process for investigating and addressing potential concerns.

HPE is recognized as one of the World's Most Ethical Companies by the Ethisphere Institute.

HPE is an active member of the World Economic Forum's Partnering Against Corruption Initiative (PACI), committing to zero tolerance of corruption in all forms and engaging in a coordinated response to the challenges of corruption globally.

Ethics and compliance program

Our core document is the HPE Standards of Business Conduct (SBC), which governs our business practices and provides guidance for ethical decision-making. In 2019, we re-wrote the standard to better reflect our commitment to ethical leadership and to align its content with global best practices. We also refreshed our dedicated SBC website and ran an internal, company-wide campaign to promote the update.

Our Ethics and Compliance Committee and our Audit Committee oversee our approach to ethical conduct, with the HPE Board of Directors taking ultimate responsibility. All members of our Board of Directors completed the annual Standard of Business Conduct training in 2019.

If something is not right, we want to know. We encourage anyone with a concern or question about business conduct to raise it through one of our reporting channels, without fear of reprisal. Reports are confidential and can be made anonymously where local law allows. For each report made, we:

- Add a record to our global case management system, which we use to identify trends and priorities
- Review and respond promptly
- Conduct any required investigations appropriately, carrying out disciplinary or remedial action when needed

We track the nature of ethics and compliance items reported to us each year. In 2019, the majority of issues related to labor law and misuse of assets.

ETHICS & COMPLIANCE GOVERNANCE STRUCTURE

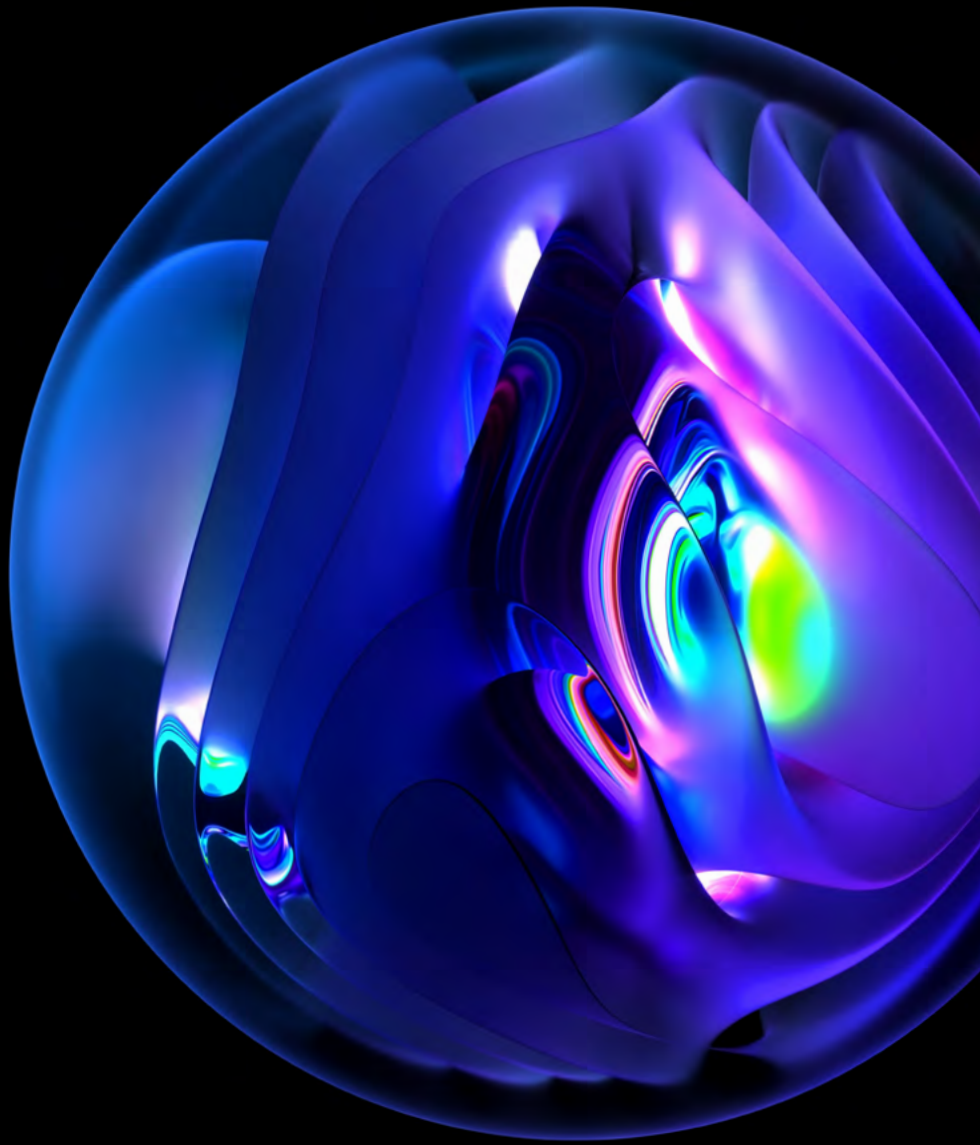
Training and communication

Clear and consistent communication reinforces the importance of ethical behavior with our workforce. We update our communications annually, including training, to ensure we address areas for improvement. We deliver relevant and timely messages, tailored to team-member roles to ensure their efficacy. Our program includes the following:

- **Training on our Standards of Business Conduct**—All team members must complete the annual SBC refresher course, which covers key policies, procedures, and high-risk issues. Board members take SBC training every two years. New hires complete an SBC course within 30 days of joining HPE.
- **Internal ethics and compliance social media platform**—The platform, which is part of our internal social network Connect Now, allows our team members to ask questions, access resources, and debate ethics and compliance issues.
- **Ethics Road Show**—The Road Show connects senior members of the Ethics and Compliance Office (ECO) with HPE business leaders in our regions. These in-person and virtual meetings strengthen our culture of ethical conduct and enables ECO to remain alert to challenges and successes across our business.

We communicate with our workforce on ethics and compliance issues through targeted email messages, videos, and live training sessions. In 2019, we created new ethics content to elevate awareness including six anonymized case studies on SBC violations and a video on bribery, which was translated into eight languages and distributed in 10 countries.

In 2019, the HPE ECO recognized three team members as Ethics Champions for exhibiting exemplary ethical behavior.



ETHICAL SOURCING

Our extensive Supply Chain Responsibility program guides our approach to assessing risks, monitoring and improving performance, and working collaboratively with suppliers to share knowledge on key issues.

At HPE, we hold our supply chain partners to high ethical standards and regularly audit and engage with suppliers to ensure compliance with HPE standards through our Supply Chain Responsibility (SCR) program. Our mission is to protect and elevate workers; reduce global and community environmental impact; and benefit our company, our business partners, and our customers.

Through our longstanding SCR program, we assess social and environmental risks in our supply chain and set rigorous standards and targets, including our Foreign Migrant Worker Standard and first-of-its-kind science-based supply chain greenhouse gas (GHG) emissions reduction goal. While we continue to hone our program and policies to address emerging risks and monitor compliance, we also work to further elevate supply chain social and environmental standards by sharing knowledge and collaborating with our suppliers and industry partners.

To learn more about our program purpose, objectives, and procedures, read our approach to supply chain responsibility.

COMBATING FORCED LABOR AND HUMAN TRAFFICKING IN OUR SUPPLY CHAIN

Every individual has the right to choose the work they do, and to be treated with dignity and respect. We believe the business community plays a vital role in the effort to eradicate forced labor, and more specifically, must implement policies and standards in their supply chains.

Anyone concerned about potential human trafficking or forced labor in our supply chain can use a range of reporting channels to report it.

How we map and respond to risks of forced labor in our supply chain

Working closely with our suppliers, we clearly convey our expectations, assess risks, monitor progress, and take corrective actions where needed. We provide support and training for suppliers as an important step to build a resilient supply chain and avoid conditions that might contribute to human trafficking or forced labor.

The two groups of workers most vulnerable to exploitation in our supply chain remain foreign migrant workers and student and dispatch workers in China. We respond to these risks with a step-by-step process to detect and address unacceptable labor practices in our supply chain.

We set clear standards to promote practices designed to prevent forced labor and human trafficking, and developed the industry's first Foreign Migrant Workers Standard in 2015. We are also a founding member of the Leadership Group for Responsible Recruitment, focused on promoting ethical recruitment and combating the exploitation of migrant workers. In 2018, KnowTheChain, a resource for companies and investors to understand and address forced labor risks, ranked HPE third out of 40 companies in the ICT sector for our efforts to address forced labor in our supply chain.

Our standard upholds the "Employer Pays Principle," protecting workers from having to pay fees to obtain a job. If we find that one of our suppliers is in violation of this requirement, we require all recruitment fees to be reimbursed. When enforced, these policies help to ensure that employers in supply chains absorb the true cost of recruitment and prohibit the charging of recruitment costs to workers, in accordance with international standards and regulations.

To protect the rights of student and dispatch workers at our suppliers' plants in China, we require relevant suppliers to adhere to our Student and Dispatch Worker Standard for Supplier Facilities in the People's Republic of China.

In instances where we work with a major new supplier or receive a tender for a large contract, we assess the organization to ensure compliance with our Foreign Migrant Worker Standard. If we identify major or critical issues during this phase, we require the potential supplier to commit to and demonstrate improvement prior to working with us.

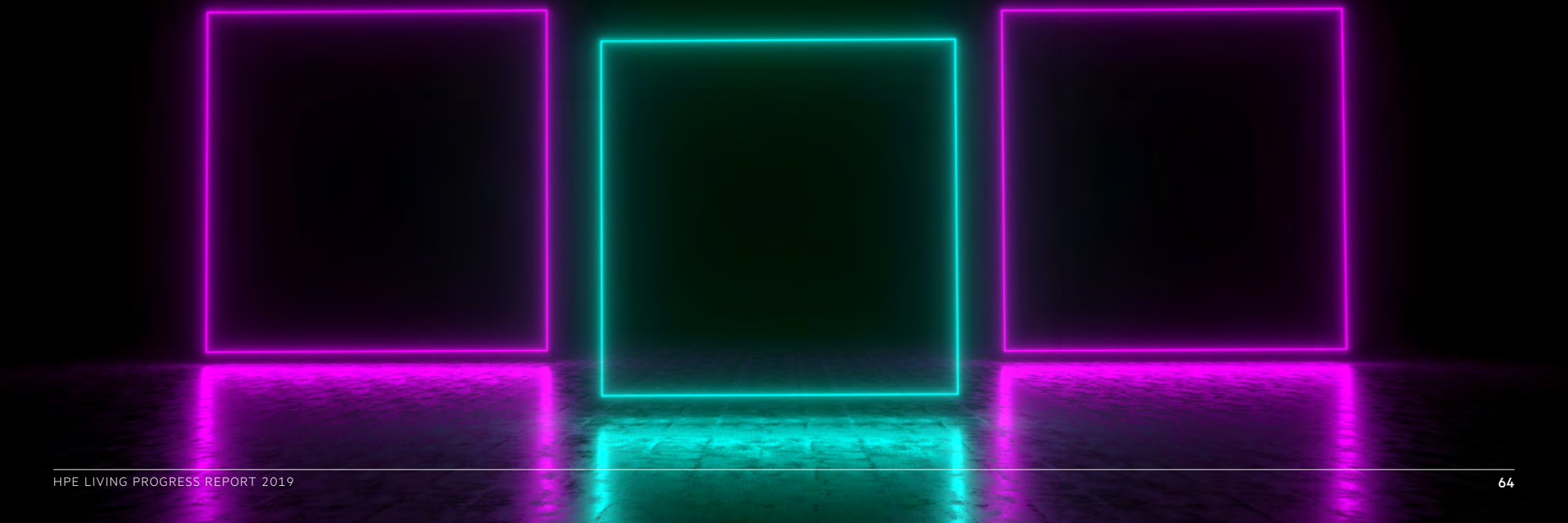
Advocating for stronger standards and reporting

The global recruitment industry spans multiple sectors and we engage with partners within and outside of the IT industry to drive wider change in working practices. We encourage others to join in our approach. HPE also takes initiative to promote large-scale collaboration between the public and private sectors to address the root cause of modern slavery and forced labor. For example, in 2019 HPE:

- Co-authored a recruitment fee payment guidance document, along with our industry peers, that was published by the Responsible Labor Initiative (RLI). The purpose of the guidance document is to aid and provide recommendations for our shared suppliers on issues including worker fee reimbursements.
- Commissioned Verité to research the impact of foreign migrant work security bonds in Singapore and Malaysia, where a number of HPE suppliers are located, to better understand if such bonds and other potential existing financial mechanisms could influence how suppliers recruit and employ foreign migrant workers.
- Co-sponsored and participated in the Global Reporting Initiative (GRI) partnership project with the RLI to provide company feedback on transparency requirements and best practices in modern slavery reporting.
- Joined the temporary subcommittee within the RLI to revise the Definition of Fees Standard for use by HPE and the Responsible Business Alliance.
- Participated in the Global Business Initiative on Human Rights (GBI) Beyond Auditing working group, contributed to a best practice publication, and promoted best practice with GBI members.

Our Board of Directors recognizes the leading role we play and approves our commitments to the California Transparency in Supply Chains Act of 2010 and the UK Modern Slavery Act of 2015. Read our statement to meet the requirements of the California Transparency in Supply Chains Act of 2010 and the UK Modern Slavery Act of 2015.

Learn more about how we build supplier capability and advocate for stronger labor standards.



SUPPLY CHAIN LEADERSHIP AND TRANSPARENCY

Leadership and transparency are at the core of our SCR program. We engage with peers, industry bodies, and cross-sectoral organizations, including the Responsible Business Alliance (RBA),[26] the Global Business Initiative, and the Leadership Group for Responsible Recruitment, to share best practices and new challenges.

We support supply chain transparency and publish:

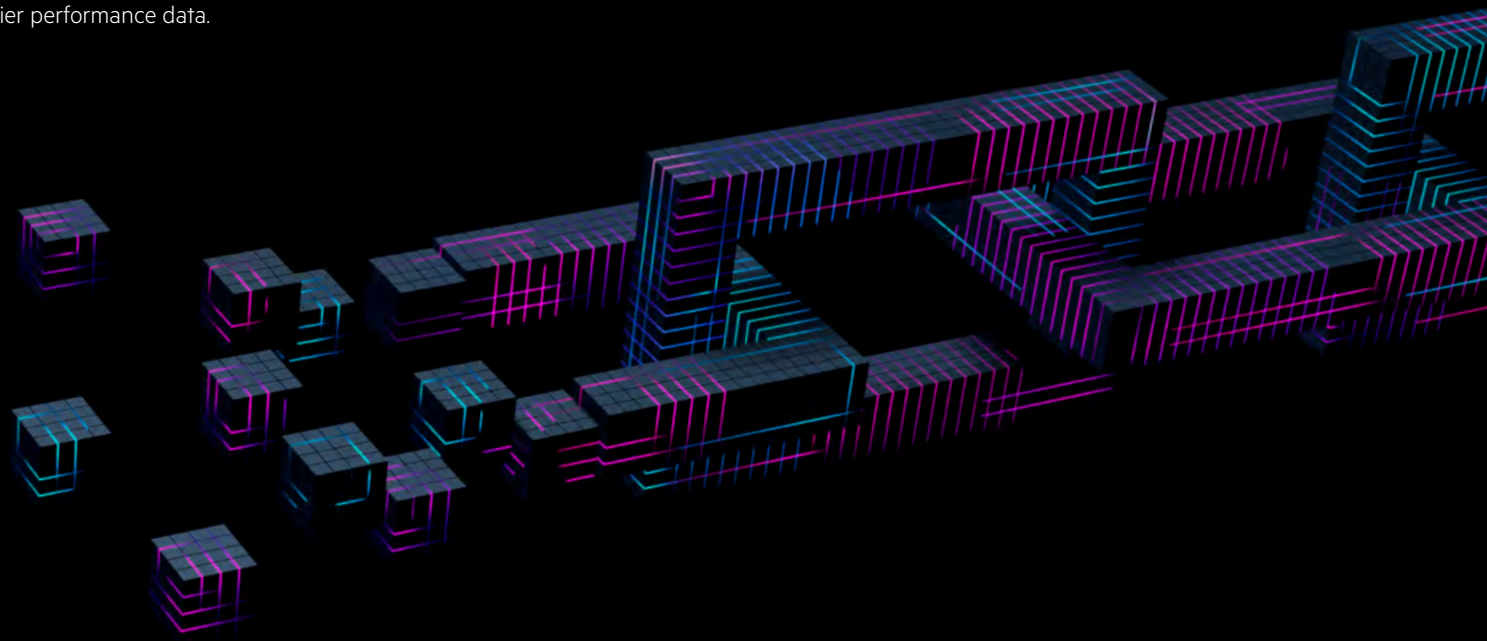
- A list of suppliers and their addresses, their sustainability reporting, and their progress toward a transparent and science-based GHG emissions-reduction program
- Our Supply Chain Responsibility dashboard and supplier audit results
- Information about our capability-building programs
- A list of 3TG (tin, tantalum, tungsten, and gold) smelters and refiners and their locations

HOW WE WORK WITH SUPPLIERS

We undertake regular, independent audits against our Supplier Code of Conduct[27] and include Social and Environmental Responsibility (SER) indicators in our supplier scorecard, ensuring supplier performance against social and environmental factors is demonstrated and considered in our supplier selection criteria. See the 2019 Data Summary for comprehensive supplier performance data.

We have long-term relationships with many of our suppliers and invest resources to deliver training and capability-building programs. We require our suppliers to cascade our Supplier Code of Conduct and our SER standards and requirements within their own supply chain and expect them to engage with their sub-tier suppliers. For example, in 2019 HPE:

- Partnered with fellow RBA members Intel®, Seagate, HP Inc., and Western Digital to fund supply chain sustainability workshops delivered in four regions of Southeast Asia where we have collectively seen the most nonconformances through the Supplemental Validated Audit Process (SVAP).
- Conducted a two-day training for HPE suppliers and recruitment agents in Singapore to communicate and train suppliers and their sending and receiving country recruitment agents on the HPE Foreign Migrant Worker Standard.
- Onboarded a group of HPE suppliers to Verite's online data platform to monitor and assess their recruitment agencies for risks to compliance and adoption of best practices.
- Worked to improve worker voice through Impactt Restart training rooted in social-psychology concepts, as well as Elevate's Worker Sentiment Survey, a mobile-based alternative for workers to raise concerns.



RESPONSIBLE SOURCING OF MINERALS

We have a responsibility to ensure that the materials used to make HPE products—including metals found in most IT products such as tin, tantalum, tungsten, and gold (3TG)—are ethically sourced. The sale and use of 3TG from the Democratic Republic of the Congo (DRC) or an adjoining country—collectively known as the Covered Countries—has been linked to funding for violent groups who commit human rights offenses.

Our goal is to improve the transparency of mineral sourcing within our supply chain while striving to achieve DRC conflict-free[28] sourcing for our products. Ultimately, we aim to improve conditions in the Covered Countries and other Conflict-Affected and High-Risk Areas identified by the presence of armed conflict, widespread violence, or other human rights abuses. Because we believe it is important to avoid the economic and humanitarian impacts associated with an embargo of a particular region, we continue to source, and do not prohibit our suppliers from sourcing, from the Covered Countries and other Conflict-Affected and High-Risk Areas. In 2019, 95% of smelters and refiners reported by suppliers made progress toward DRC conflict-free status.[29] Our annual Conflict Minerals Report—required by the U.S. Securities and Exchange Commission—shows the status of smelters and refiners involved in our supply chain.

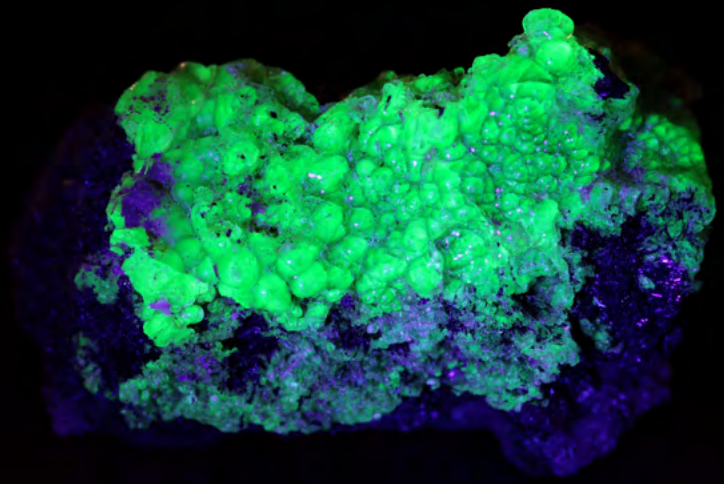
HPE is a member of the Responsible Minerals Initiative (RMI), an organization instrumental in developing and advancing programs such as the Responsible Minerals Assurance Process (RMAP). In 2019, we facilitated outreach to more than 45 facilities to encourage their involvement in RMAP or another independent assessment program aligned with the Organization for Economic Co-operation and Development (OECD) Due Diligence Guidance.[30]

To increase smelters' participation in RMI's RMAP audit program, in 2019, HPE repeated its 2018 financial contribution to the RMI's Initial Audit Fund for Participating Smelters to help smelters pay for responsible sourcing audits. We also helped launch a new fund through the RMI, called the Upstream Due Diligence Fund, to help smelters conduct mine level assessments in Conflict-Affected and High-Risk Areas.

In 2019, HPE participated in a RMI delegation in India to drive the uptake of responsible gold sourcing practices in the country. We met face-to-face with Indian refiners at their processing facilities to strengthen our understanding of the gold supply chain and its challenges. Additionally, we participated in the Indian Responsible Gold Sourcing Workshop organized by OECD and various Indian responsible gold sourcing organizations. Participants agreed to take steps to encourage gold refiners in India to undertake a responsible sourcing assessment by an OECD-aligned audit program and support resources to achieve this goal.

HPE continues to make financial contributions to KEMET[31] Corporation's closed-loop tantalum supply chain by purchasing conflict-free tantalum capacitors; and to KEMET's Friends of Kisengo Foundation, a nonprofit dedicated to effectively and sustainably improving the lives of people in the DRC through an integrated rural development program focusing on infrastructure, health, education, and environmental development. In 2019, we repeated our contribution and funded one month of school expenses for 1,500 children in the mining community of Kisengo, DRC.

In 2019, 95% of smelters and refiners reported by suppliers made progress toward DRC conflict-free status.



HUMAN RIGHTS

We treat all people—inside and outside the company—with fairness, dignity, and respect. We actively pursue ways to demonstrate our respect for human rights, and embed it in how we operate.

PROTECTING HUMAN RIGHTS ACROSS OUR VALUE CHAIN

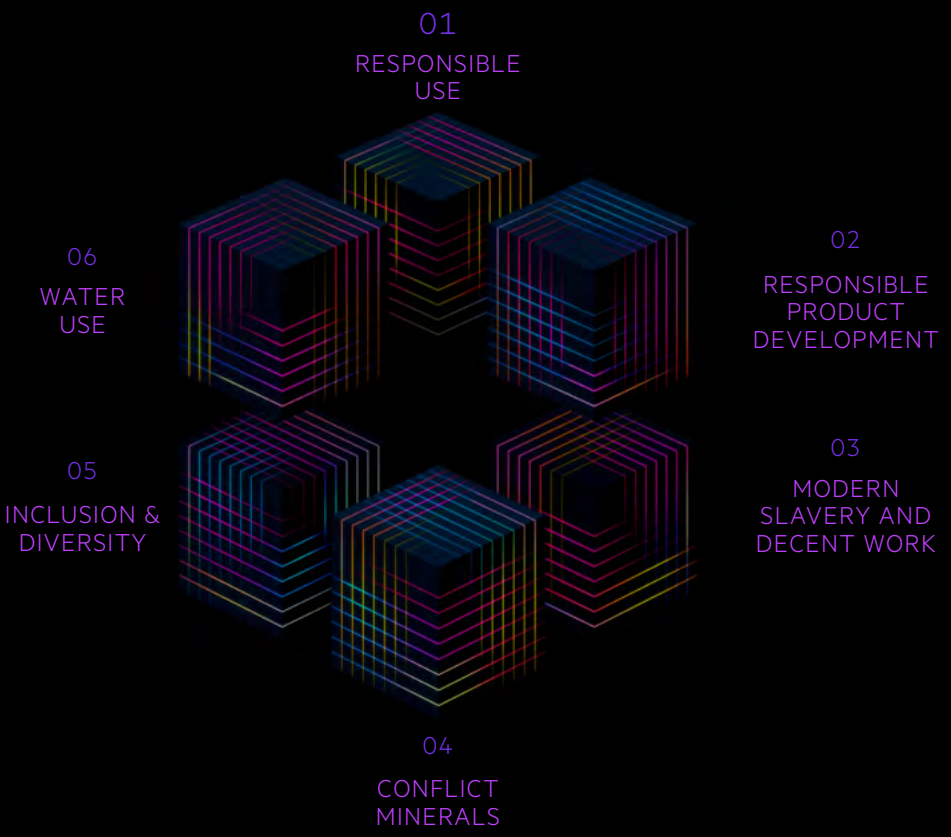
At HPE, we believe that the basic freedoms and standards of treatment to which all people are entitled are universal. Upholding these rights is fundamental to our values. We respect the rights of all individuals impacted by our work and that of our partners. In particular, we respect the rights of vulnerable groups including migrants, children, and women, as defined in the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work. We continue to be committed to the UN Guiding Principles on Business and Human Rights, which are the international standard on how to apply human rights to how we work, and our standards and codes reflect the ILO's core conventions.

The HPE Office of Legal and Administrative Affairs guides our approach and works across the business to address specific issues as they arise. We recently updated our policies and commitments related to Human Rights to strengthen our pledge to global standards, clarify our commitment to respect the rights of vulnerable groups and human rights defenders, and better explain how we ensure compliance with the policy. In 2019, HPE was one of the three ICT companies to score a top place on the Corporate Human Rights Benchmark.

Any parties concerned about activities within our value chain should contact us immediately through one of our reporting channels. We offer uninterrupted access, anonymity, and translation services to make it easy for anyone to raise a concern, and we promote our hotline where opportunities arise, such as when interviewing suppliers' workers.

OUR SALIENT HUMAN RIGHTS RISKS

In 2019, HPE conducted a company-wide Human Rights Impact Assessment with an external evaluator, Article One, to better understand our risks, identify gaps in our due diligence, and update our strategy and processes in order to more effectively manage our human rights risks. The assessment identified HPE's most salient risks, all of which are common throughout the IT industry: responsible use, responsible product development, modern slavery and decent work, conflict minerals, inclusion and diversity, and water use.



Responsible use of our technology

Our most salient risk is the irresponsible use of our products, which could happen if a customer uses our product to power or support activities that violate the rights and freedoms of individuals. Innovative technologies have the power to disrupt industries and create significant solutions for some of the world's toughest problems but, if misused, these technologies can also pose new challenges. We recognize that we share a responsibility to ensure our products are not used with any mal-intent.

Our HPE Global Human Rights Policy guides us and helps us reduce the potential for our products or services to be used by companies, individuals, organizations, or regimes to cause violations of people's human rights. Through our policy, we:

- Evaluate specific concerns connected with existing or future customers and partners
- Conduct due diligence on relevant business activities in appropriate circumstances
- Work to comply with all relevant sanctions, restrictions, and embargoes in our business operations worldwide

One of the ways we implement this is by partnering with our legal teams, building awareness and equipping them with tools to monitor and identify high-risk sales opportunities, and escalating them to our human rights desk for further risk assessment.

Responsible development of artificial intelligence

Artificial intelligence (AI) brings new human rights risks, including discrimination from algorithmic bias and labor impacts associated with automation.

HPE has implemented processes to identify potential new products that could increase risks, and we seek to understand and mitigate those risks prior to and during product development by engaging our engineers and involving them in our risk analysis. We continue to design and refine formulaic processes for carrying out due diligence in responsible product design, particularly in AI.

In 2019, we engaged across our business to assess the best governance framework for managing the ethics of AI, and built awareness amongst our leadership of the nature of our AI ethics risks. Looking ahead, we will launch our AI Ethics Advisory Board, AI Ethics Working Group, and AI Ethical Principles to guide, assess, and support our responsible development and use of AI.

Modern slavery and decent work and conflict minerals

We manage supply chain risk through our Supply Chain Responsibility program which focuses on improving labor standards and protecting workers. We emphasize the importance of respect for workers' rights with suppliers, helping them to embed human rights into how they operate, and engage with their workers in a meaningful way. See the ethical sourcing section for further information.

Inclusion and diversity

Our mission is to build a respectful and inclusive culture at HPE, where individuals are valued for their skills and the knowledge they bring, regardless of factors that are irrelevant to their work, such as gender or ethnicity. We support a more inclusive economy through our supplier diversity program and STEM skilling programs. See the inclusion and diversity section for further information.

Water use

Operating in water-stressed areas poses risks to our business, employees, and suppliers. We are currently developing a company-wide strategy to reduce these vulnerabilities. See the environment section for further information.

HUMAN RIGHTS AT HPE

We design and develop internal procedures for robust due diligence, build awareness across our company and partners, and strengthen governance and systems to hold ourselves accountable. We adopted recommendations provided by our Human Rights Impact Assessment to refine our strategy and develop our new roadmap for continuous improvement, which includes the following principles:

- Identify and escalate high-risk transactions
- Assess risk and inform decision-makers across the business
- Design and implement mitigation strategies
- Track performance, assess and report trends to HPE leadership, and contribute to international best practices

We manage workplace risk through our Standards of Business Conduct, our Nondiscrimination Policy, and our Harassment-Free Work Environment Policy.

Our workforce also cares deeply about supporting human rights. During our HPE Accelerating Impact campaign supporting technology-driven nonprofits, team members overwhelmingly supported Thorn, directing more than $140,000 to their work providing technology to defend children from online sexual abuse. Ten thousand children who are victims of sex exploitation have been rescued by officers using Thorn's Spotlight software and 50,000 images and videos of abuse have been removed from the open web in a matter of months because of Thorn's Safer product.

COLLABORATING FOR GLOBAL CHANGE

We are active members of various leadership forums that extend beyond our value chain, including the Global Business Initiative on Human Rights (GBI) and the Business Roundtable on Human Rights and AI. The GBI is committed to strengthening corporate respect for human rights by sharing best practices, examining challenges and potential solutions, and monitoring emerging trends and issues. The Business Roundtable on Human Rights and AI seeks to promote collaboration and action across the tech, business, and human rights communities. We join regular meetings to identify best practices on embedding human rights into the development and deployment of AI and to understand trends from guest experts of various backgrounds.

We also participated in open forums in 2019, including the Engaging Business Forum and the UN Forum on Business and Human Rights, and engaged with various government institutions to share our best practices, challenges, and experiences in managing human rights.

PRIVACY

Protecting the privacy of personal information is a priority for business and society. HPE aims to be at the forefront of technology and practices that protect data, and comply with all regulations across global markets.

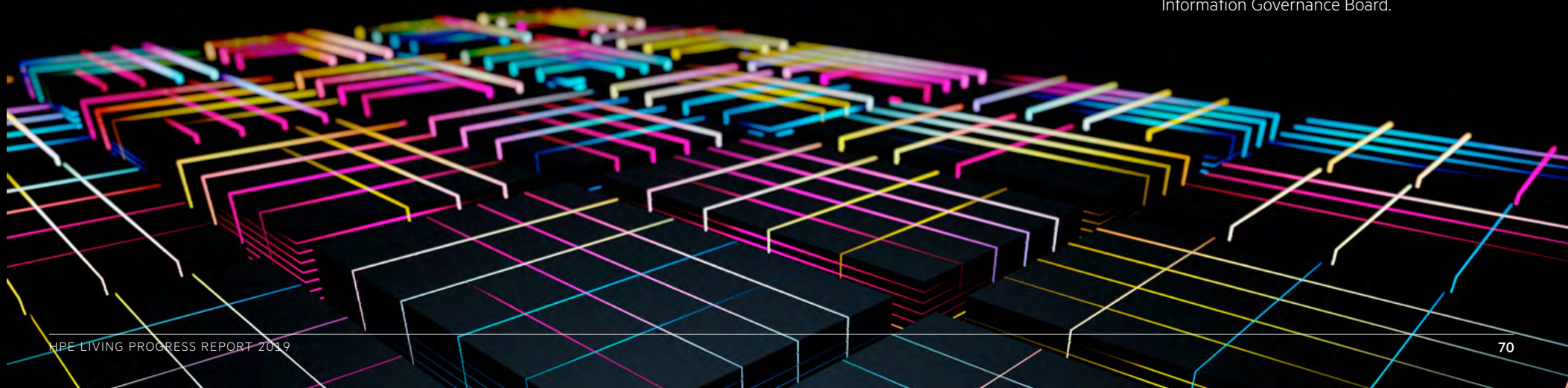
PRIVACY GOVERNANCE

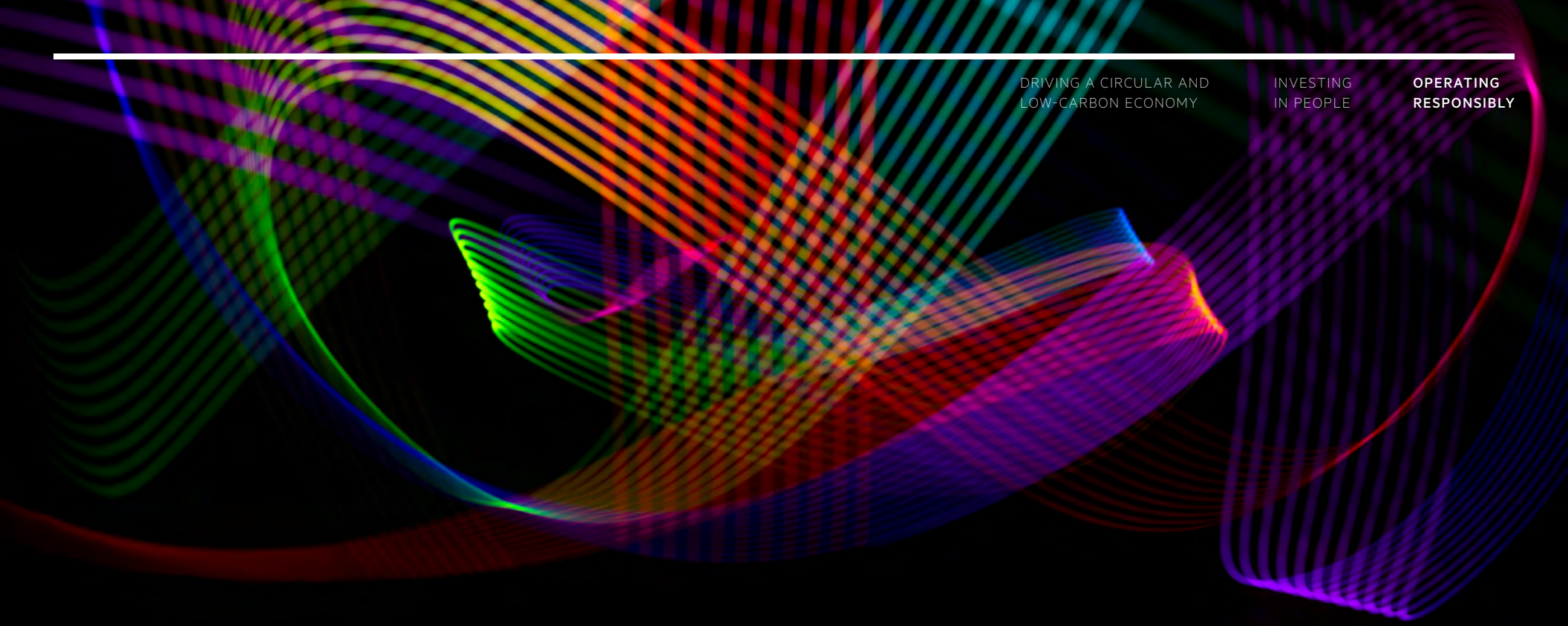
Protecting privacy is more than a legal obligation—it safeguards the trust and confidence we've built with team members, customers, and business partners. Robust privacy governance and a suite of internal accountability measures ensure we meet regulatory requirements and stakeholder expectations.

The HPE Privacy Office is responsible for our global privacy program and works in close partnership with HPE Cyber Security, as well as other global functions and business units within the company. The Privacy Office leads the Privacy Compliance Committee—a group of senior HPE leaders who oversee our global privacy program and compliance work. In 2019, we focused on advancing our privacy program to meet the requirements of the California Consumer Privacy Act, which came into effect in January 2020. This year we will focus on preparing for the forthcoming Indian and Brazilian Data Protection laws. The continued work of our Privacy Office put HPE in the 100th percentile benchmark for Privacy in the Dow Jones Sustainability Index.

The Privacy Compliance Committee is responsible for reviewing privacy risks and elevating concerns to the Ethics and Compliance Committee, which led by our Chief Ethics and Compliance Officer and is comprised of executives and senior leaders. The committee meets quarterly to review ethics and compliance risks, including those related to privacy.

In 2019, the HPE Privacy Office assumed leadership of the Information Governance team, which is responsible for record retention and management. In 2020, the teams will work together to enhance HPE information governance practices, including through the establishment of an Information Governance Board.





INTERNAL ACCOUNTABILITY PROTECTIONS

Our Global Master Privacy Policy articulates the general privacy and data protection principles we follow. The HPE Privacy Statement and Employee Privacy Policy inform customers, partners, and team members about our privacy practices and explain what personal data we collect, use, disclose, and transfer. The policies detail the choices individuals can make and rights they can exercise in relation to their personal information, including the right to access, rectify, and delete personal data. We have tools and documented processes for responding to data-subject rights requests in accordance with local law requirements.

The effectiveness of our privacy and information governance programs are regularly reviewed by the HPE Internal Audit function and the Ethics and Compliance Office audit team. Internal audits help us evaluate and improve governance, risk management, and controls. If we uncover an issue through an audit, we address it in a timely manner. We conducted six privacy and information governance-related audits in 2019. Zero substantiated complaints were made in 2018 and 2019 regarding HPE breaches of customer privacy and losses of data.

We educate all HPE team members on privacy through our annual Standards of Business Conduct training. Team members in our Human Resources function complete additional privacy training before accessing HR systems and complete refresher training every 24 months.

The Privacy Office provides team members with a curriculum of additional privacy training modules.

To ensure privacy and security extend to our supply chain, we conduct due diligence on suppliers and obtain specific contractual commitments to ensure data is protected and used appropriately.

We continue to use our Privacy Impact and Compliance Assessment tool to assess the privacy risks within our service solutions and business processes and ensure compliance.

COLLABORATION

We advance privacy protection by partnering with regulators, think tanks, and industry groups including the Centre for Information Policy Leadership, the International Association of Privacy Professionals, and the Information Technology Industry Council. In 2019, we participated in regulatory consultations in the EU on the challenges of managing data-subject rights and think-tank consultations on privacy and artificial intelligence.

DATA SECURITY

HPE products and services enable customers to harness the potential of data. We integrate privacy and security protocols that keep this data secure, maintaining customer trust and protecting our reputation.

HELPING OUR CUSTOMERS STAY SECURE

As the possibilities of data continue to grow, so do the threats against its security. According to an Accenture study, security breaches increased 67% over the last five years, while the average annual cost of cybercrime for an organization grew from $1.4 million to $13 million.

We defend against cybercrime at every step of our value chain. This keeps our customers' data and systems secure—helping to protect them against the financial and reputational damage of a breach.

Supply chain

We provide end-to-end supply chain security that enables us to quickly and effectively respond to the rapidly evolving cybersecurity landscape. A known threat in our industry is malicious firmware, hardware, and malware entering products in the supply chain. We protect against this by:

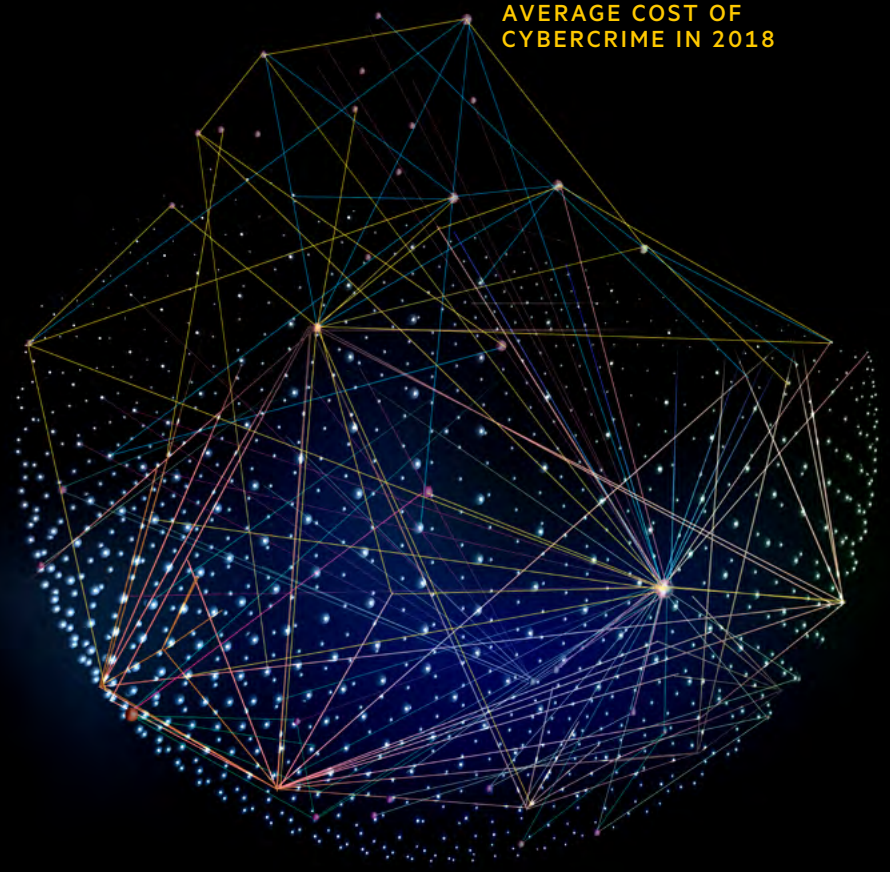
- Maintaining strict control over firmware code access; including running malware scans and checking code signatures prior to sending products to customers
- Using only suppliers on our approved vendor list that have been thoroughly vetted for their strong security protocols
- Implementing third-party evaluations in our supply chain for products at a higher risk of security threats

Products

We design our products with security built in. Our Silicon Root of Trust technology gives our servers an immutable fingerprint that prevents malicious code from corrupting essential firmware. Unlike our competitors that buy their silicon off the shelf, HPE is the only company to design and develop our own. In 2019, our Silicon Root of Trust was given the Cyber Catalyst designation, a recognition of our ability to reduce cyber risk.

$13M

AVERAGE COST OF CYBERCRIME IN 2018



Additionally, HPE is the only company to develop our servers in line with the high standards of the National Institute of Standards and Technology (NIST) 800-53 controls. More details about NIST and other best practices that our servers meet are available on our website.

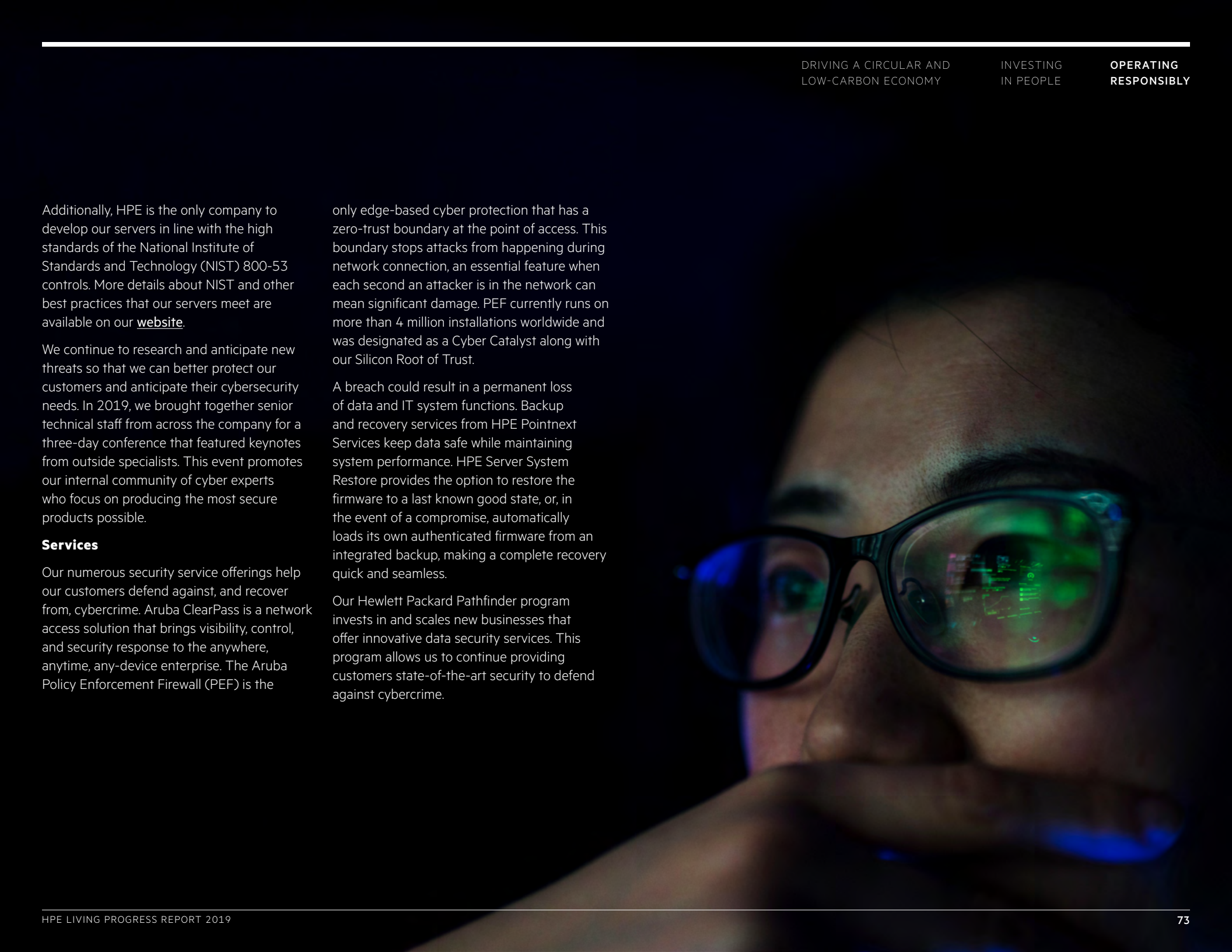
We continue to research and anticipate new threats so that we can better protect our customers and anticipate their cybersecurity needs. In 2019, we brought together senior technical staff from across the company for a three-day conference that featured keynotes from outside specialists. This event promotes our internal community of cyber experts who focus on producing the most secure products possible.

Services

Our numerous security service offerings help our customers defend against, and recover from, cybercrime. Aruba ClearPass is a network access solution that brings visibility, control, and security response to the anywhere, anytime, any-device enterprise. The Aruba Policy Enforcement Firewall (PEF) is the only edge-based cyber protection that has a zero-trust boundary at the point of access. This boundary stops attacks from happening during network connection, an essential feature when each second an attacker is in the network can mean significant damage. PEF currently runs on more than 4 million installations worldwide and was designated as a Cyber Catalyst along with our Silicon Root of Trust.

A breach could result in a permanent loss of data and IT system functions. Backup and recovery services from HPE Pointnext Services keep data safe while maintaining system performance. HPE Server System Restore provides the option to restore the firmware to a last known good state, or, in the event of a compromise, automatically loads its own authenticated firmware from an integrated backup, making a complete recovery quick and seamless.

Our Hewlett Packard Pathfinder program invests in and scales new businesses that offer innovative data security services. This program allows us to continue providing customers state-of-the-art security to defend against cybercrime.



PROTECTING OUR BUSINESS FROM EVOLVING THREATS

Cybersecurity risks and regulations are always evolving. We keep our team members prepared for the latest threats and protocols through three types of training:

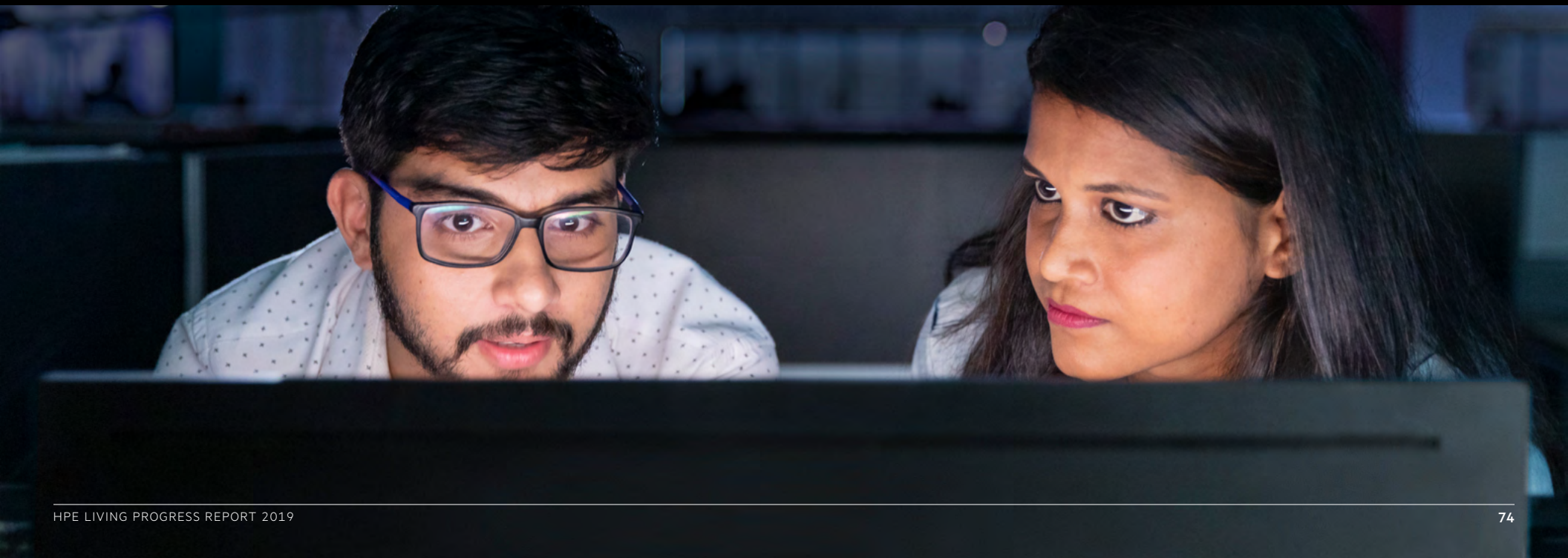
* Mandatory annual training and monthly phishing exercises for all team members
* Role-based training for higher-risk jobs
* Product training for developers

Every year we host a cybersecurity month that uses gamification to engage and inform team members on risks and how to address them. Based on the success of this initiative, we will begin running the program year-round in 2020. Team members also have 24x7 access to cybersecurity information through the HPE Cybersecurity Yammer group and cybersecurity central, our internal cyber knowledge base.

We have two Security Operations Centers that monitor potential threats to our business. Each day, they review an average of 6.5 billion cybersecurity events. In 2019, we implemented a Cyber Fusion Center, an initiative that allows us to be more proactive against threats through the use of intelligence. In the future, we will expand our Fusion Center to our product and supply chain practices to further help our customers stay secure. In addition to our security centers, we analyze and remediate data security issues reported by customers or identified through NIST and other sources.

We assess our cybersecurity practices and preparedness through internal and external audits. In 2019, we contracted a third party to audit our IT infrastructure and validate our cybersecurity preparedness. In addition, when HPE acquires a company, we conduct a thorough assessment of their cybersecurity protocols.

We continue to work with governments globally and participate in a number of external engagements to promote cybersecurity. In 2019, we played an active role in the National Technology Security Coalition, the Paris Call for Trust and Security in Cyberspace, and the World Economic Forum's (WEF) new fintech cybersecurity consortium. We were also a primary contributor to a 2019 cybersecurity principles report published by WEF, which provides a framework that investors can use to assess the cybersecurity preparedness of a company.



SUPPORTING THE NEXT GENERATION OF FEMALE CYBERSECURITY EXPERTS

In 2018, HPE partnered with the Girl Scouts Nation's Capital to launch a **cybersecurity curriculum**. The program targets Junior Girl Scouts between the ages of 9 and 11 to cultivate an interest in STEM and teach them best practices about their digital footprint, online safety, cyberbullying, and privacy and security. As part of the program, HPE introduced Cyber Squad, an online game that takes players through real-life scenarios and simulates the outcomes of risky and safe online behaviors. Girl Scouts who complete the program will receive a cybersecurity patch.

This partnership is just one of many ways HPE is supporting and empowering diverse talent to enter IT and cybersecurity roles. In 2019, we increased our recruitment activities with Historically Black Colleges and Universities in Texas, including offering internships and hosting meet-and-greets with students to engage them on careers in cybersecurity.

"Through this collaboration, we hope to arm Girl Scouts with the cybersecurity literacy and knowledge they need to be savvy, secure, and safe online, and to empower them to be good digital citizens."

LIZ JOYCE,
HPE CHIEF INFORMATION SECURITY OFFICER

CASE STUDY

NETWORK RESILIENCE

We build networks to harness valuable data flowing between the edge, core, and cloud. Connectivity, adaptability, and built-in security allow our customers to easily scale their IT and make their networks more resilient.

BUILDING RESILIENCE INTO INTELLIGENT NETWORKS

In a digital transformation, we upgrade infrastructure and activate cloud computing so customers can react to information in real-time. The networks we design and deploy allow information to flow freely across hybrid cloud systems. In 2019, IDC MarketScape recognized HPE as the industry leader for global network consulting. Our technology stack, unique intellectual property, superior designs, and as-a-service model differentiate HPE built networks.

The explosion of data and the rise of edge computing—processing information near where it is generated—make uninterrupted connectivity more important than ever. 5G, the next generation of wireless communication, increases the demand on networks with its expanded bandwidth, high availability, and near-zero latency. We're partnering with enterprise customers and communication service providers to prepare for a 5G future, which includes the integration of Wi-Fi 6 and 5G.

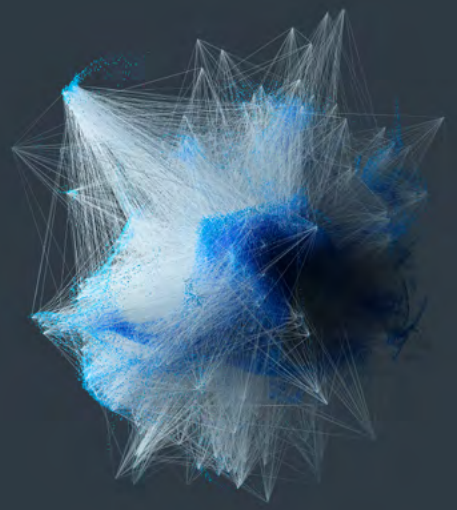
Organizations of all types—from healthcare to manufacturing to governments—are deploying intelligent network solutions to meet growing digital transformation demands. We strengthen our customers' IT with optimized networks that are secure, adaptable, policy-driven, and aligned to business goals. The effect is faster transmission of information from the edge to core to cloud, ultimately reducing time to insight.

Because networks touch nearly every aspect of business and society, maintaining their security is critical. Our networks are built to withstand a growing volume and variety of threats including cyberattacks, extreme weather conditions, and unexpected demands. Our technology also helps customers keep pace with evolving global security standards and compliance requirements. Read more in Data Security and Privacy.

HPE products and services bring increased network resilience and security to customers:

- **HPE GreenLake for Aruba**—HPE offers networking as a service with flexible, consumption-based models. The scalable solution makes risk-reducing network technology more accessible.
- **HPE Pointnext Services**—Our consulting services advise customers on building or improving networks. In 2019, we expanded our capabilities to address the demand for multicloud networking and container security.
- **Aruba 360 Secure Fabric**—With artificial intelligence-based machine learning, Aruba 360 Secure Fabric supports IT teams by increasing control and visibility over IT systems, providing advanced threat defense. The fabric also helps users comply with the EU General Data Protection Regulation.

In 2019, HPE launched Cloudless Computing, a network solution that reduces the risk of sharing information across cloud systems. Cloudless ensures communication can only take place between known entities. All approved traffic is encrypted, which ultimately increases connectivity and collaboration between trusted parties.



EMPOWERING DOCTORS WITH DATA AT TEXAS CHILDREN'S HOSPITAL

Since 1954, Texas Children's Hospital has improved health outcomes for children and women through their leading pediatric specialty care facilities. The hospital registers 4.3 million patient encounters each year at 10 Houston-area locations. Working with HPE Pointnext Services, the hospital launched a two-year digital transformation effort to upgrade and simplify their network, servers, storage, and security infrastructure. Completed in 2019, the project delivered improved connectivity and data processing capacities to the healthcare provider whose 13,500-person team works with 50,000 IT and biomedical technology devices to deliver patient care and life-saving research.

CASE STUDY

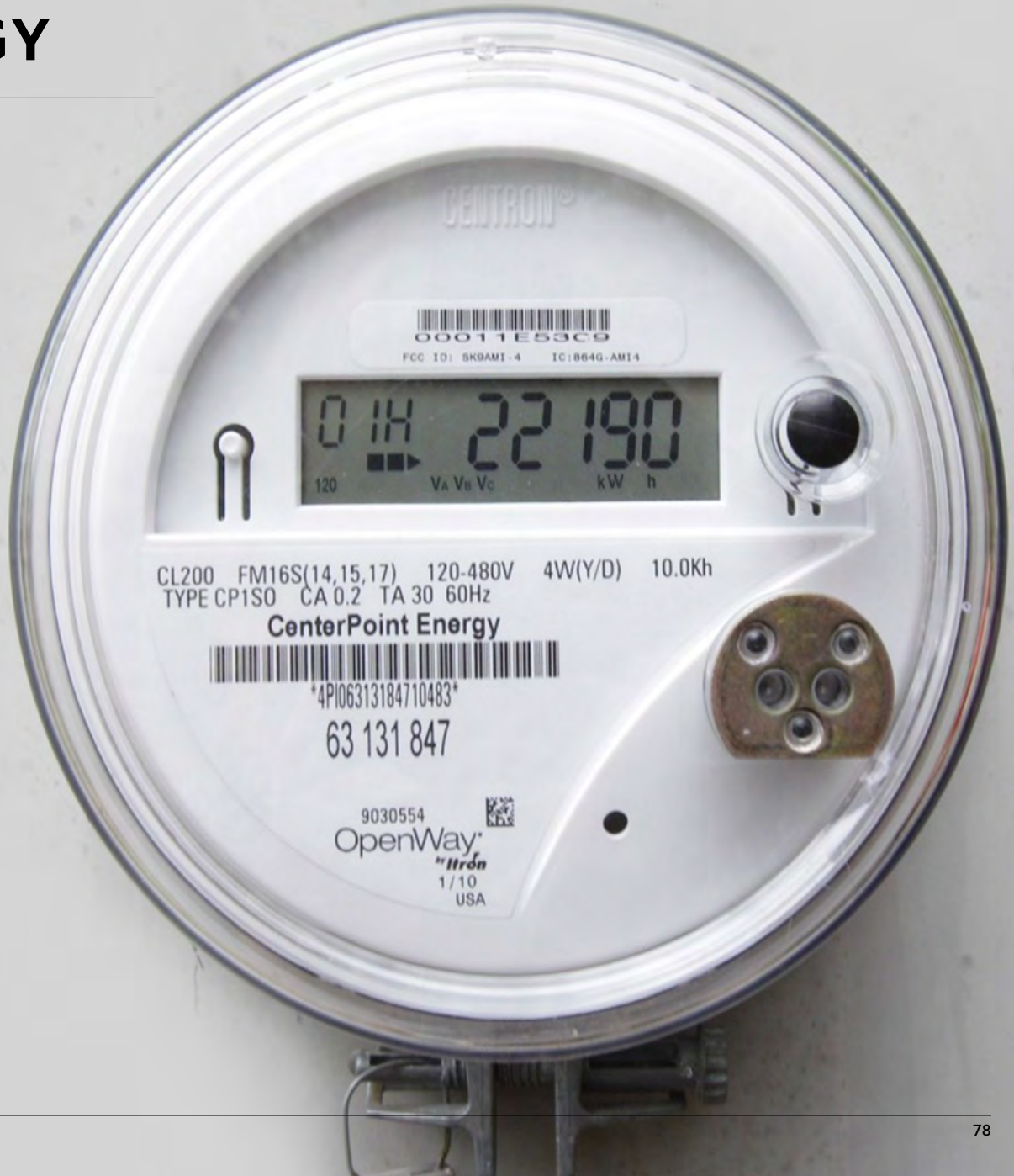
BOOSTING GRID RESILIENCE WITH CENTERPOINT ENERGY

CenterPoint Energy serves more than seven million natural gas and electric customers in eight U.S. states.

The company once read 80,000 meters a day manually by sending meter readers into the field on foot. Today, its smart grid enables the company to perform 221 million meter-reads a day automatically. Big data demands on CenterPoint's operations led them to engage with HPE to help deploy data analytics and Internet of Things (IoT) to improve its services to its customers and boost operational efficiency. The result was a 10% improvement in customer satisfaction due to faster resolution of power issues and usage questions and thousands fewer truck rolls annually.

In 2019, CenterPoint launched a drone-based video analytics program to provide better service with fewer resources. The drones collect Lidar, infrared, and HD video data analytics and beam the information down to the HPE Edgeline servers that are in the field. Using analytics at the edge helps CenterPoint to cut down its latency and process time by half.

With improved real-time analytics, CenterPoint is expediting repairs and restoring electricity service for customers in less time.



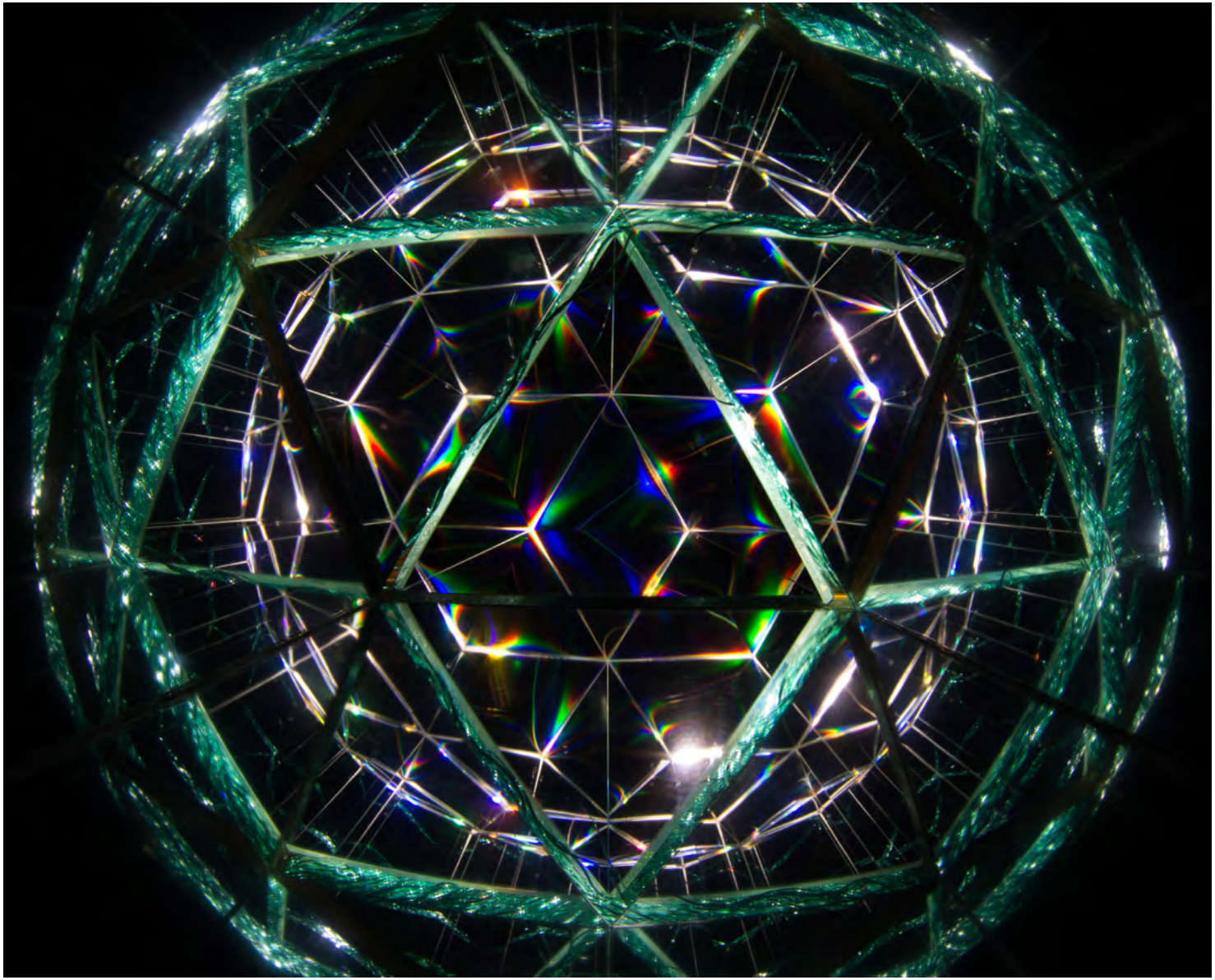
CASE STUDY

STRENGTHENING HPE INTERNAL NETWORKS

With HPE Pointnext Services, we're installing intelligent networks for our own HPE IT department that enable our workforce, help sites manage costs, and shield our company from digital threats. Our 360° security at all layers of our network grants appropriate user access and prevents cybercriminals from accessing company information. With Aruba ClearPass Policy Manager, we protect the physical environment, controlling building access for team members and guests. Location-based services from Aruba Meridian enable better way-finding, concierge, room availability, and reservation capabilities through our mobile app developed by HPE Pointnext Services. Our Global Real Estate team uses data on traffic patterns and dwell times to optimize space utilization and decrease energy use.

In 2019, we completed network upgrades at the HPE San Jose, Plano, New York City, and London offices, enhancing the work environment for our team members. Our new networks help us:

- Ensure consistent levels of contact and customer service with secure, pervasive, wired, and wireless connectivity
- Enable teams to access tools, collaborate, and stay connected anywhere, at any time, on any device
- Retrieve data securely from sources within and outside of HPE by merging appropriate security measures with network infrastructure



PUBLIC POLICY

The role of technology in everyday life continues to grow, attracting the interest of lawmakers and regulators. We help governments understand how legislation and policies can influence access to and adoption of beneficial technologies globally.

POLICY PRIORITIES

The actions of policy makers can influence how technologies are developed, deployed, and implemented. We advocate for policies that promote global innovation, broaden access to technology, and encourage open markets by eliminating barriers to IT goods and services.

In 2019, our Corporate Affairs team worked at the state, federal, and global level to promote policies that advance HPE's priorities. Highlights from the year include:

Global trade

- Positioned HPE as a leader in the Americans for Free Trade coalition to engage Congress on the complexity of the global ICT supply chain and impact of tariffs on American consumers and manufacturers
- Promoted successful passage into law of the U.S.-Mexico-Canada Agreement, which strengthens the North American technology supply chain and incentivizes the growth of the digital economy

Technology

- Increased appropriations for high-performance computing for the third consecutive year, leading to record funding of this technology
- Introduced language into the National Defense Authorization Act to increase the use of edge technology by the Department of Defense
- Educated lawmakers on the strengths of hybrid cloud and consumption-based solutions while simultaneously mitigating cloud-first policies that would limit an organization's flexibility to modernize their IT infrastructure
- Launched our first HPE Digital Life Garage in Dubai to support the United Arab Emirates' Smart Nation initiative to promote local scientific research and high-tech solutions that can result in groundbreaking technology innovations for citizens

Immigration:

- Advocated for the passage of the Fairness for High-Skilled Immigrants Act of 2019, which would improve the United States' employment-based visa system
- Supported the Deferred Action for Childhood Arrivals (DACA) legislation, including signing onto several amicus briefs
- Remained an active member of the Coalition for the American Dream, a business-led organization to support and protect those covered by DACA through lobbying and legal actions

We also work with other businesses and nongovernmental organizations to promote the deployment and adoption of technology to advance the way people live and work. In 2019, we partnered with Agastya International Foundation to build a Center of Excellence at their campus in India. The facility will teach students skills in Internet of Things (IoT) and computer programming and give them access to state-of-the-art agricultural IT solutions. This effort will help bridge the digital literacy gap while improving crop yields and productivity.

In 2019, HPE participated in TechForGood, a summit convened by French president Emmanuel Macron that brings together multinational corporations, startups, and foundations to discuss how disruptive technologies can have a positive impact on societies and economies. HPE CEO Antonio Neri co-chaired a climate and circular economy working group that developed actionable steps for progress. The group is now working on a roadmap and indicators that members can use to measure and reduce their environmental impact.

POLITICAL CONTRIBUTIONS

HPE makes corporate contributions to U.S. state and local candidates, committees, and ballot measures. Annually, we publicly disclose the candidates, groups, and Section 527 organizations that receive corporate contributions from HPE. The company does not make political contributions outside the U.S.

The HPE Political Action Committee (PAC), a separate legal entity funded by voluntary employee donations, makes bipartisan contributions to U.S. congressional and state and local candidates and committees who share our public policy views. We publicly disclose the candidates and groups that receive HPE PAC contributions.

As we engage in the political process, we ensure that our actions are ethical, legal, transparent, and align with the HPE Standards of Business Conduct.

04
HOW WE REPORT

Our culture of integrity and transparency builds trust with our stakeholders as we collaborate to make meaningful progress on the issues most relevant to our business. Our best-in-class environmental, social, and governance (ESG) reporting ensures accountability, aligning with prominent standards and frameworks to meet the needs of our stakeholders.

IN THIS SECTION

Materiality

Sustainable Development Goals

Stakeholder engagement

About this report

HOW WE REPORT

Our fourth annual Living Progress Report offers an overview of our approach, our programs, and our progress on the environmental, social, and governance issues most significant to our business.

MATERIALITY

Materiality guides our Living Progress plan, which helps to meet the expectations of our stakeholders, identify sources of value creation, and integrate sustainability across our business. We regularly review this plan to understand the link between long-term issues and the business case, and we develop metrics and disclosures to report this publicly.

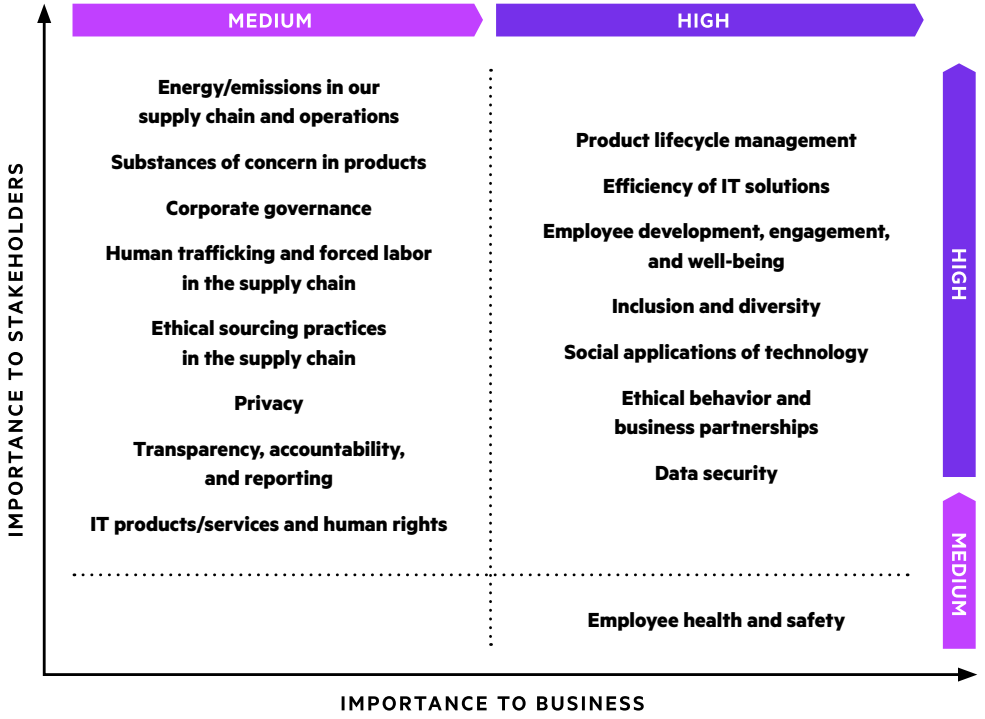
HPE completed our latest materiality assessment in 2019. Conducted by external consultant BSR, this assessment engaged customers, investors, industry experts, and HPE management to understand perspectives on sustainability broadly, as well as how specific issues material to HPE's business have evolved since the last materiality assessment in 2017. The assessment also considered changes in the sustainability landscape, such as progress toward the Sustainable Development Goals, and the continuing evolution of best practice materiality techniques, including the Global Reporting Index (GRI) and Sustainability Accounting Standards Board (SASB) standards to which this report is aligned.

We have paired this with a data-driven approach that leverages artificial intelligence software to analyze digital media conversations to detect emerging issues and current or potential sustainability risks.

For the first time, our materiality assessment evaluated how issues vary by region—identifying nuances across Europe, India, and Southeast Asia—to understand material priorities that drive value for the business across key geographies.

The issues in the following chart meet the materiality threshold for this report. Issues are rated by their importance to HPE's business and importance to external stakeholders. Although these issues are the primary focus for this report, we also provide information about additional issues that have particular significance to our transparency and accountability as a corporate citizen, such as our environmental footprint, public policy engagement, and community investment. Definitions of the issues in the chart, as well as the corresponding report section, can be found in the Appendix.

2019 Materiality Map



SUSTAINABLE DEVELOPMENT GOALS

Our Sustainable Development Goals (SDGs) strategy aligns objectives that are mutually beneficial to society and to our business, assessing both where our company can have the greatest contribution and how these actions can create new forms of customer value.

The SDGs require transformational solutions and our technologies play an important role in further advancing more sustainable industries and societies. In fact, according to a UN Global Compact (UNGC) report[32], 75% of CEOs say they are investing in digital to address sustainability challenges. Investment in industries, innovation, and infrastructure (SDG 9) is not only critical to achieving sustainable development, but also creates opportunities for bespoke HPE products and services to grow market share and improve customer loyalty. From finance to farming, medicine to manufacturing, HPE's unique hybrid cloud, edge, and artificial intelligence capabilities are providing solutions to longstanding sustainability issues while generating new market opportunities in key industries.

Many enterprises are committed to driving progress toward the SDGs, yet there is no clear set of standard impact metrics available to track this progress. For this reason, HPE is collaborating with SAP® and Deloitte to develop a SDG Analytics Dashboard, which will enable companies to use their management and operational data to report progress and drive meaningful impact toward the SDGs. The aim is to facilitate increased transparency and reporting, thereby enabling companies to uncover new sustainable business opportunities and aid decision-making.

A materiality-based approach

In alignment with the recommendations of the UNGC, we have mapped the goals and their supporting targets against our material issues to focus our implementation efforts on six material SDGs (shown in the following chart). With this prioritization completed, we are focused on improving our measurement and accountability toward these goals. For instance, this year we mapped our contributions to the SDGs against GRI indicators to better align to this prominent multi-stakeholder reporting approach.

Achieving any of these goals will require technological innovation to be applied both purposefully and collaboratively—making Partnership to the Goals (SDG 17) an underlying theme across our strategy and implementation efforts. Learn more about how we are partnering with our customers to innovate toward a sustainable economy and developing technology-based solutions to expand access to healthcare and education in underprivileged communities around the world.

Gender Equality—We work to address inequalities in our industry by supporting women at HPE, in our supply chain, and in our communities through a variety of capability-building programs and a commitment to equal opportunity. Creating inclusive work environments for all team members is the expectation at HPE, enabling each individual to contribute to the success of our company.

Affordable and Clean Energy—We support the transition to a low-carbon economy through our own commitment to renewable energy procurement, by advocating for more access to renewable energy sources for businesses, and by working with our customers to develop low-carbon technologies for data centers, smart factories, energy grids, and other sectors.

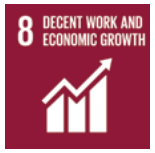
Decent Work and Economic Growth—We are committed to protecting workers throughout our company and our supply chain and we set industry-leading standards to prevent forced labor. HPE also provides our own team members with a safe and healthy work environment to improve engagement, productivity, and retention.

Industry, Innovation, and Infrastructure—We research and develop technologies that radically change the way data moves and is processed, innovating with sustainability in mind as we address cost and scalability challenges. As our customers undergo digital transformation, we are accelerating the sustainability of their businesses and entire sectors with edge and hybrid cloud solutions.

Responsible Consumption and Production—We contribute to the circular economy with products and services that facilitate more efficient use of energy, materials, and resources. By offering our entire portfolio as a service by 2022, we are fighting overprovisioning and IT waste. Our circular IT programs span the IT lifecycle, enabling customers to reach their financial and sustainability goals simultaneously.

Climate Action—We are leaders in corporate climate action, with science-based emissions reduction targets across our value chain that limit our environmental impact to align with the Paris Climate Agreement. We disclose our climate-related risks and opportunities in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

The following chart highlights examples of how HPE's practices or activities advance the SDGs and targets that are material to our business. A list of indicators mapped to the SDGs can be found in the GRI index.

SDG	Targets	HPE material issues	Activity or business practice
	5.1: End gender-based discrimination. **5.5: Ensure women's full and effective participation and equal opportunities for leadership.**	Inclusion and diversity Employee development, engagement, and well-being	• We nurture the development of our team members, particularly women, by offering leadership trainings, opportunities, and employee resource groups (ERGs). In 2019, more than one-third of our workforce actively engaged in driving our ERG program. • We provide a variety of internal trainings to our employees to encourage inclusion, ranging from unconscious bias to skills development. Learning courses covering elements of anti-harassment and discrimination are required for all new hires. • We offer equal employment opportunity, flexible work arrangements, and parental leave policies in order to provide flexibility to working parents and caregivers.
	7.2: By 2030, increase substantially the share of renewable energy in the global energy mix. **7.3: By 2030, double the global rate of improvement in energy efficiency.**	Efficiency of IT solutions Social applications of technology	• Through RE100, we have committed to sourcing 100% renewable power, with a 2025 interim goal of achieving 50%. We advocate for more access to renewable energy as a founder and board member of the Renewable Energy Buyers Alliance. • We increased our product energy performance to 3X our 2015 baseline, almost doubling our 2018 performance. • We are partnering with our customers to develop multiple low-carbon and carbon-free technologies for data centers, smart factories, energy grids, and other production sectors.
	**8.5: Achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.** **8.7: Eradicate forced labor, modern slavery, child labor, and human trafficking.** **8.8: Protect labor rights and promote safe and secure working environments for all workers.**	Ethical sourcing practices in the supply chain Human trafficking and forced labor in the supply chain Employee health and safety	• We lead our industry and influence other sectors to protect workers from the risks of forced labor and we regularly audit our suppliers. In 2018, we ranked third on the KnowTheChain benchmark of 40 ICT companies for our efforts to address forced labor in our supply chain. • In 2019, 28% of supplier spend in the U.S. was spent with small businesses. • In 2019, our lost workday case rate and our recordable incident rates were well below industry standards.

SDG	Targets	HPE material issues	Activity or business practice
	9.4: Upgrade infrastructure and retrofit industries to make them sustainable.	Efficiency of IT solutions Data security Privacy Social applications of technology	• HPE solutions enable customers to achieve more with less environmental impacts and make data-driven decisions that improve the sustainability of entire sectors, including agriculture and manufacturing. • HPE partnered with digitalswitzerland, as well as industry, academia, and the Swiss government, to launch a first-of-its-kind Swiss Data Center Efficiency Label designed to decarbonize data centers and significantly reduce their energy consumption. • Innovations such as Memory-Driven Computing will be critical to meeting this goal by solving problems thousands of times faster than any current computer while requiring a fraction of the energy per calculation.
	12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	Product lifecycle management Efficiency of IT solutions	• We address the environmental impacts of HPE products by applying our Design for Environment (DfE) principles, which include energy efficiency, design for recyclability, and materials innovation. • We have committed to offering our entire portfolio as a service by 2022, shifting to consumption-based models that eliminate customer overprovisioning and enable HPE to manage and extend asset lifecycles. • We offer multiple programs across our global markets to encourage participation in the circular economy. For example, HPE Technology Renewal Centers processed more than 50 million pounds of equipment in 2019 for refurbishment and recycling. • In 2019, the Dow Jones Sustainability Index awarded HPE a perfect score of 100 for product stewardship.
	13.3: Improve education, awareness raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning.	Efficiency of IT solutions Energy use and GHG emissions in our operations and supply chain	• We proactively support leading climate organizations/campaigns, including: Paris Climate Agreement, Business Backs Low-Carbon USA pledge, We Mean Business, and the WEF Alliance of CEO Climate Leaders. • Our operations and supply chain goals have been approved by the Science Based Targets Initiative. Last year, we set a new goal to reduce our operational GHG emissions by 55% by 2025, making HPE one of the first 28 companies globally to align to a 1.5°C climate scenario target recommended by the U.N. • We disclose our climate-related risks and opportunities in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). • Customers such as the U.S. Department of Energy and National Center for Atmospheric Research use HPE hyper-efficient, high-performance computing solutions to advance modelling and research on our changing climate.

STAKEHOLDER ENGAGEMENT

As a technology company, we strive to leave a lasting legacy on the world in which our positive influence far outweighs our impacts. We recognize that meaningful sustainable impact will require collaboration, and we are increasingly partnering within and beyond our industry to realize our company purpose—to advance the way people live and work.

Engagement with stakeholders on our shared sustainability objectives helps us to understand expectations and priorities and to form leading-edge partnerships. We regularly collaborate with our stakeholders through varying approaches such as partnerships, industry forums, supplier capability-building, direct customer engagements, mentoring, surveys and assessments, and more. In addition, we seek to understand stakeholder priorities, garner feedback, and further integrate environmental, social, and governance (ESG) matters into our business strategy through our materiality assessment.

We transparently report on HPE activities through our annual ESG reporting to meet the needs of key stakeholders. This report is aligned with a number of investor-driven and multistakeholder reporting standards and frameworks, including the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), and the Task Force on Climate-related Financial Disclosures (TCFD). In addition, this report demonstrates HPE's contributions toward the Sustainable Development Goals (SDGs), following the guidance of the UN Global Compact. HPE is also actively engaged with the International Business Council (IBC) of the World Economic Forum to evaluate a new set of common disclosures that intend to standardize corporate reporting on the SDGs.

Customer engagement

In addition to face-to-face engagements with customers, HPE offers a direct channel for customer and stakeholder inquiries through our Sustainability Contact Center (SCC). In 2019, the SCC responded to more than 1,200 inquiries from stakeholders, primarily comprised of customers and sales representatives, requesting information about HPE policies and practices related to sustainability issues. Inquiries are catalogued by subject matter and tracked to ensure that our programs, materials, and reporting address stakeholder needs. The Living Progress team also provides support to HPE sales representatives via a direct internal mailbox and sales trainings, which serve as a central feedback loop for our customer engagement strategy.

Investor engagement

HPE actively engages with investors regarding our approach to ESG issues management and performance. This year, we further integrated this information into our HPE Annual 10-K Report and HPE Proxy Statement to better align our financial and sustainability disclosures. In addition, HPE Investor Relations regularly briefs investors on ESG issues through direct exchanges, face-to-face engagements, the HPE Security Analysts Meeting, and the annual investor road show. In 2019, we met with approximately 50% of our outstanding shareholders, and some of these meetings included active discussions on ESG. In 2020, HPE will develop an ESG-focused investor outreach plan to further these efforts. More information regarding ESG engagement and oversight by the HPE Board of Directors can be found in corporate governance.

In 2019, we commissioned GlobeScan to conduct a stakeholder research study to evaluate the most relevant programmatic areas of focus for our company, in alignment with HPE's materiality assessment, and to gather intelligence on how HPE is perceived by these stakeholders. The research identified three topics on which stakeholders believe HPE has an opportunity to exhibit increased leadership: demonstrating the sustainability of HPE solutions, innovating for the circular economy, and applying HPE solutions for societal progress. In 2020, HPE will invest in programs and communications relevant to these topics to address stakeholder feedback.

Memberships and partnerships

HPE partners with industry and peer groups to advance global sustainability agendas and achieve objectives critical to our business success, such as maintaining an ethical supply chain and sourcing renewable power. The following table lists the key memberships, affiliations, and working groups with whom HPE actively engaged in 2019; however, this is not exhaustive of all HPE partnerships:

In addition, we are enhancing our ability to innovate by developing a robust partner ecosystem with and for our customers. For instance, with Hewlett Packard Pathfinder, we are investing in disruptive startups and integrating their solutions into ours. We are also building partnerships to scale solutions to global challenges. HPE launched Tech Impact 2030 with the World Economic Forum in June 2018 to bring together industry, technology, academia, and government to solve key societal challenges related to agriculture and healthcare.

Additional stakeholders critical to our business are referenced throughout this report, including our team members, suppliers, governments, and communities.

Reporting theme	Organizations	
Driving a circular and low-carbon economy	Abinee	Information Technology Industry Council
	American Chamber of Commerce	Renewable Energy Buyers Alliance
	Basel Convention	Shell Center for Sustainability at Rice University
	Bloomberg New Energy Finance	Step Up Declaration
	Business for Social Responsibility	Sustainable Air Freight Alliance
	Canieti	TCO certified
	DEFRA DeSA Alliance	techUK
	Digital Europe	The Climate Group
	Ellen McArthur Foundation	The Green Grid
	Engineering Entrepreneurship Steering Council at Texas A&M University	Uptime Institute
	Green Electronics Council	We Mean Business Coalition
	ICT SEA	World Resources Institute
	ICT-Milieu (part of NLDigital)	
Investing in people	American Foundations for the Blind	International Association for Volunteer Effort
	AntiaB.org	Lucile Packard Children's Hospital at Stanford
	Cultural Navigator	MindGym
	Curated Pathways to Innovation	National Action Council for Minorities in Engineering
	Disability Equality Index	National Center for Women in Information Technology
	Disability:IN	NetHope
	Fast Forward	Out and Equal
	Gartner	Points of Light
	Girl Scouts Nation's Capital	Red Cross Disaster Responder Program
	Hire our Heroes	Silicon Valley Community Foundation
	Hispanic Information Technology Executive Council	Silicon Valley Leadership Group
	Human Rights Equality Index	The Executive Leadership Council

Memberships and partnerships (continued)

Reporting theme	Organizations	
Operating ethically and responsibly	Association of Certified E-Discovery Specialists	Global Business Initiative on Human Rights
	Association of Corporate Citizenship Professionals	Information Technology Industry Council
	Association of Intelligent Information Management	International Association of Privacy Professionals
	Association of Records Managers and Administrators	Leadership Group for Responsible Recruitment
	Business Against Slavery Forum	Responsible Business Alliance (Responsible Labor Initiative, Responsible Minerals Initiative)
	Centre for Information Policy Leadership	TechNet
	Corporate Community Relations Consortium	The National Technology Security Coalition
	Corporate Eco Forum	World Economic Forum
	Digital Europe	
How we report	Article One	Sustainability Transparency Network
	CDP	Sustainable Brands Advisory Board
	Dow Jones Sustainability Index	Taiwan Institute for Sustainable Energy
	EcoVadis	United Nations Global Compact
	Just Capital	

ABOUT THIS REPORT

This report covers HPE's fiscal year 2019 (November 1, 2018–October 31, 2019) and is part of the Living Progress reporting suite, along with complete performance data available in our 2019 Data Summary.

Our Living Progress reporting and disclosure to third parties keeps us accountable and builds trust with our stakeholders. We report each year to third-party organizations including:

- CDP
- Dow Jones Sustainability Index
- EcoVadis

We also contract external assurance provider SCS Global to perform an independent review of selected key performance indicators in the 2019 Data Summary. This is in accordance with attestation standards established by the American Institute of Certified Public Accountants, including AT-C sections 105 and 210.

Complete 2019 data and statement of assurance can be found in the 2019 Data Summary

Information within this report adheres to the following specifications:

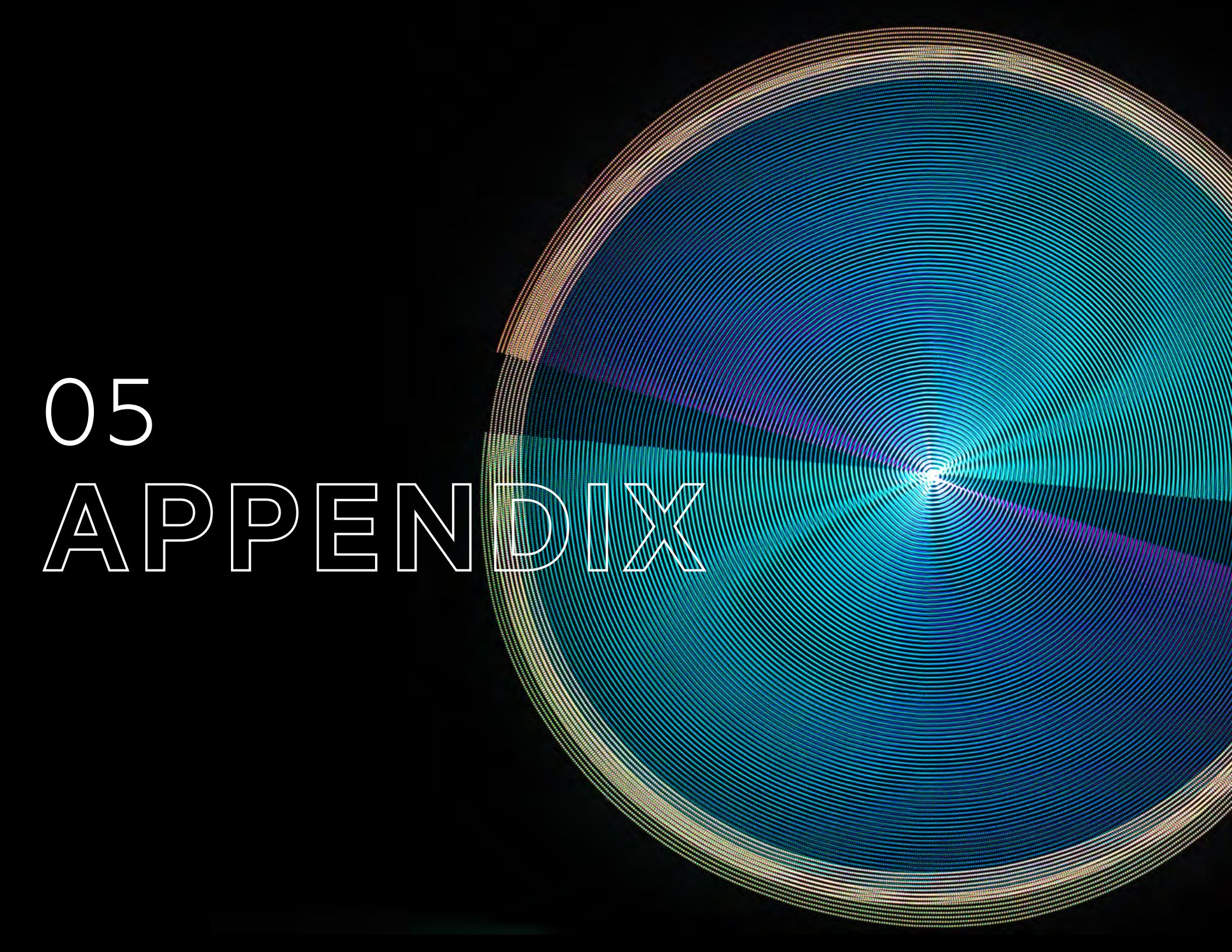
- Contents cover all HPE operations but do not cover joint ventures
- Data are rounded to reflect the appropriate level of certainty
- References to years are to HPE's fiscal year, unless otherwise stated
- References to dollars are to U.S. dollars

All the information in the report is current as of the date of initial publication. The report has not been updated to reflect any changes that may have occurred after such date, including any changes to HPE's business or strategy.

As a forward-looking document, our report contains statements that involve inherent assumptions, risks, and uncertainties. HPE assumes no obligation and does not intend to update these statements based on changes resulting from the emergence of any of these risks or uncertainties, or in the case of assumptions proving incorrect.

We welcome any questions or feedback relating to our Living Progress Report. Contact us here.

You can remain up to date on Living Progress through our Inspiring Progress blog, hpe.com/livingprogress, and by joining us in conversation on Twitter at @HPE_LivingProg.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APPENDIX

STANDARDS INDEX

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) published a special report projecting the impacts of climate change on natural and human systems, including risks to livelihoods, human health and security, and the global economy. The report compared the consequences of a global average temperature increase of 1.5° Celsius (C) relative to 2°C above pre-industrial levels and emphasized that:

- Aiming for a 2°C scenario is no longer a viable option to avoid the worst impacts of climate change
- Reducing industry energy consumption is critical to achieve a 1.5°C scenario
- Industries must act with a sense of urgency

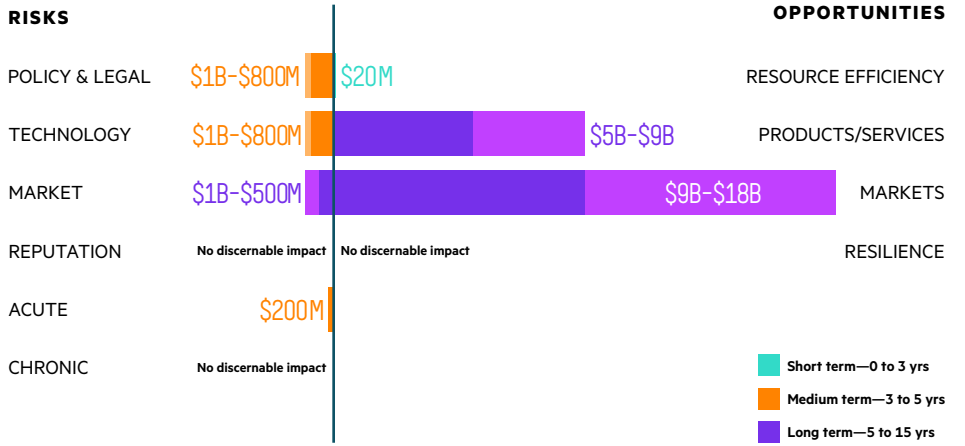
The financial implications of these projections are significant. With limited climate mitigation, aggravated natural disasters and fluctuating commodity prices could disrupt worldwide business operations, while, conversely, transitioning to a low-carbon economy presents its own challenges and will require disruptive change across multiple sectors. We believe that technology will be fundamental to accelerating this transition and that HPE has a responsibility to collaborate with industry, business groups, and governments to promote ways that our technology can be used to address climate change and facilitate compliance with related laws, regulations, and treaties.

In 2019, HPE conducted its second TCFD analysis, following the recommendations set forth by the G20 Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD), which links climate-related risks and opportunities with the financial stability of our organization. Similar to last year's analysis, we modelled two climate scenarios over three time horizons—short (0-3 years), medium (3-5 years), and long-term (5-15 years). Although we updated our assessment with more recent and accurate data[33], our modelling again confirmed that the business opportunities from developing technology solutions to facilitate a low-carbon transition will outweigh the risks.

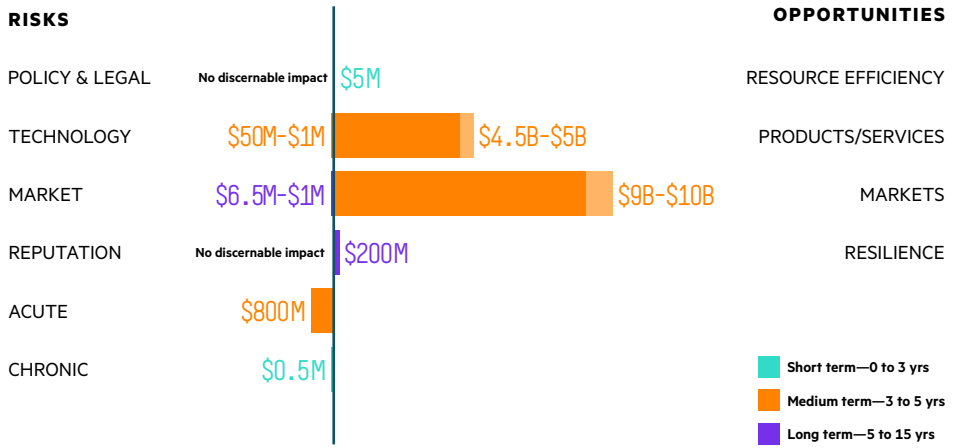
We recently commissioned BSR to expand our TCFD analysis by leveraging additional multidimensional scenarios with input from existing climate projections. We plan to publish these results in the coming year and will continue to update our reporting on an annual basis. These results will help to:

- Improve foresight and a more holistic understanding of emerging issues that confront our business
- Share perspective on key risks, opportunities, and options to enhance resilience
- Provide investors with a clear explanation of how our scenario analysis aligns with the TCFD recommendations
- Enhance our resiliency strategy and risk management processes

1.5°C SCENARIO



LIMITED MITIGATION SCENARIO (>2°C)



Scenario assumptions

In a 1.5°C scenario we assume:

- The power sector is fully decarbonized by 2050; reduced energy demand by industry, buildings, and transport lowers emissions further
- Reduced energy demand depends on efficiency and efficiency depends on adopting the best available technology
- Policies emerge that accelerate the socio-technical transition and the phase out of existing systems
- Aggressive policies on energy efficiency lower mitigation and energy costs
- Carbon-pricing mechanisms increase the cost of non-renewable energy by making GHG emissions expensive

1.5°C SCENARIO

	Impact quantification	Timeline	Potential results
OPPORTUNITIES			
Resource efficiency and energy sources	$20M	0–3 years	Aggressive building energy reduction through innovative technologies as well as renewable energy procurement reduces operational energy cost.
Products and services[34]	$5B–$9B	5-15 years	Need to reduce industry electricity use increases demand for IT solutions that are also energy efficient.
Markets[35]	$9B–$18B	5–15 years	Economy-wide drive for socio-technical transition opens new markets to IT infrastructure and increases need for solutions such has hybrid cloud and edge compute.
Resilience	No discernable impact	N/A	Increased investments in renewable energy, efficiency, and IT infrastructure builds resilience by minimizing single points of failure and improving data feedback to response times. Enhanced partnerships with supply chain partners and customers builds resiliency.
TRANSITION RISKS			
Policy and legal[36]	$800M–$1B	3–5 years	Stringent regulation on carbon-pricing, technology policies, and energy-efficiency requirements raise the bar for market entry and cost of energy consumption.
Technology[37]	$800M–$1B	3–5 years	Technologies that do not facilitate transition to a low-carbon economy will not be viable, which includes low-performing IT technologies.
Market[38]	$500M–$1B	5–15 years	Inability to anticipate new applications of IT solutions that reduce industry energy demand and facilitate transition to a low-carbon economy may lead to lost opportunities in emerging markets.
Reputation	No discernable impact	N/A	Companies that do not accelerate transition to a low-carbon economy are less competitive with customers. Investors and analysts evaluate companies based on ESG metrics.
PHYSICAL RISKS			
Acute	$200M	3–5 years	Frequency of extreme weather events continues at current rate and current severity.
Chronic	No discernable impact	N/A	Today's frequency and duration of drought conditions continues, but does not increase or expand to other areas vulnerable to water scarcity.

In a limited mitigation (business-as-usual) scenario we assume:

- Policies and regulations around GHG and energy efficiency maintain status quo
- Extreme weather events such as hurricanes, flooding, and wildfires occur with higher frequency and intensity
- Water-related issues such as scarcity, flooding, and low water quality not only threatens human health but also impacts power generation
- Coastal cities and businesses are forced to relocate due to sea-level rise

LIMITED MITIGATION SCENARIO (>2°C)

	Impact quantification	Timeline	Potential results
OPPORTUNITIES			
Resource efficiency and energy sources	$5M	0–3 years	Less ambitious reduction of energy demand leads to moderate cost savings.
Products and services[39]	$4.5B–$5B	3–5 years	Adoption of IT solutions continues at current rate. Limited drive beyond status quo for technologies that are energy-efficient and reduce end-user energy demand.
Markets[40]	$9B–$10B	3–5 years	New markets continue to adopt IT solutions at current rate. But expedited adoption for socio-technical change is severely delayed.
Resilience	$200M	5–15 years	Current rate of renewable energy procurement continues. Moderate investment in IT infrastructure to increase efficiency. Sporadic partnerships with suppliers and customers.
TRANSITION RISKS			
Policy and legal	No discernable impact	N/A	Emergence of carbon pricing mechanism and energy- efficiency regulation continues as is—globally disparate. No discernable impact.
Technology[41]	$1M–$50M	3–5 years	Transition to high-performance technology is slow compared to 1.5°C scenario with less-efficient technologies persisting in the marketplace. Stunts adoption of innovative IT solutions.
Market[42]	$1M–$6.5M	5–15 years	New markets to adopt IT solutions are slow to emerge, which constrains the application of technologies with edge computing.
Reputation	No discernable impact	N/A	No discernable impact to reputation beyond status quo.
PHYSICAL RISKS			
Acute	$800M	3–5 years	Frequency and severity of extreme weather events increases. Sea-level rise threatens both HPE facilities and employees that live near the coast. Supply chain vulnerability increases.
Chronic	$0.5M	0–3 years	Increased frequency and duration of droughts. Regions that experience drought-like conditions increase. In some instances, water scarcity impacts reliability of power generation.

This report references the following disclosures from the Global Reporting Initiative (GRI), focusing on issues and indicators most material to our business. This index is intended to help our stakeholders locate content of interest across HPE's reporting suite. It does not represent a complete overview of HPE's reporting or practices.

GRI INDEX

GRI standard number	GRI standard title	Disclosure number	Description	Location	SDG target
GRI 102	**General Disclosures**	**102-1**	Name of the organization	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-2**	Activities, brands, products, and services	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-3**	Location of headquarters	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-4**	Location of operations	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-5**	Ownership and legal form	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-6**	Markets served	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-7**	Scale of the organization	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-8**	Information on employees and other workers	2019 Data Summary – Employees	8.5, 10.3
GRI 102	**General Disclosures**	**102-9**	Description of the supply chain	Environment	N/A
GRI 102	**General Disclosures**	**102-10**	Significant changes to the organization and its supply chain	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-11**	Precautionary Principle or approach	Substances of concern	N/A
GRI 102	**General Disclosures**	**102-12**	External economic, environmental, and social initiatives to which the organization subscribes	Environment Privacy Stakeholder engagement Data security	N/A
GRI 102	**General Disclosures**	**102-13**	Membership of associations	Environment Substances of concern Data security Ethical sourcing Human rights Privacy Public policy Corporate governance and ethical behavior	N/A
GRI 102	**General Disclosures**	**102-14**	Statement from senior decision-maker	A message from our CEO	N/A

GRI INDEX (CONTINUED)

GRI standard number	GRI standard title	Disclosure number	Description	Location	SDG target
GRI 102	**General Disclosures**	**102-15**	Key impacts, risks, and opportunities	HPE 2019 10-K Creating shareholder value TCFD Index	N/A
GRI 102	**General Disclosures**	**102-16**	Values, principles, standards, and norms of behavior	Corporate governance and ethical behavior Policies and standards	N/A
GRI 102	**General Disclosures**	**102-17**	Mechanisms for advice and concerns about ethics	Corporate governance and ethical behavior	16.3
GRI 102	**General Disclosures**	**102-18**	Governance structure	Corporate governance and ethical behavior HPE Governance	N/A
GRI 102	**General Disclosures**	**102-20**	Executive-level responsibility for economic, environmental, and social topics	Corporate governance and ethical behavior	N/A
GRI 102	**General Disclosures**	**102-21**	Consulting stakeholders on economic, environmental, and social topics	Corporate governance and ethical behavior HPE Governance Stakeholder engagement	N/A
GRI 102	**General Disclosures**	**102-22**	Composition of the highest governance body and its committees	Corporate governance and ethical behavior HPE Governance	5.5
GRI 102	**General Disclosures**	**102-23**	Chair of the highest governance body	Corporate governance and ethical behavior	16.6
GRI 102	**General Disclosures**	**102-24**	Nominating and selecting the highest governance body	Corporate governance and ethical behavior	5.5, 16.7
GRI 102	**General Disclosures**	**102-25**	Conflicts of interest	Corporate governance and ethical behavior 2020 HPE Proxy Statement	16.6
GRI 102	**General Disclosures**	**102-29**	Identifying and managing economic, environmental, and social impacts	Corporate governance and ethical behavior HPE 2019 10-K	16.7
GRI 102	**General Disclosures**	**102-30**	Effectiveness of risk management process	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-31**	Review of economic, environmental, and social topics	Corporate governance and ethical behavior	N/A
GRI 102	**General Disclosures**	**102-32**	Highest governance body's role in sustainability reporting	Corporate governance and ethical behavior	N/A
GRI 102	**General Disclosures**	**102-33**	Communicating critical concerns	Corporate governance and ethical behavior HPE Governance	N/A
GRI 102	**General Disclosures**	**102-35**	Remuneration policies	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-40**	List of stakeholder groups	Stakeholder engagement	N/A

GRI INDEX (CONTINUED)

GRI standard number	GRI standard title	Disclosure number	Description	Location	SDG target
GRI 102	**General Disclosures**	**102-42**	Identifying and selecting stakeholders	Stakeholder engagement	N/A
GRI 102	**General Disclosures**	**102-43**	Approach to stakeholder engagement	About this report	N/A
GRI 102	**General Disclosures**	**102-45**	Entities included in the consolidated financial statements	HPE 2019 10-K	N/A
GRI 102	**General Disclosures**	**102-46**	Defining report content and topic Boundaries	Materiality	N/A
GRI 102	**General Disclosures**	**102-47**	List of material topics	Materiality	N/A
GRI 102	**General Disclosures**	**102-48**	Restatements of information	About this report	N/A
GRI 102	**General Disclosures**	**102-49**	Changes in reporting	Environment Materiality TCFD Index	N/A
GRI 102	**General Disclosures**	**102-50**	Reporting period	About this report	N/A
GRI 102	**General Disclosures**	**102-51**	Date of most recent report	June 2019	N/A
GRI 102	**General Disclosures**	**102-52**	Reporting cycle	About this report	N/A
GRI 102	**General Disclosures**	**102-53**	Contact point for questions regarding the report	About this report	N/A
GRI 102	**General Disclosures**	**102-55**	GRI content index	Standards index	N/A
GRI 102	**General Disclosures**	**102-56**	External assurance	About this report 2019 Data Summary	N/A
GRI 201	**Economic Performance**	**201-1**	Direct economic value generated and distributed	HPE 2019 10-K	8.1, 8.2, 9.1, 9.4, 9.5
GRI 201	**Economic Performance**	**201-2**	Financial implications and other risks and opportunities due to climate change	2019 CDP Submission TCFD Index	13.1
GRI 201	**Economic Performance**	**201-3**	Defined benefit plan obligations and other retirement plans	HPE 2019 10-K	N/A
GRI 205	**Anti-corruption**	**205-2**	Communication and training about anti-corruption policies and procedures	Corporate governance and ethical behavior	16.5
GRI 301	**Materials**	**301-1**	Materials used by weight or volume	Product lifecycle management 2019 Data Summary – Materials and packaging	8.4
GRI 301	**Materials**	**301-2**	Recycled input materials used	Product lifecycle management 2019 Data Summary – Materials and packaging	8.4

GRI INDEX (CONTINUED)

GRI standard number	GRI standard title	Disclosure number	Description	Location	SDG target
GRI 301	**Materials**	**301-3**	Reclaimed products and their packaging materials	Product lifecycle management 2019 Data Summary – Product return, reuse, and recycling	8.4
GRI 302	**Energy**	**302-1**	Energy consumption within the organization	Environment 2019 Data Summary – Environmental footprint	7.2, 7.3, 8.4, 12.2, 13.1
GRI 302	**Energy**	**302-2**	Energy consumption outside of the organization	Environment 2019 Data Summary – Environmental footprint	7.2, 7.3, 8.4, 12.2, 13.1
GRI 302	**Energy**	**302-3**	Energy intensity	Environment 2019 Data Summary – Environmental footprint	7.3, 8.4, 12.2, 13.1
GRI 302	**Energy**	**302-4**	Reduction of energy consumption	Environment 2019 Data Summary – Environmental footprint	7.3, 8.4, 12.2, 13.1
GRI 302	**Energy**	**302-5**	Reductions in energy requirements of products and services	IT efficiency	7.3, 8.4, 12.2, 13.1
GRI 303	**Water**	**303-1**	Water withdrawal by source	Environment 2019 Data Summary – Environmental footprint HPE Water Accounting Manual	6.4
GRI 303	**Water**	**303-3**	Water recycled and reused	2019 Data Summary – Environmental footprint	6.3, 6.4, 8.4, 12.2,
GRI 305	**Emissions**	**305-1**	Direct (Scope 1) GHG emissions	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	3.9, 12.4, 13.1, 14.3, 15.2
GRI 305	**Emissions**	**305-2**	Energy indirect (Scope 2) GHG emissions	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	3.9, 12.4, 13.1, 14.3, 15.2
GRI 305	**Emissions**	**305-3**	Other indirect (Scope 3) GHG emissions	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	3.9, 12.4, 13.1, 14.3, 15.2
GRI 305	**Emissions**	**305-4**	GHG emissions intensity	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	13.1, 14.3, 15.2
GRI 305	**Emissions**	**305-5**	Reduction of GHG emissions	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	13.1, 14.3, 15.2

GRI INDEX (CONTINUED)

GRI standard number	GRI standard title	Disclosure number	Description	Location	SDG target
GRI 305	**Emissions**	**305-6**	Emissions of ozone-depleting substances (ODS)	2019 Carbon Accounting Manual Environment 2019 Data Summary – Environmental footprint	3.9, 12.4
GRI 306	**Effluents and Waste**	**306-2**	Waste by type and disposal method	Environment 2019 Data Summary – Environmental footprint	3.9, 6.3, 12.4, 12.5
GRI 308	**Supplier Environmental Assessment**	**308-2**	Negative environmental impacts in the supply chain and actions taken	Environment 2019 Data Summary – Environmental footprint	N/A
GRI 401	**Employment**	**401-1**	New employee hires and employee turnover	2019 Data Summary – Employees	5.1, 8.5, 8.6, 10.3
GRI 403	**Occupational Health and Safety**	**403-2**	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Employee health and safety 2019 Data Summary – Employees	3.3, 3.9, 8.8
GRI 404	**Training and Education**	**404-2**	Programs for upgrading employee skills and transition assistance programs	Employee development, engagement, and well-being	8.2, 8.5
GRI 405	**Diversity and Equal Opportunity**	**405-1**	Diversity of governance bodies and employees	Inclusion and diversity Corporate governance and ethical behavior 2019 Data Summary – Employees	5.5, 8.5
GRI 408	**Child Labor**	**408-1**	Operations and suppliers at significant risk for incidents of child labor	Ethical sourcing 2019 Data Summary – Supply chain responsibility	8.7, 16.2
GRI 409	**Forced or Compulsory Labor**	**409-1**	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Ethical sourcing 2019 Data Summary – Supply chain responsibility	8.7
GRI 414	**Supplier Social Assessment**	**414-2**	Negative social impacts in the supply chain and actions taken	Ethical sourcing 2019 Data Summary – Supply chain responsibility	5.2, 8.8, 16.1
GRI 415	**Public Policy**	**415-1**	Political contributions	Public policy Political contributions	16.5
GRI 418	**Customer Privacy**	**418-1**	Substantiated complaints concerning breaches of customer privacy and losses of customer data	2019 Data Summary – Privacy	16.3, 16.10

HPE aligns our reporting to the Sustainability Accounting Standards Board (SASB) standards, focusing on disclosures and indicators most material to our business by drawing from the sector-specific indicators of both the SASB "Software & IT Services" and "Hardware" industry standards. This index is intended to help our stakeholders locate content of interest across HPE's reporting suite. It does not represent a complete overview of HPE's reporting or practices.

SASB INDEX

Code	Metric description	HPE 2019 disclosure location
Technology & Communications—Software & IT Services		
ENVIRONMENTAL FOOTPRINT OF HARDWARE INFRASTRUCTURE		
TC-SI-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Environment 2019 Data Summary – Environmental footprint
TC-SI-130a.2	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Environment 2019 Data Summary – Environmental footprint
TC-SI-130a.3	Discussion of the integration of environmental considerations into strategic planning for data center needs	IT efficiency Environment
DATA PRIVACY & FREEDOM OF EXPRESSION		
TC-SI-220a.1	Description of policies and practices relating to behavioral advertising and user privacy	Privacy HPE Global Master Privacy Policy HPE Privacy Statement
DATA SECURITY		
TC-SI-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of users affected	Data security
TC-SI-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	Data security HPE 2019 10-K
RECRUITING & MANAGING A GLOBAL, DIVERSE SKILLED WORKFORCE		
TC-SI-330a.2	Employee engagement as a percentage	Employee development, engagement, and well-being Inclusion and diversity
TC-SI-330a.3	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	Inclusion and diversity 2019 Data Summary – Employees
MANAGING SYSTEMIC RISKS FROM TECHNOLOGY DISRUPTIONS		
TC-SI-550a.2	Description of business continuity risks related to disruptions of operations	Network resilience HPE 2019 10-K

SASB INDEX (CONTINUED)

Code	Metric description	HPE 2019 disclosure location
Technology & Communications—Hardware		
PRODUCT SECURITY		
TC-HW-230a.1	Discussion of approach to identifying and addressing data security risks to new and existing products	Data security HPE 2019 10-K
EMPLOYEE DIVERSITY & INCLUSION		
TC-HW-330a.1	Percentage of gender and racial/ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	Inclusion and diversity 2019 Data Summary – Employees
PRODUCT LIFECYCLE MANAGEMENT		
TC-HW410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	Product lifecycle management HPE General Specification for the Environment
TC-HW410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	Product lifecycle management 2019 Data Summary – Design for environment
TC-HW410a.3	Percentage of eligible products by revenue meeting ENERGY STAR® criteria	2019 Data Summary – Design for environment
TC-HW410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	2019 Data Summary – Product return, reuse, and recycling
SUPPLY CHAIN MANAGEMENT		
TC-HW-430a.1	Percentage of products by revenue that contain critical materials	Ethical sourcing 2019 Data Summary – Supply chain responsibility
TC-HW-430a.2	Percentage of tungsten, tin, tantalum, and gold smelters within the supply chain that are verified conflict-free	Ethical sourcing 2019 Data Summary – Supply chain responsibility
MATERIAL SOURCING		
TC-HW-440a.1	Discussion of the management of risks associated with the use of critical materials and conflict minerals	Ethical sourcing 2019 Data Summary – Supply chain responsibility 2019 Conflict Minerals Report HPE 2019 10-K

POLICIES AND STANDARDS

ACCESSIBILITY, HUMAN RIGHTS, AND LABOR PRACTICES

Accessibility Policy

HPE Supply Chain Foreign Migrant Worker Standard

HPE Global Human Rights Policy

Open Door Policy

CORPORATE GOVERNANCE

Corporate Governance Guidelines

HPE Tax Policy

DIVERSITY

Harassment-Free Work Environment Policy

Nondiscrimination Policy

Equal Opportunity Policy

ENVIRONMENT

Environmental, Health, and Safety Policy (EHS)

Export of Electronic Waste to Developing Countries Policy

HPE Vendor Requirements for Hardware Recycling

HPE General Specification for the Environment

HPE European WEEE Compliance

HPE Sustainable Procurement Framework

ETHICS, ANTI-CORRUPTION, AND PRIVACY

Anti-Corruption Policy

Contingent Worker Code of Conduct

Global Business Amenities Policy

Partner Code of Conduct

HPE Partner Ready Partner Privacy and Data Protection Addendum

Standards of Business Conduct (SBC)

U.S. Public Sector Code of Conduct

HPE Global Master Privacy Policy

SUPPLY CHAIN

HPE Student and Dispatch Worker Standard for Supplier Facilities in the People's Republic of China

HPE Supplier Code of Conduct

HPE Supply Chain Social and Environmental Responsibility Policy

HPE Supplier SER Requirements

This is not a complete list of HPE policies and standards. Additional sustainability-related policy documents can be found here.

MATERIAL ISSUE DEFINITIONS

The following table provides definitions for our material issues. The definitions are based on input from internal and external stakeholders, as well as best practice guidelines from the Global Reporting Initiative and the Sustainability Accounting Standards Board.

Material Issue	Covered in section(s)	Definition
High importance to external stakeholders, high importance to HPE's business success		
Product lifecycle management	Product lifecycle management	Managing the impacts of HPE products and services through their entire lifecycle, including production of raw materials, engineering, design, manufacturing, use, and end-of-life options. Contributing to a more circular economy.
Efficiency of IT solutions	IT efficiency	Providing IT services, products, and solutions and engaging with customers to solve customer business and sustainability challenges. Increasing the energy efficiency of HPE products and enabling customers to reduce their energy use.
Employee engagement, development, and well-being	Employee engagement and development	Promoting rapid professional growth and matching team member skills to future business needs in the ever-evolving technology industry. Fostering employee engagement and open communication and promoting team member well-being.
Inclusion and diversity	Inclusion and diversity	Ensuring that the HPE workforce reflects our global business and customers. Maintaining a supply chain that is diverse, inclusive, and global. Preventing discriminatory outcomes resulting from the use of customer data and Big Data analytics.
Social applications of technology	Introduction Human rights	Providing IT solutions that improve access to health, finance, food, government services, education, information, and markets. Taking account of ethical considerations in the social applications of big data and the social implications of IoT.
Ethical behavior and business partnerships	Corporate governance and ethical behavior	Promoting high standards of ethics and eliminating corruption, extortion, and bribery in employee, business partner, joint venture, and customer relationships. Ensuring that the marketing and communication of products and services is honest, transparent, and fair. Fulfilling taxation responsibilities to the economies in which HPE operates.
Data security	Data security	Protecting information managed by HPE and customers from unwanted parties and unauthorized access, such as security threats and cyberattacks. Processes managed include the collection, use, processing, storage, transfer, sharing, and end-of-life disposal of data.

Material Issue	Covered in section(s)	Definition
High importance to external stakeholders, medium importance to HPE's business success		
Energy use and GHG emissions in our supply chain and operations	Environment	Improving energy efficiency and using renewable energy sources to reduce GHG emissions in our operations, including buildings, employee travel, and transportation logistics. Encouraging our suppliers to adopt energy efficiency and GHG emissions reduction practices in their operations.
Substances of concern in products	Substances of concern	Designing and developing products and solutions that use alternatives to materials and substances of concern to human health and the environment.
Corporate governance	Corporate governance and ethical behavior	Improving diversity of HPE's board structure, as well as its independent oversight of the company, governance of sustainability, and role of CEO/chairman. Managing executive compensation relative to average worker salaries. Providing clear and comparable business and sustainability information on products, operations, and the supply chain in an accessible manner.
Human trafficking and forced labor in the supply chain	Ethical sourcing	Eliminating slavery and forced labor in the HPE supply chain.
Ethical sourcing practices in the supply chain	Ethical sourcing	Maintaining and elevating ethical standards in the supply chain, including services and manufacturing supply chains that maintain labor standards in working hours and conditions, wages and benefits, and humane treatment of workers employed. Achieving fair and beneficial outcomes for supply chain participants, especially workers and communities.
Privacy	Privacy	Upholding the right to privacy and protecting personal data from unwanted parties, including privacy by design. This includes the management of requests for private or personal information from government or law enforcement agencies to determine their legitimacy and comply with local, regional, and national laws and standards.
Transparency, accountability, and reporting	How we report Appendix	Providing clear and comparable business and sustainability information on products, operations, and the supply chain in an accessible manner.
IT products and services and human rights	Human rights	Taking measures to prevent the use of HPE products and services by individuals, groups, or entities that are restricted or who may use IT to infringe on human rights.
Medium importance to external stakeholders, high importance to HPE's business success		
Employee health and safety	Employee health and safety	Creating a healthy, safe, and secure working environment for all HPE team members.

Material Issue	Covered in section(s)	Definition
Additional fundamental issues covered in the report (Medium or low importance to both external stakeholders and HPE's business success)		
Waste and hazardous materials in our value chain	Environment	Managing and disposing of hazardous and non-hazardous waste responsibly across the HPE value chain.
Water in our value chain	Environment	Conserving water across the HPE value chain and improving transparency and water stewardship of suppliers.
Network resilience	Network resilience	Managing reliable information networks—including those that support critical infrastructure and public goods—to reduce and rapidly respond to systemic risks and disruptions such as programming errors or server downtime.
Public policy engagement	Public policy	Influencing public policy development through direct engagement and multistakeholder associations or initiatives. Responsible and ethical public policy engagement, including lobbying and political contributions.
Responsible sourcing of minerals	Ethical sourcing	This includes the responsible sourcing of raw minerals for HPE products and managing the negative social and environmental impacts associated with sourcing and extraction of raw materials, such as rare earth elements and conflict minerals.
Corporate philanthropy	Community investment	Supporting local communities through employee volunteering or providing monetary contributions to qualified organizations. Additional monetary and product contributions are donated in response to natural disasters.

FOOTNOTES

1 "Digitalisation, energy and data demand: The impact of Internet traffic on overall and peak electricity consumption", Morley, Widdicks and Hazas, 2018

2 as of August 2019

3 The use by HPE of any MSCI ESG Research LLC or its affiliates ("MSCI") data, and the use of the MSCI logos, trademarks, service marks, or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of HPE by MSCI.

MSCI services and data are the property of MSCI or its information providers, and are provided 'as-is' and without warranty. MSCI names and logos are trademarks or service marks of MSCI.

4 All HPE products demonstrate essential sustainability elements; however, we focus our suite of efficient IT solutions on approximately 40% of the HPE portfolio, which demonstrate the highest level of efficiency, as compared to our peers. These attributes are based upon efficient equipment, energy-efficient products, and resource efficiency. Efficient solutions enable our customers to compute at the highest level while exhausting the least amount of resources possible.

5 "The power of consumption-based on-premises services in meeting dynamic storage demands", Futurum, 2019

6 http://www.hpezone.com/assets/pdf/Forrester-TEI-Study-HPE-GreenLake-Flex-Capacity.pdf

7 Significant increases in energy performance occur when new product generations are introduced.

8 "What Edge Computing Means for Infrastructure and Operations Leaders", Gartner, 2018

9 https://www.hpe.com/us/en/newsroom/press-release/2019/06/hpe-announces-plans-to-offer-entire-portfolio-as-a-service-by-2022.html

10 https://www.plasticpollutioncoalition.org/the-problem

11 http://hpe-renew.hpe.com/ie/en/Overview/

12 G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures

13 This recognition was received by Hewlett Packard Enterprise for the first time in 2016. Hewlett-Packard Company received all prior recognitions.

14 Supplier data is reported as a one-year lag. Therefore, the most recent data available is from 2018.

15 Significant increases in energy performance occur when new product generations are introduced.

16 https://sciencebasedtargets.org/2017/05/26/hpe-targets-100-million-tons-of-supply-chain-co2e-reductions/

17 Supplier data is reported as a one-year lag. Therefore, the most recent data available is from 2018.

18 Supplier commitments decreased from 2017 due to suppliers setting actual targets through 2018.

19 Composite Water Management Index, https://niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf

20 The majority of HPE's water footprint is related to the electricity associated with the use of our products, including consumption related to power generation and infrastructure cooling. The WRI released its new Guidance for Calculating Water Use in Embedded in Purchased Electricity in February 2020. HPE has applied the new guidance to calculate our water withdrawal data for Operations and Product Use. We will apply the new guidance to water withdrawal associated with our Supply Chain in our next reporting cycle.

21 Composite Water Management Index, https://niti.gov.in/sites/default/files/2019-08/CWMI-2.0-latest.pdf

22 "Belonging At Work Is Essential—Here Are 4 Ways To Foster It", Forbes, September 2019.

23 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.

24 Recordable incident 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.

25 Sum of total number of beneficiaries as reported by each HPE Accelerating Impact tech nonprofit, where applicable. Wikimedia Foundation was excluded in the calculation. Organizations that do not track impact by number of beneficiaries are also excluded from this impact number..

26 Formerly the Electronic Industry Citizenship Coalition (EICC)

27 For audits on RBA member facilities and their suppliers' facilities, independent third-party specialists trained in social and environmental auditing carry out the audits, using the RBA Validated Audit Process.

28 "DRC conflict-free" as defined in the U.S. Securities and Exchange Commission's conflict minerals rule are products that do not contain conflict minerals that directly or indirectly finance or benefit armed groups in the DRC or an adjoining country. Conflict minerals from recycled or scrap sources are considered DRC conflict free.

29 Our progress toward DRC conflict-free status is based on the number (as of the 2019 Cut-Off Date of May 2020) of all supplier-reported 3TG facilities that were either RMAP-conformant or active, and/or that we reasonably believe exclusively source conflict minerals from recycled or scrap sources or from outside of the Covered Countries.

30 We designed our due diligence measures to conform with applicable portions of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (Third Edition, OECD 2016).

31 This project developed one of the electronics industry's only closed-pipe, vertically integrated conflict-free tantalum supply chains. HPE supports this effort by utilizing tantalum capacitors from KEMET Corporation.

32 UN Global Compact and Accenture, "The decade to deliver: A call to business action", 2019

33 Analysis is based on publicly available data, research, and interviews. Results are generated from a series of assumptions and linear extrapolations of data, where available.

34 Extrapolated value changed due to improved classification of clean revenue and energy efficient technologies compared to previous year. Assume average YoY increase of 5% with ranges from 3–9% in 5–15 yr time horizon.

35 Extrapolated value changed to reflect HPE clean revenue and energy efficient technologies. Previous year extrapolation based on market reports (e.g., IDC). Assume average YoY increase of 5% with ranges from 3–9% in 5–15 yr time horizon.

36 Range reflects change FY18 and FY19 net revenue percent from EMEA market.

37 Range reflects change FY18 and FY19 net revenue percent from EMEA market.

38 Extrapolated value changed to reflect HPE clean revenue and energy efficient technologies. Previous year extrapolation based on market reports (e.g., IDC).

39 Extrapolated value changed due to improved classification of clean revenue and energy efficient technologies compared to previous year. Assume average YoY increase of 2% with ranges from 0–2% in 3–5 yr time horizon.

40 Extrapolated value changed due to improved classification of clean revenue and energy efficient technologies compared to previous year. Assume average YoY increase of 2% with ranges from 0–2% in 3–5 yr time horizon.

41 Extrapolated value changed due to improved classification of clean revenue and energy efficient technologies compared to previous year.

42 Extrapolated value changed to reflect HPE clean revenue and energy efficient technologies. Previous year extrapolation based on market reports (e.g., IDC).

RESOURCES

HPE REPORTS AND ONLINE CONTENT

HPE 2019 Living Progress Data Summary

HPE Annual 10-K Report

HPE Proxy Statement

HPE Investor Relations

HPE Carbon Accounting Manual

HPE Water Accounting Manual

EXTERNAL RATINGS

Search for Hewlett-Packard for historical Hewlett-Packard Company submissions, and Hewlett Packard Enterprise for post-separation HPE submissions.

CDP

Dow Jones Sustainability Index

FEEDBACK

We welcome feedback on any aspect of our Living Progress reporting and performance. Contact us here.

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a00097537enw, May 2020