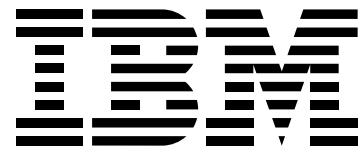# 2018

Corporate Responsibility Report

Trust and responsibility.

Earned and practiced daily.

#GoodTechIBM

IBM

Trust and responsibility.
Earned and practiced daily.

We have seen, for more than a century, that when we apply science to real-world problems, we can create a tomorrow that is better than today. More sustainable. More equitable. More secure.

In fact, we have never known a time when science and technology had more potential to benefit society than right now.

In the last 10 years alone, the world has achieved stunning advancements, from breaking the AI winter to the dawn of quantum computing. These and other advanced technologies have the potential to solve some of the world's most enduring challenges — like fighting fraud in global financial markets, discovering lifesaving medicines, accelerating the acquisition of leading-edge skills and safeguarding our food supply.

Yet the full promise of this moment will only be realized if society trusts these technologies and the organizations that develop them.

Trust and responsibility have been cornerstones of IBM's business since the beginning. These values permeate our culture, from the labs

to the boardroom. They are core to every relationship — with our employees, our clients, our shareholders, and the communities in which we live and work.

In this report, you will read about the many achievements we made to further this foundation of trust and responsibility throughout 2018. For example:

— After reaching our aggressive goals to increase our use of renewable energy and reduce CO_2 emissions 4 years ahead of schedule, we set new, even more ambitious goals, including to obtain more than half of our electricity from renewable sources by 2025.

— For a record fourth time, we received the Catalyst Award for leadership in building a workplace that values diversity and inclusion.

— We invested in more than 24 million hours of professional education for IBMers, to help give them the skills they need to be successful in this new era of technology — for our company and our clients.

— We invested hundreds of millions of dollars in programs to help train and prepare the global workforce for this new era. These initiatives include 21st century apprenticeship programs, returnships for women reentering the workforce, veterans programs and volunteer skills-building sessions for more than 3.2 million students worldwide. And we helped scale the P-TECH™ school model — a six-year program that offers a high school diploma and an associate's degree, along with real-world working experience and mentorship — at no cost to students. This upcoming school year, we anticipate 200 P-TECH schools across 16 countries and 125,000 students enrolled.

We invest in these efforts because it is the right thing to do — and because it is the right investment to sustain our business over the long term. Responsible stewardship is an integral part of our business strategy — a simple, honest approach to doing business that also earned us recognition as one of the World's Most Ethical Companies by the Ethisphere Institute.

Ginni Rometty at P-TECH in Brooklyn, N.Y., May 2019

We know that trust and responsibility can never be taken for granted. That's why we continue to earn and practice them every day. It's also why we have never been more optimistic about our ability to help fulfill the true promise of today's science and technology for business and society.

Ginni Rometty

Ginni Rometty
Chairman, President and
Chief Executive Officer

2018 Corporate Responsibility Report

About this report

IBM's annual Corporate Responsibility Report is published during the second quarter of the subsequent calendar year. This report covers our performance in 2018 and some notable activities during the first half of 2019. In selecting the content for inclusion in our 2018 report, we were inspired by frameworks such as the Global Reporting Initiative (GRI) Standards and the United Nations Sustainable Development Goals. IBM's GRI report using the GRI Standards guidelines can be found on our IBM.org portal. In early 2019, Business for Social Responsibility (BSR) — a nonprofit consultancy dedicated to sustainability — conducted a nonfinancial materiality assessment for IBM. The results of the assessment provided guidance for the report and will be used to inform our Corporate Responsibility strategy. Unless otherwise noted, the data in this report covers our global operations. Information about our business and financial performance is provided in our 2018 Annual Report. IBM did not employ an external agency or organization to audit the 2018 Corporate Responsibility Report. As we continue to innovate and evolve, IBM regularly reviews our strategy and approach to corporate responsibility. This ongoing analysis enables us to identify and prioritize corporate responsibility issues that are relevant to our business and all stakeholders.

Our approach

At IBM, we pursue the highest standards of trust and responsibility by embedding our core values in our daily business — being a responsible steward, working with clients and suppliers, empowering IBMers, setting our governance standards and engaging with society. This approach to corporate responsibility embodies IBM's values:

— Dedication to every client's success
— Innovation that matters for our company and for the world
— Trust and personal responsibility in all relationships

Corporate responsibility management system

Under the supervision of the IBM Board of Directors, the Corporate Responsibility Executive Steering Committee provides corporate social responsibility leadership. The committee is chaired by the Vice President and Global Head of IBM Corporate Citizenship and includes senior leaders from human resources, corporate governance, environmental affairs, research, investor relations, governmental programs and supply chain. Our Corporate Responsibility Working Group includes representatives from the same organizations, and both groups meet regularly and facilitate ongoing stakeholder engagement.

Stakeholder engagement

We collaborate and engage with communities, clients, governments, shareholders, employees, and the social sector on environmental, social and governance (ESG) issues, responsible stewardship, and social impact.

When engaging with stakeholders, we use the same techniques as we do in our business: user centricity, cocreation and agility delivered in leading-edge digital platforms. By applying these techniques with our IBM Enterprise Design Thinking™ Framework, we are able to work effectively with others to help deliver innovation that matters by enabling social impact at scale.

We regularly review our approach to corporate responsibility. This helps us to identify and prioritize issues relevant to our business and our stakeholders.

2018 Highlights

Procured 37.9% of the electricity consumed across our operations from renewable sources

$2.1 billion in spending with global diverse first-tier suppliers

Recognized as one of the World's Most Ethical Companies by the Ethisphere Institute

24.1 million hours of learning completed by IBMers worldwide

$392.8 million in global corporate contributions made

IBM's dedication to environmental responsibility is expansive and enduring.

We met our goals for using renewable energy and cutting CO_2 emissions — so we've raised the bar again. We're also putting tech to work saving energy, preserving clean water, helping agriculture get smarter, and more.

—

A new approach to recycling plastics

"Using catalytic recycling, we harvest valuable raw materials from mixed, dirty waste to make brand-new plastic."

Dr. Bob Allen
Senior Manager of Polymer Science and Technology, IBM Research

VolCat turns waste polyethylene terephthalate (PET) into a substance ready to be fed directly into new plastic manufacturing.

Used plastic may become the next renewable resource, thanks to a radical new process from IBM Research™ called VolCat.

In lab tests, the process — short for volatile catalyst — turns used plastic bottles into piles of a pure material that can be used to manufacture new plastic products, replacing petroleum-based feedstocks.

Today, plastic recycling is suffering from a worldwide glut, a lack of processing plants and problems with contamination. VolCat offers hope for a near-term solution that could help keep plastic waste out of our oceans. The robust process is tolerant of contamination with dirt and other materials — which has been one of the roadblocks for large-scale recycling.

The new process uses a chemical catalyst, a pressure cooker and heat to digest ground-up pieces of many kinds of plastic. "This catalyst selectively digests the plastic, breaking it down very, very rapidly," says Bob Allen, senior manager of polymer science and technology at IBM Research. Food, dirt and other contaminants can be filtered out and the catalyst itself can be removed and recovered, leaving a pure substance ready for new uses.

This recent discovery stemmed from decades of polymer catalysis innovation, including a chemical amplification process invented by IBM that is used in the fabrication of all semiconductors today. IBM researchers used chemical simulation to identify the catalyst itself.

The new VolCat process could allow for the kind of reuse central to the circular economy.

Plastic surgery: A radical new recycling process will breathe new life into old plastic. | 0:56

"We believe we're at the start of a new era of innovation in the plastics recycling industry," adds Allen. "There is such a powerful need to turn waste plastics into new plastics so that they become essentially a renewable resource."

Environment

IBM is using IoT-based sensors at Lake George, in New York, in order to collect data that can be used to improve the freshwater ecosystem.

IBM is committed to environmental leadership in all of its business activities, from its operations to the design of its products and use of its technology.

Below are highlights from our environmental programs and 2018 performance. Our complete 2018 IBM and the Environment Report is published separately and available online.

Global environmental management system

IBM has had a policy for decades that calls for environmental leadership in all business activities. To meet this high standard, we maintain a strong, worldwide environmental management system (EMS) designed to help minimize the potential impact of our operations on the environment.

In 1997, IBM became the first major multinational company to earn a single global registration of its EMS to the International Organization for Standardization (ISO) 14001 environmental management system standard, and we have maintained that certification ever since. The ISO 50001 standard on energy management systems was released in June 2011 and our EMS, which incorporates energy management programs, was certified to it within a year.

Risk identification and management
IBM's overall enterprise risk management process considers environmental risks, including those related to climate change, and helps establish plans for business continuity and asset protection. Our global EMS also includes a process for identifying and assessing significant environmental aspects of our business.

Potential environmental risks include extreme weather events or interruptions in the availability

1997
IBM became the first major multinational to earn a single global registration of its EMS to ISO 14001.

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Environment

1973
Launch of IBM's energy conservation program

IBM Climate Change Position (2007)

IBM recognizes climate change is a serious concern that warrants meaningful action on a global basis to stabilize the atmospheric concentration of greenhouse gases. We believe all sectors of society, the economy and governments worldwide must participate in solutions to climate change.

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of energy, water and other critical materials, which could cause short-term disruptions to IBM's internal operations or supply chain; inability to comply with environmental laws and regulations, which could disrupt manufacturing operations or product deliveries; liabilities associated with inadequate or improper disposal of wastes and other materials generated from operations, including end-of-life products; and impacts to our reputation associated with perceived failure to responsibly manage the environmental impacts of our operations.

IBM manages its operations to meet business objectives while minimizing these potential risks. Our senior leaders assess and manage these risks and provide regular updates to our Board of Directors and to the Directors and Corporate Governance Committee. Our EMS also addresses responsibilities for identifying and complying with environmental laws and regulations — responsibilities that are also addressed in our environmental requirements for suppliers, as well as the IBM Business Conduct Guidelines certification that all IBMers must complete annually.

Energy conservation and climate protection

IBM began its energy conservation program in 1973 and issued a policy statement on the topic the following year. We set our first carbon dioxide (CO_2) emissions reduction goal in 2000, when we helped the World Wildlife Fund create its Climate Savers program. IBM published its position on climate change in 2007, which remains in place today. In 2015, IBM voiced its support for the Paris Agreement and reaffirmed its support in 2017 when the United States withdrew from the agreement, stating that we would continue our decades-long work to lower greenhouse gas emissions.

New energy and climate goals

In October 2018, IBM established a second-generation corporate goal for the use of renewable energy and a fourth-generation CO_2 emissions reduction goal, after achieving our previous targets in these areas. Our new goals are to:

— Procure 55% of IBM's worldwide electricity consumption from renewable sources by 2025. This includes (1) renewable electricity in the grid mix IBM receives from utilities or energy retailers, and (2) renewable electricity for which IBM specifically contracts over and above the renewables in the grid.

— Reduce operational CO_2 emissions associated with IBM's energy consumption 40% by 2025 against base year 2005, adjusted for acquisitions and divestitures.

IBM expanded the scope of these new goals by adding the energy use and CO_2 emissions that are associated with data centers that are located in facilities managed by third parties,
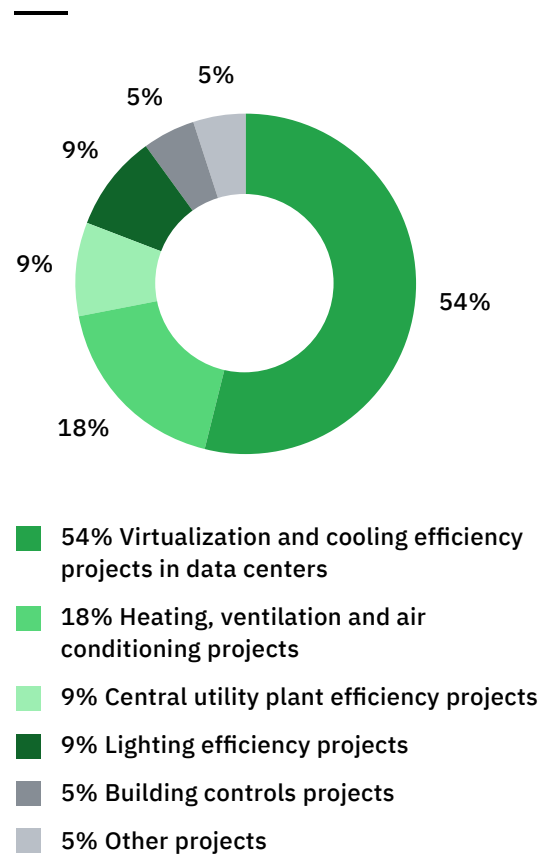
55%
Renewable energy use
by 2025

-40%
CO_2 emissions
by 2025, versus 2005 baseline

Environment

2018 energy conservation projects

By project type

- 5%
- 5%
- 9%
- 9%
- 54%
- 18%

- ■ 54% Virtualization and cooling efficiency projects in data centers
- ■ 18% Heating, ventilation and air conditioning projects
- ■ 9% Central utility plant efficiency projects
- ■ 9% Lighting efficiency projects
- ■ 5% Building controls projects
- ■ 5% Other projects

where IBM does not procure the electricity (often referred to as co-location facilities). Going forward, we are updating results to reflect this. Specifically, IBM's energy conservation, renewable energy, and CO_2 emissions reductions for 2018 are all reported against the expanded scope of our new goals. This caused previously reported results to be decreased, but it will allow for year-over-year comparisons in accordance with our new, more ambitious goals.

We also adjusted our energy conservation goal to achieve conservation savings equal to 3% of annual energy consumption, versus our previous goal of 3.5%. This change recognizes the larger universe of locations now subject to the goal, and our more limited ability to deliver savings at locations managed by third parties.

In March 2019, and in recognition of our ambitious goals, IBM received a Climate Leadership Award for "Excellence in Greenhouse Gas Management — Goal Setting" from the Center for Climate and Energy Solutions and The Climate Registry. IBM is the only company to win a Climate Leadership Award seven times in the program's eight-year history.

Energy conservation projects
IBM's energy consumption is the predominant source of CO_2 emissions attributable to its operations. IBM's total 2018 energy consumption, including co-location data centers, was approximately 4.7 million megawatt-hours (MWh). IBM's energy conservation projects

across the company delivered annual savings equal to 3.3% of our total energy use, surpassing the updated corporate goal of 3%.
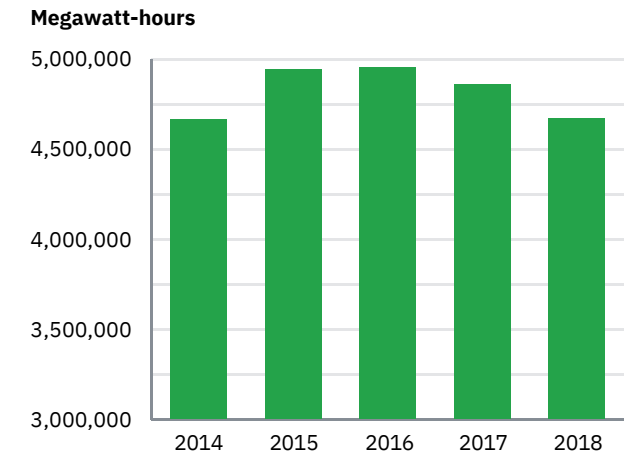
In 2018, IBM implemented approximately 1,900 energy conservation projects at nearly 300 locations. These projects avoided the consumption of 151,000 MWh of energy, the emission of an associated 53,000 metric tons of CO_2 and saved $15.5 million in expense. This impressive level of savings resulted from our continued, across-the-board focus on energy demand, energy efficiency, and the implementation of standardized, global energy conservation strategies at our facilities. From 1990 through 2018, IBM conserved 7.5 million MWh of electricity, avoiding 4.5 million metric tons of CO_2 emissions and saving $632 million.

Automated, analytics-based systems that optimize data center and building operations accounted for 64% of IBM's energy conservation savings in 2018. These systems reduce IT hardware requirements by increasing the utilization of servers and storage equipment, improve data center cooling efficiency, and track and correct building system anomalies in nearly real time to optimize energy use. Collectively, they reduced or avoided over 93,000 MWh of energy consumption and saved $10 million in 2018.

Renewable electricity
In 2018, 37.9% (1,520,000 MWh) of the electricity consumed across IBM's operations

IBM total energy consumption

Megawatt-hours

Note: Includes energy consumption from IBM and third-party managed locations.

CLIMATE LEADERSHIP AWARDS **2019**
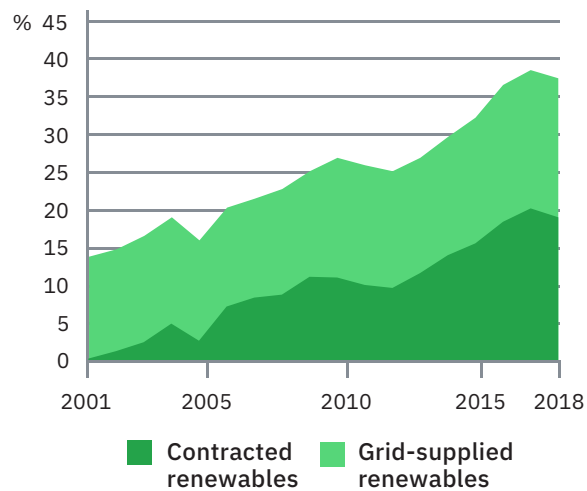Excellence in Greenhouse Gas Management (Goal Setting Certificate) Recipient

7-time winner
IBM is the only 7-time winner in the program's 8-year history.

Environment

Use of renewable electricity

As a percent of global electricity consumption

Legend:
- Contracted renewables
- Grid-supplied renewables

Note: Data has been restated to reflect the expanded scope of our goal, which now includes data centers located in third-party managed facilities, and was further revised to address an error in the original report published in July 2019.

came from renewable-generation assets. (As discussed earlier, this is calculated in accordance with the expanded scope of our new goal.) Of this total, IBM directly contracted to purchase 19.3% (772,000 MWh) through its utility suppliers, which avoided 236,000 metric tons of CO_2 emissions. The remaining 18.6% (748,000 MWh) was part of the existing mix of electricity we receive from the grid.

A key objective of our renewable energy procurement program is to drive better integration of renewables into reliable grid supplies, reducing overall grid emissions factors and making renewable electricity accessible to more organizations. IBM continues to work with regulated utilities, energy retailers and service companies, and renewable project developers to create short-term (4-6 years), economically viable contracting approaches for renewable electricity procurement.

CO_2 emissions
From 2017 to 2018, IBM reduced CO_2 emissions at IBM and third-party-managed locations by 3.0% (43,000 metric tons), to 1,375,000 metric tons. When measured against the 2005 emissions baseline, we reduced CO_2 emissions by 32.2%. For details on IBM's complete greenhouse gas emissions inventory, please see our IBM and the Environment Report.

Product stewardship

IBM's product stewardship program is a proactive, strategic approach to the environmental design and management of our products. Established in 1991, its mission is to develop, manufacture and market products that are increasingly energy efficient; that can be upgraded, refurbished, remanufactured and reused to extend product life; that incorporate recycled content and environmentally preferable materials and finishes; and that can be dismantled, recycled and disposed of safely.

IBM has two goals for product energy efficiency:

— Improve the computing power delivered for each kilowatt-hour of electricity consumed for new server products as compared to equivalent, previous-generation products.

— Certify at least two-thirds of eligible new server products — and at least one storage product in each of three categories — to the U.S. Environmental Protection Agency's (EPA) ENERGY STAR program criteria.

We met both of these goals. IBM released four POWER9™-based servers eligible for ENERGY STAR and certified three (models S922, S924 and E950). These products improved the work delivered per unit of power consumed, as measured by the Standard Performance Evaluation Corporation Server Efficiency Rating

Solar array installation at IBM's data center in Vaux-sur-Sûre, Belgium.

Operational CO_2 emissions reduction

Versus IBM's 2005 baseline

2014	2015	2016	2017	2018	2025
-24.2	-22.6	-29.2	-30.1	-32.2	-40.0
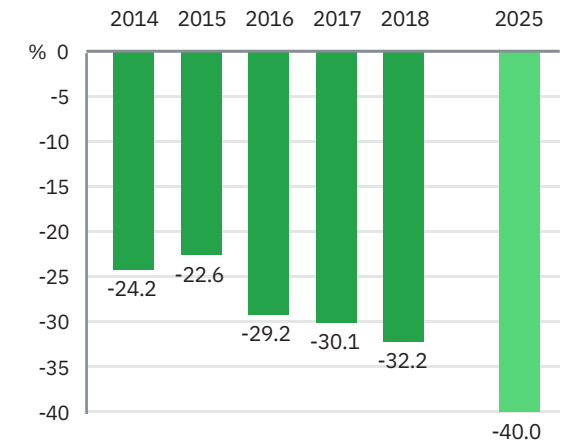
IBM CO_2 emissions reduction goal

Note: CO_2 emissions include those from IBM and third-party managed locations.

Environment

The IBM-built Summit is the world's smartest and most powerful supercomputer.

Tool, by 30-60% over previous-generation POWER8® servers. IBM also certified the new IBM FlashSystem® 900 storage product to ENERGY STAR criteria. As of May 2019, IBM had three Power Systems servers and eight storage products certified to ENERGY STAR requirements.

IBM deployed two supercomputers for the U.S. Department of Energy in 2018, and as of November, they not only ranked first and second in the Top500 list of the world's fastest, but also third and sixth for energy efficiency in the Green500.

IBM's global product end-of-life management operations processed 28,300 metric tons of end-of-life products and product waste in 2018. More than 96% (by weight) was recycled, resold or reused, and only 0.7% was sent directly to landfill or incineration facilities for disposal. IBM initiated product takeback programs in Europe in 1989 and has expanded them over time. In many countries and U.S. states, we offer solutions to household consumers for the end-of-life management of computer equipment, either through voluntary IBM initiatives or programs in which we participate. More information about these programs can be found on our product recycling website. IBM has documented the collection and processing of 1.07 million metric tons (2.35 billion pounds) of product and product waste worldwide since 1995, when we began including product recovery in our annual corporate environmental report.

Water conservation and waste management

The preservation of water resources is an important area of focus for IBM. In 2016, IBM established a goal to reduce water withdrawals year-to-year at 45 data centers and other large IBM facilities located in water-stressed regions. In 2018, withdrawals at these locations decreased by 0.4% versus 2017. This was a smaller reduction than in previous years due to business activities that increased water demand at some locations.

For waste that IBM generates, we focus on preventing pollution through a comprehensive, proactive waste management program. IBM's waste management hierarchy defines our strategic management practice in order of preference as: (1) prevention, (2) reuse, (3) recycling, (4) recovery, (5) other treatment, and (6) land disposal.

IBM's worldwide operations generated approximately 34,200 metric tons of nonhazardous waste in 2018. We recovered and sent 89.5% (by weight) to be recycled — an increase of 1.7% from 2017 and surpassing our goal of 75%.

IBM generated 1,760 metric tons of hazardous waste in 2018. Although this is a relatively small part of IBM's overall waste, the amount increased by 20% in 2018 due to the one-time demolition and replacement of groundwater treatment facility systems at two former IBM locations in the United States.
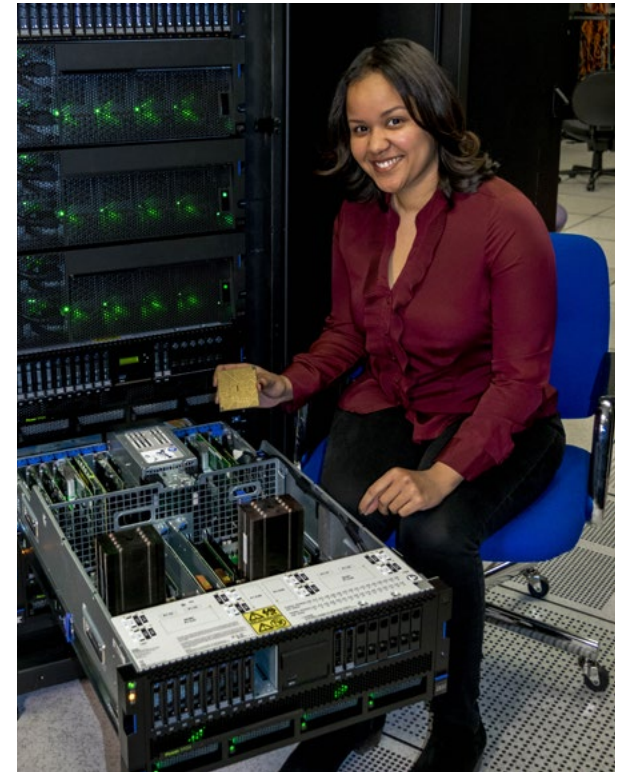
IBM engineer Ana Santos De Leon tests an IBM Power Systems server in Austin, Texas.

Environment

"Utilize IBM products, services and expertise around the world to assist in the development of solutions to environmental problems."

One of IBM's 11 environmental policy objectives

Solutions

Here are just a few current examples of how IBMers throughout our company are inventing and implementing solutions that can improve the quality and sustainability of water, energy, agriculture and more.
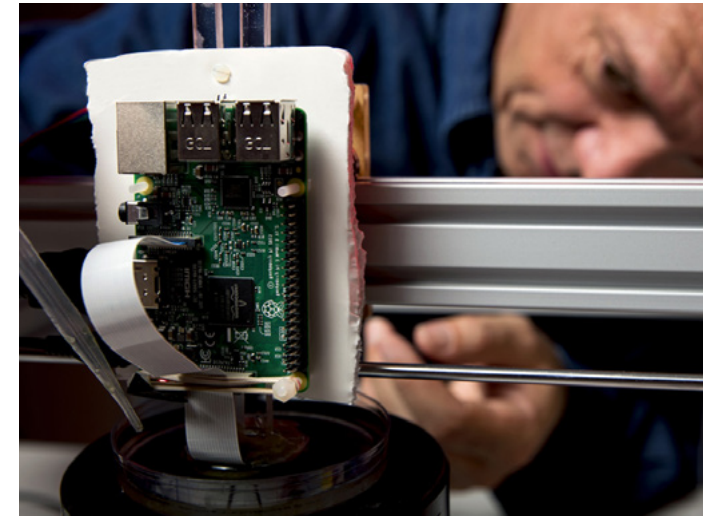
Water

Helping harness safe water

IBM Research-Africa has collaborated with local governments and private and public-sector partners, including the Millennium Water Alliance (MWA) as part of the Kenya Resilient Arid Lands Partnership for Integrated Development (Kenya RAPID). The MWA has created a water-management platform to address the local water needs of Kenyans and livestock in the remote regions where access to a reliable and safe drinking water supply is lacking. The IBM Research software being used in this effort, known as the Water Management as a Service Platform (WMaaSP), is accessible on both web and mobile apps, and assists local water officials' decision making by predicting water demand based on population trends, ground and surface water supplies, climatic patterns, land use, and maintenance. Learn more at ibm.com.

Kenyans access safe water in a kiosk constructed with the support of Kenya RAPID at the opening of the Kapedo Community Water Project.

Microscopes to monitor plankton

IBM researchers reprogrammed imaging sensors from cell phones and used them to create underwater microscopes that monitor plankton, the tiny organisms that are the foundation of the oceanic food chain and produce at least half of our planet's oxygen. Since plankton health is an indicator of their environment, a global network of these devices could monitor aspects of water quality that existing sensors miss. Learn more at IBM Research.

IBM researcher Tom Zimmerman evaluates a seagoing microscope, analyzing plankton in a dish.
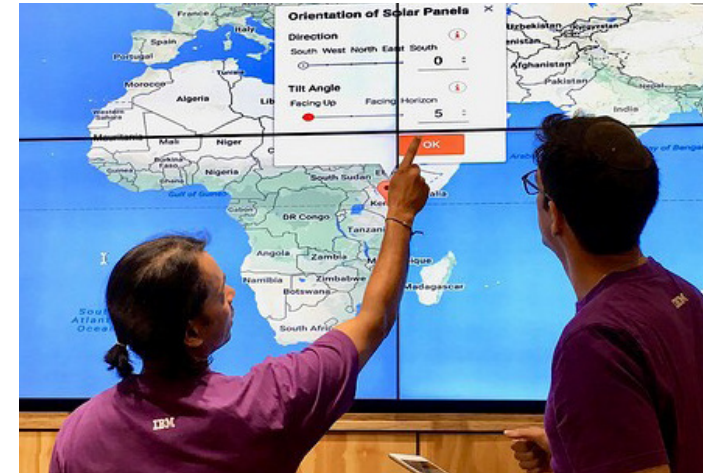
Environment

Watson Decision Platform for Agriculture combines AI and weather technology to help unlock new insights. | 1:31

The AgroPad is a quick, simple way for farmers to test soil and water.

Agriculture

AI helps farmers test their soil

IBM Research–Brazil has prototyped a quick, simple way for farmers to test soil and water. AgroPad is a paper card with a microfluidics chip and circles that change color to indicate the levels of chemicals in a water or soil sample placed on the card. A smartphone app analyzes a photo of the card and presents the results, which can also feed a cloud-based platform monitoring soil regionally. Innovations like AgroPad could help manage soil quality and increase yields on small farms, which produce an estimated 80% of the world's food. Learn more at IBM Research.

Watson for agriculture

Watson™ Decision Platform for Agriculture is a suite of solutions that combine AI, analytics and weather technologies to help farmers and food companies make more informed decisions. The solutions analyze satellite imagery, hyper-local weather forecast details, and crop specific inputs (sowing date, growth stage, etc.) to predict crop yields, model the outbreak probability of various pests and diseases, and make more informed decisions regarding fertilizer, pesticide and irrigation schedules. Some of its technology originated at IBM Research labs in Brazil and India, working with IBM Watson® and The Weather Company®. Learn more at IBM Research.

Energy

Solar energy app for Africa

IBM scientists in South Africa developed a free, web-based tool called the IBM Research Empower Solar app that allows users to design a personalized solar photovoltaic system, including solar panels and storage batteries, for homes and businesses. Because more than 600 million people in sub-Saharan Africa live off the energy grid, this tool can help communities have improved access to clean energy. Learn more at IBM Research.

Smarter Buildings

The IBM Smarter Buildings solution combines our real estate management, software and services expertise with analytics to reveal a

IBM researchers Toby Kurien (left) and Ashley Gritzman developed the IBM Research Empower Solar app.

building's hidden failings and identify opportunities for improving performance and efficiency. Deployed at 25 major IBM campuses — encompassing 174 buildings and over 24.8 million square feet of space around the globe — Smarter Buildings helped reduce energy consumption in 2018 by 17,000 MWh, saving over $1 million.

AI to spot oil leaks

IBM developed an AI solution to help Bridger Pipeline monitor its 3,500-mile network, which carries 450,000 barrels of oil daily. Although Bridger has an extensive system to detect leaks or failures, using deep learning techniques to analyze the high volume of real-time data can help reduce false alarms and more efficiently detect minor leaks that might otherwise go unnoticed — good not only for business, but also the environment. Learn more at IBM Systems magazine.

IBM strives to buy from companies that share our commitment to social responsibility.

We believe all suppliers should manage and report their social and environmental objectives, and we've built a more diverse supply chain for a half-century. We collaborate to advance these values in our industry, and to build tools for more transparency in supply chains worldwide.

Food transparency and traceability

5 million +
transactions have been entered onto the blockchain

—

With the IBM Food Trust, suppliers and retailers can trace food across the global supply chain.

Leafy greens can be traced on the blockchain. As can mashed potatoes, mangoes and most recently, shrimp. They are just some of the products farmers, food producers and retailers worldwide are tracing using IBM Food Trust, the leading blockchain solution for transparency and traceability within the global food supply chain. More than 50 companies have signed on to work with the trust.

Using IBM blockchain technology running on the IBM Cloud, the Food Trust connects growers, processors, distributors and retailers through a permissioned, permanent and shared record of food-system data that can drastically cut the time needed to trace produce from farm to store, or inform a consumer on where their food came from. In a pilot program, tracing

time was reduced from almost seven days to just 2.2 seconds.

The Food Trust ecosystem connects supply chains like Walmart's and also those of other major retailers and global companies such as Carrefour, Dole, Golden State Foods, Driscoll's and Nestlé — all without sharing any information they have not chosen to share.

As more companies adopt a digital, end-to-end traceability protocol, the IBM Food Trust's goal is to help make the world's food supply safer — something that is sorely needed.

Ed Treacy, vice president of Supply Chain and Sustainability at the Produce Marketing Association, believes blockchain can transform

"We believe our vision of a transformed food ecosystem using blockchain is closer than ever."

Raj Rao
General Manager, IBM Food Trust

how the food industry works. "It can help by speeding up investigations into contaminated food, authenticating the origin of food and providing insights about the conditions and pathway through which the food traveled," he says. "This will help identify opportunities to maximize shelf life and reduce losses due to spoilage."
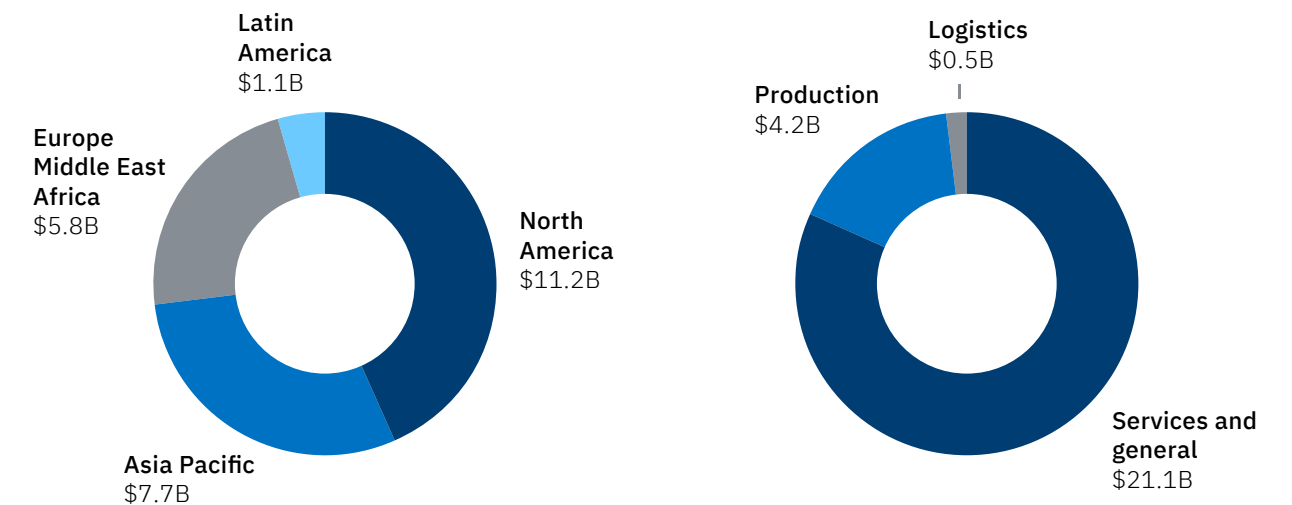
Supply chain

Our relationships with suppliers are built on a mutual commitment to social and environmental responsibility.

Spending $25.8 billion with a global network of more than 13,000 suppliers — as IBM did in 2018 — presents an opportunity to promote our values and help drive progress in our industry. We work with suppliers to establish requirements and assess compliance. We collaborate with industry groups to improve our sector, and we have worked for 50 years to increase supply chain diversity.

Half of IBM's top 100 suppliers published corporate responsibility reports, and nearly 85% of those followed Global Reporting Initiative guidelines. We encourage our remaining suppliers to follow their lead for greater transparency.

2018 spending

IBM spent $25.8 billion in 2018 with more than 13,000 suppliers in more than 100 countries. Below are distributions by region (left) and category.
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Latin America $1.1B

Europe Middle East Africa $5.8B

North America $11.2B

Asia Pacific $7.7B

Logistics $0.5B

Production $4.2B

Services and general $21.1B

Supply chain

These 50 firms represent 90% of IBM's spending in Production and Logistics Procurement (supporting our hardware brands and product distribution operations):

Acbel Polytech	Flextronics	Mellanox Technologies	Seagate
Applied Materials	Fuji Electric	Mercury Corporation	SK hynix
Artesyn	Fujifilm	Micron Technology	Super Micro Computer
ASML Holding	Geodis	Molex	Syncreon
BDT Media Automation	GlobalFoundries	NABS	Teleplan
Broadcom	Hon Hai	NEC Platform Technologies	Toshiba
Celestica	i3 Technologies	NetApp	Trenton Systems
Cisco Systems	Intel	Nvidia	UPS
Compro Business Services	Iron Mountain	Nippon Express	Western Digital
Delta Electronics	Jabil Circuits	Panalpina	Wistron
DHL	Lam Research	Pontocom	Zollner Elektronik
FedEx	Lenovo	Redsis	
Finisar	Marvell	Samsung	

These 50 firms represent 46% of IBM's spending in Services and General Procurement (supporting client services, software offerings, and internal operations):

Adecco	Cisco Systems	Jones Lang LaSalle	Rocket Software
Akamai Technologies	Collabera	Juniper Networks	SAP
American Airlines	Computer Task Group	LeasePlan	SDI International
American Express	CVS Caremark	Lenovo	SHI International
Apleona	Dell Technologies	Manpower	Sumitomo Corporation
Apple	Delta Airlines	Mitsubishi	The Employment Solution
Aricent Holdings	George P. Johnson	NetApp	TIS INTEC Group
Artech Info Systems	HCL Technologies	NTT Group	UNICOM Systems
AT&T	Hewlett Packard Enterprise	OKI Electric	Westcon-Comstor
BMC Software	Hilton	Oracle	WPP Group
Broadcom	Hitachi	Persistent Systems	Zebra Technologies
CBRE Group	Infinite Computer Systems	Randstad	
CDI	Internet Initiative Japan	Red Hat	

Supply chain

Maersk, the container logistics giant, is using IBM Blockchain to create a global blockchain solution for the shipping ecosystem.

Supplier assessment and improvement plans

In 2010, IBM's Social and Environmental Management System began requiring direct suppliers to create their own systems for managing social and environmental responsibilities, with the goal of building sustainable capability by:

— Building a management system that includes employees, society and the environment, and complies with the Responsible Business Alliance (RBA) Code of Conduct (formerly the Electronics Industry Code of Conduct).

— Measuring performance and establishing voluntary, quantifiable environmental goals for waste, energy and greenhouse gas emissions.
— Publicly disclosing these goals, results and other environmental aspects of their management systems.
— Conducting self-assessments, audits and senior leadership reviews.
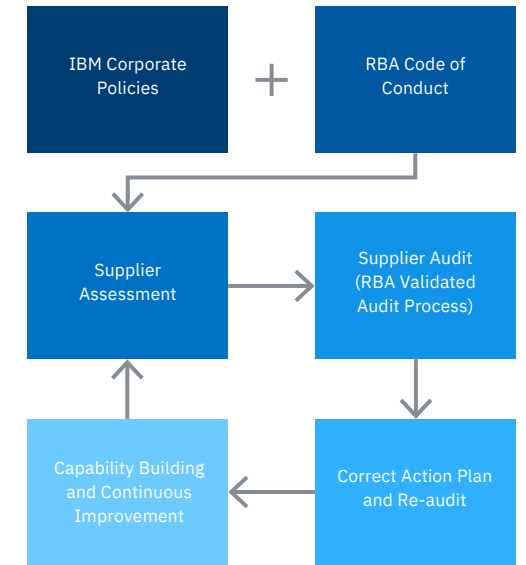— Requiring these actions of their next-tier suppliers.

IBM requires all new suppliers without a social and environmental responsibility management system to create one during their first year of doing business with IBM; in 2018, 1,100 new suppliers were notified that they needed to fulfill this requirement. IBM works closely with suppliers and tracks their progress to build sustainable systems. More information on our requirements may be found on IBM's supply chain environmental responsibility webpage.

Supply chain social responsibility

IBM's focus on social responsibility has been a key element of our procurement strategy for 15 years. As a founding member of the RBA, IBM's operations abide by the RBA code and IBM requires the same of our direct suppliers of hardware, software and services. The RBA also provides valuable education opportunities and audits of our suppliers' operations to confirm they are properly following the code or to determine if they need further improvement.

IBM supply chain social responsibility

Compliance program

—

IBM Corporate Policies + RBA Code of Conduct

Supplier Assessment → Supplier Audit (RBA Validated Audit Process) → Correct Action Plan and Re-audit → Capability Building and Continuous Improvement → Supplier Assessment

Supply chain

In 2018, there were audits to the RBA code with a cross-section of our Production and Logistics Procurement suppliers and Services and General Procurement suppliers. This helped us assess that our supply chain is following the RBA code and enables IBM to monitor critical issues such as human trafficking prevention. We do this through RBA's Validated Audit Process, the standardized social responsibility audit developed by the electronics industry. RBA audit reports provide a level of detail enabling suppliers to understand where noncompliance exists, and provide evidence to help suppliers identify root causes so that sustainable improvements can be made.
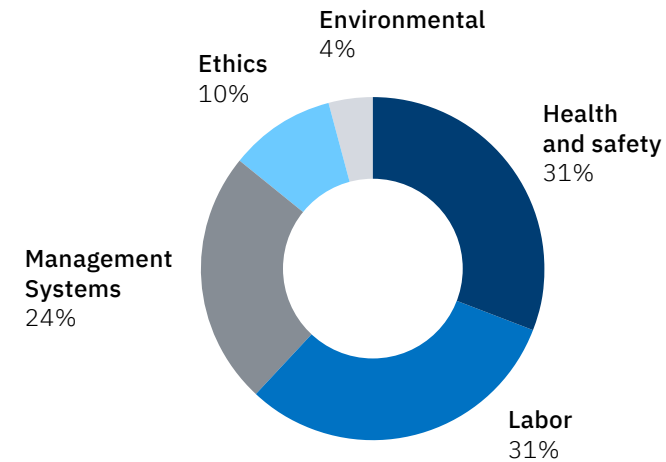
Since 2004, IBM has driven 2,028 full-scope audits, including 437 since 2013, measuring our suppliers' RBA code compliance (and in earlier years, IBM's Supplier Conduct Principles). In 2018, 62 of IBM's first-tier suppliers had full-scope audits: 36 were Production and Logistics Procurement suppliers and 26 were Services and General Procurement suppliers.

Combined with re-audits, IBM assessed 90 first-tier suppliers in 2018 across 14 countries or territories, including in China, where the most audits and re-audits took place, followed by India, Mexico, Taiwan, Malaysia, Singapore, and the Philippines. Production and Logistics suppliers accounted for 63% of audits and re-audits and Services and General Procurement suppliers accounted for 37%.

Supplier audit nonconformance

Distribution of nonconformance to RBA Code of Conduct sections

—

2018 (62 full audits)

Environmental 4%

Ethics 10%

Health and safety 31%

Management Systems 24%

Labor 31%

Audits by country

IBM completed 90 full audits and re-audits in 2018.

—

China
India
Mexico
Taiwan
Malaysia
Singapore
Philippines
Brazil
Romania
Korea
Turkey
Thailand
Indonesia
United Arab Emirates

0   5   10   15   20   25   30   35   40

■ Full audits   ■ Re-audits
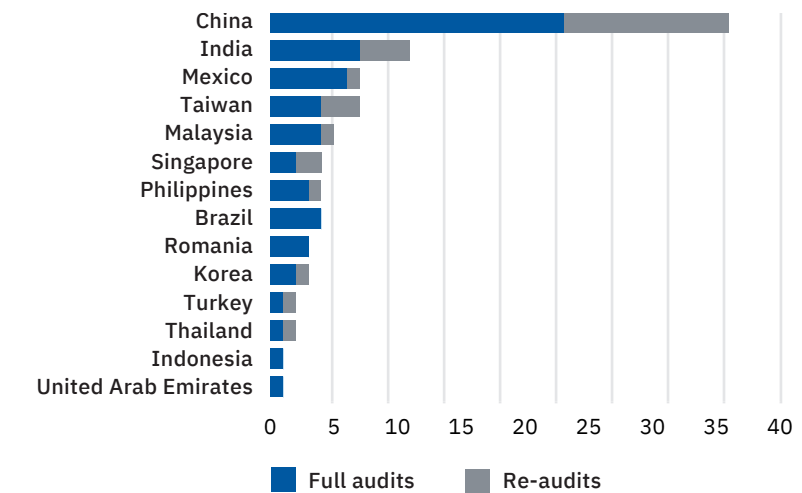
Supply chain

In the 62 full-scope RBA audits in 2018, the 10 most frequent code nonconformances (major and minor) are provided in the chart to the right. To link the nonconformances to the five code sections, we have noted this via abbreviation: Lab (labor), H&S (health and safety), Env (environmental), Eth (ethics) and Mgt (management system).

These audits, along with IBM's long-term supplier relationships and our suppliers' progress toward code compliance, are helping drive long-term supply chain improvements. For example, consider "working hours," where audits show that combined major and minor nonconformance declined to 13% in 2018 from 16% in 2017 and 20% in 2016.

Following an audit, IBM's suppliers create and submit a Corrective Action Plan (CAP) for all issues identified. The CAP provides a roadmap for suppliers to make meaningful change — and later, to test those changes through a re-audit. IBM reviewed and accepted 102 supplier CAPs in 2018.

IBM's cycle of auditing and re-auditing has been effective, as shown by the "before and after" results in the chart to the right. Within the 28 re-audits in 2018, we found 41 code provisions from the full-scope audits with major or minor nonconformance. The CAPs helped our suppliers improve across all 41 code provisions. The 10 code provisions with the highest nonconformance showed
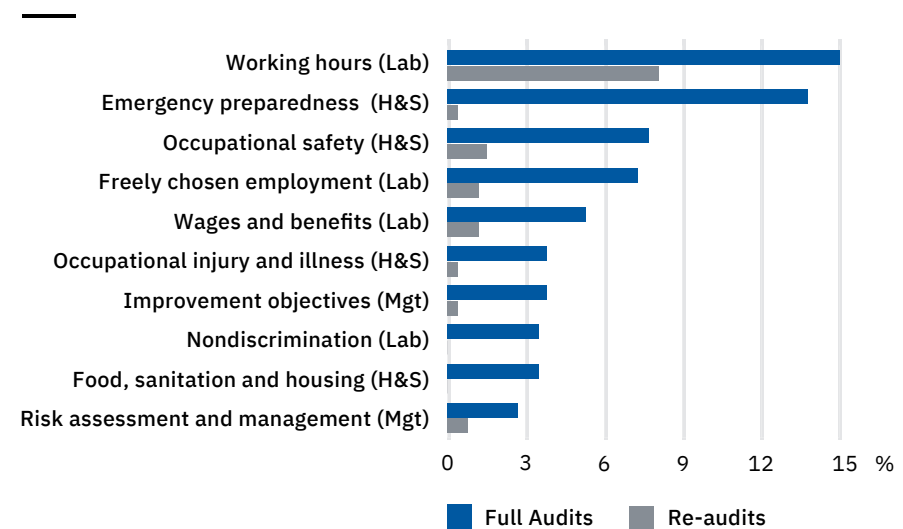
2018 audit results

2018 top 10 RBA Code of Conduct categories with rates of noncompliance determined by 62 full audits.

Legend: Major Noncompliance, Minor Noncompliance
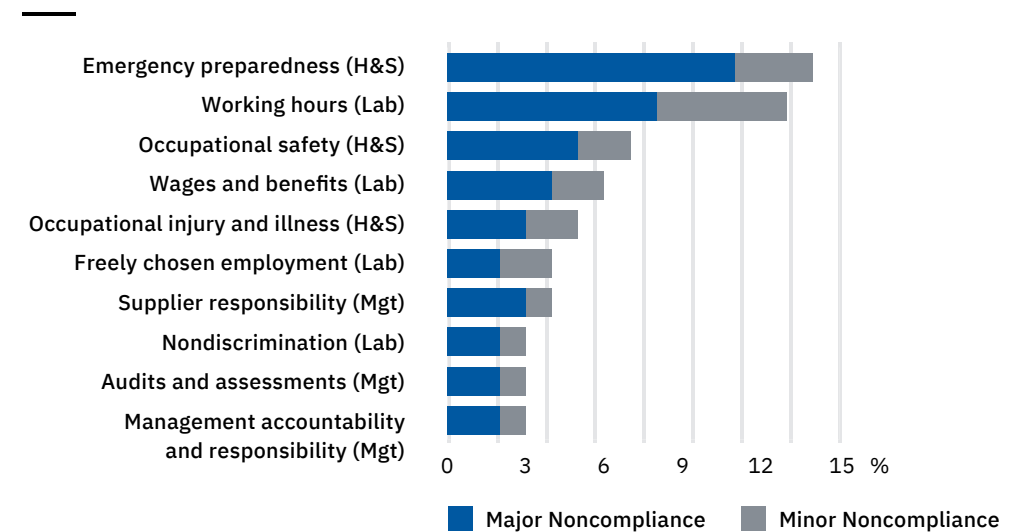
Re-audit improvements

Change in nonconformance rates to RBA code provisions, from initial full audits to the 28 re-audits completed in 2018.

Legend: Full Audits, Re-audits

Supply chain

significant improvement, including working hours (46% improvement), emergency preparedness (97% improvement) and occupational safety (81% improvement). CAPs fully corrected these 21 code provisions from an initial audit revealing both major and minor issues:

— Nondiscrimination (Lab)
— Food, sanitation and housing (H&S)
— Health and safety communication (H&S)
— Hazardous substances (H&S)
— Documentation and records (Mgt)
— Worker feedback and participation (Mgt)
— Corrective Action Process (Mgt)
— Industrial hygiene (H&S)
— Environmental permits and reporting (Env)
— Air emissions (Env)
— Storm water management (Env)
— Energy consumption and greenhouse emissions (Env)
— Company commitment (Mgt)
— Machine safeguarding (H&S)
— Wastewater and solid waste (Env)
— Protection of identity (Mgt)
— Training (Mgt)
— Communication (Env)
— Business integrity (Eth)
— Disclosure of information (Eth)
— Nonretaliation (Eth)

Additionally, 46% of re-audited suppliers addressed all code compliance issues after completing their re-audit cycle. This significant achievement shows both the value of going through the full RBA process as well as our suppliers' commitment to investing in lasting improvements. IBM Global Procurement works with suppliers who have outstanding issues following their re-audits. IBM's procurement executive team reviews supplier audit results monthly, and IBM's Chief Procurement Officer reviews them quarterly.

In 2019, IBM will extend online access to RBA's learning academy courses to help suppliers learn and apply that learning in their compliance efforts.

Center of Excellence for Product Environmental Compliance

IBM's Center of Excellence (CoE) for Global Product Environmental Compliance helps IBM meet environmental regulations everywhere we do business. The CoE reviews regulations, develops compliance strategies, processes and deployment plans, and provides education and training materials for IBM's employees and suppliers.

Worldwide, governments are passing more environmental laws than ever as they consider the health and safety of their citizens. IBM's product environmental compliance work includes:

— Validating that all IBM hardware products don't contain (or exceed acceptable amounts) of prohibited substances.
— Meeting eco-design directives, power and energy reduction regulations, and voluntary standards such as the U.S. Environmental Protection Agency's ENERGY STAR program.
— Complying with the U.S. Toxic Substances Control Act, nanomaterials reporting requirements, battery laws, product takeback regulations and annual reporting.
— Delivering supplier education via dedicated global webinars.

IBM has deployed analytical tools for managing environmental compliance of our products. For example, one tool identifies which IBM part numbers are impacted by expiring exemptions for the European Union RoHS Directive. These tools save IBM engineers extensive amounts of time analyzing complex bills-of-materials to identify the IBM parts impacted by changing requirements.

Supply chain

Engagement and collaboration

IBM collaborates with industry groups, academics, nongovernmental and professional organizations, sharing our work and learning from each other to identify ways to improve supply chain social responsibility. We encourage our suppliers to participate as well.

Our primary supply chain social responsibility collaboration group is the RBA. Representing a wide range of the supply chain, the RBA has grown to over 140 members across automotive, communications, consumer electronics, computer brands, contract manufacturing, hardware components, industrial equipment, logistics, retail, services, software, and the toy industries.

Each member of IBM's global Supply Chain Social Responsibility team is part of one or more of RBA's workgroups. This allows us to remain engaged in, contribute to and learn from other companies that make up each group.

IBM also engages with local and nongovernmental organizations around the globe. For example, as a key member of the electronics industry in Mexico, IBM collaborates with industry chambers and nonprofit organizations — such as the NGO Centro de Reflexión y Acción Laboral — that share our commitment to a sustainable and responsible supply chain. Together, we are working to try to address mutual concerns regarding working conditions in our respective supply chains.

Conflict minerals

In 2018, IBM continued efforts to increase conflict-free tantalum, tin, tungsten and gold (3TG) in our supply chain. IBM participates in the Responsible Minerals Initiative (RMI), along with over 350 companies and industry groups focused on resolving challenges associated with conflict minerals. IBM's due diligence measures conform to the framework set forth in the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chain of Minerals from Conflict-Affected and High-Risk Areas. Our work to date can be summarized in four categories:

1. Establish a supply chain standard for conflict minerals.
2. Perform a Reasonable Country of Origin Inquiry (RCOI) to determine potential conflict mineral sources in IBM's products.
3. Survey direct suppliers using the RMI's Conflict Mineral Reporting Template (CMRT) to determine the smelters or refiners (SORs) of conflict minerals in the supply chain.
4. Engage these SORs in our Responsible Minerals Assessment Program (RMAP) or equivalent programs.

IBM identified 298 upstream SORs of 3TG via 112 direct suppliers in 44 countries, and determined that 93% of these SORs were conflict-free or pursuing assessment. Names and locations of these SORs are published in IBM's 2018 Conflict Minerals Report.

IBM's direct suppliers that report SORs of conflict minerals that are not progressing toward being conflict-free are required to have a plan to remove conflict minerals from products provided to IBM. We work closely with suppliers to help them overcome this difficult challenge and achieve this goal through conflict minerals education, including webinars and RMI online courses.

In 2018, IBM representatives along with other RMI member companies met with conflict-mineral SORs in Indonesia and India to encourage their participation in RMAP. IBM donated to the RBA Initial Audit Fund, which offers full reimbursement for the cost of initial RMAP audits for SORs new to the program. IBM also attended conferences in China, Hungary, and India to meet with SORs of 3TG and encourage RMAP participation.

In 2019, we are continuing our work to reach conflict-free on 3TG and have started exploring our supply chain for cobalt, which has become the next material of interest.

Supply chain

Supplier diversity

IBM believes that diversity in our supply chain stimulates growth in a global marketplace and drives development in growing economies. Our supplier diversity program celebrated its 50th anniversary in 2018 and provides opportunities to suppliers that are majority-owned by people from an ethnic minority (as defined in each country or region), women, military veterans, people with disabilities or LGBT individuals.

In 2003, IBM expanded the program beyond the United States to seek relationships with diverse suppliers in every country where we operate, and to require our direct suppliers to seek diversity through their supply chains. We look for suppliers that not only provide value to our supply chain, but also promote economic opportunities for historically disempowered groups wherever we operate. IBM also works with our diverse suppliers to help them expand their capabilities and delivery models so they can respond more effectively to IBM's requirements.

IBM has conducted more than $1 billion annually in business with our first-tier diverse suppliers in the United States since 2000 and more than $2 billion annually in business with first-tier diverse suppliers globally since 2006. In 2018, IBM purchased $2.5 billion in goods and services from diverse first- and second-tier

suppliers globally, including nearly $1.4 billion with diverse first-tier suppliers in the United States and $710 million with diverse first-tier suppliers in other countries.

IBM's Global Supplier Diversity organization has been widely considered an industry leader globally and was recognized more than 20 times in 2018. We will continue to foster diversity in our global supply chain as business needs evolve, and we will work to identify and develop diverse firms in countries where we have purchasing needs.

Diverse spending worldwide

IBM spent $2.1 billion directly with first-tier diverse suppliers in 2018.

- Latin America $88M
- Asia Pacific $226M
- Europe Middle East Africa $243M
- Canada $155M
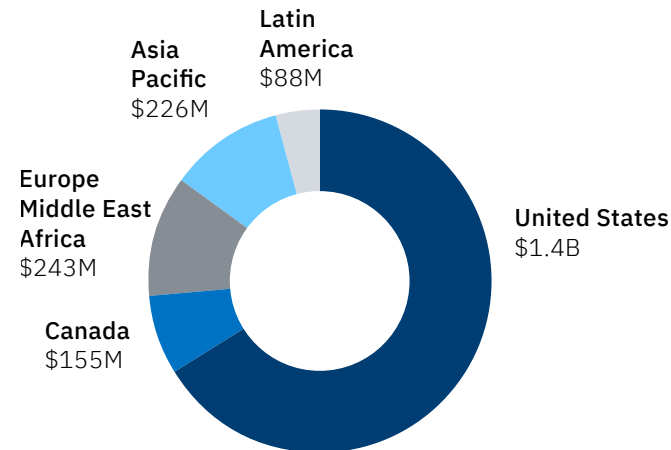- United States $1.4B

<eye icon>

Best of the Decade

Minority Business News USA included IBM in its 2018 Best of the Decade list for "demonstrated commitment to qualified, diverse suppliers."

CELEBRATING
50
YEARS OF LEADERSHIP

50 years of supplier diversity | 5:25

IBM works every day to maintain the trust earned over a century.

In 2018, we asserted simple, clear principles on some of our industry's most pressing issues: from the responsible handling of data, to the need for trust, transparency and fairness in AI and other advanced technologies that are already transforming our world.

Building trust into AI

"Instrumenting trust into data sets and machine learning models will accelerate the adoption of AI and engender increased confidence in these general-purpose technologies."

Aleksandra Mojsilović
IBM Fellow, Head of Foundations of Trusted AI, IBM Research, and Co-Director of IBM Science for Social Good

AI Fairness 360 is a comprehensive open source toolkit to help researchers and developers detect, understand, and mitigate unwanted algorithmic bias in data sets and machine learning models throughout the AI application lifecycle.

Artificial intelligence and machine learning are becoming foundational technologies used to inform decisions that make a big difference in the world. As a result, addressing issues of bias and fairness in these systems and applications is essential. "AI is now being used in many different consequential applications, from natural language interaction to flagging compliance challenges. The issue is in building machine learning models that we trust," says Kush Varshney, IBM researcher and founding co-director of IBM Science for Social Good.

One of IBM's core Trust and Transparency Principles is that new technology, including AI, must be transparent and explainable. IBM's

AI Fairness 360 contains more than 70 fairness metrics and 10 state-of-the-art bias mitigation algorithms designed to translate algorithmic research from the lab into practices as far-reaching as finance, human capital management, healthcare, and education.

Lack of trust and transparency in machine learning and AI models can impede their ability to deliver significant and measurable benefits for enterprise at scale. The AI Fairness 360 toolkit and other IBM Trusted AI efforts aim to bring more fairness and accountability into the equation and enable businesses to tap into historic levels of opportunity while remaining aligned with our core human values.

70+
fairness metrics in the AI Fairness 360 toolkit
—

Governance
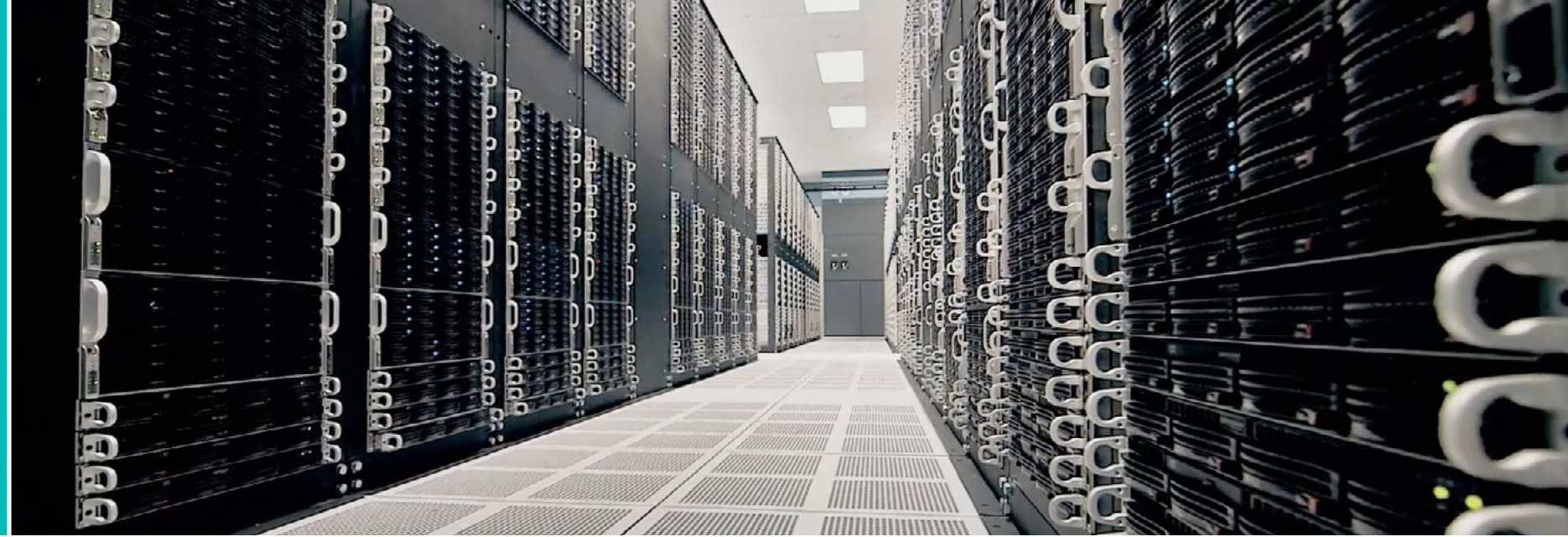
One of the 60 IBM Cloud data centers

We govern our business to maintain the trust that IBM has earned over a century, and which remains the foundation of all our relationships.

Trust and responsibility

Responsible stewardship of data and powerful new technologies has always been fundamental to IBM's business and its commitment to clients. We were among the first companies to appoint a chief privacy officer (in 2000) and establish a genetics privacy policy (2005). In 2017, we released a comprehensive statement of beliefs and practices about data responsibility at IBM.

In May 2018, IBM established principles for trust and transparency to reaffirm a long-standing position: organizations that collect, store, manage or process data are obligated to handle it responsibly. This belief is why the world's largest enterprises trust IBM to steward their most valuable data. We consider these three principles fundamental to the trust our industry needs from clients and society:

— The purpose of AI is to augment human intelligence. We believe that AI will not replace human intelligence but rather should extend human capability and benefit everyone. To that end, we support initiatives to help people gain the skills needed to work with these technologies.

— IBM clients' data is their data, and their insights are their insights. Client data and the insights produced on IBM's cloud or from IBM's AI are owned by IBM's clients. We believe that government data policies should be fair and equitable and prioritize openness.

— New technology, including AI systems, must be transparent and explainable. Technology companies must be clear about who trains their AI systems, what data was used in that training and, most importantly, what went into their algorithm's recommendations.

Governance

Data Responsibility @IBM

IBM believes organizations that collect, store, manage or process data have an obligation to handle it responsibly.

Since issuing these principles, we have continued to engage in discourse on these important issues. Starting in 2018, IBM participated in the European Commission's work to develop "ethics guidelines for trustworthy AI."

Security and privacy

At IBM, we carefully consider security when developing our technology solutions, and continually examine our internal systems and processes to assess how we can best reduce risk and maintain the continuity of our business. Our ongoing commitment to "privacy by design" helps us limit personal data use by default to what is specifically required.

We also work within our industry to help establish prudent standards for safeguarding clients' data. IBM is a founding member of the **Charter of Trust for cybersecurity,** established in 2018 to improve security through industry-led commitments in skills, security, governance and other areas, and by working closely with governments. Charter members endorsed 10 high-level principles that will have provisions and recommendations to establish a new benchmark for cybersecurity.

Education is an essential form of protection against attacks using social engineering to target unwitting users, so we strive to reinforce a cybersecurity-aware culture within IBM and externally. All IBMers are required to complete an annual cybersecurity course that is regularly updated to reflect the latest types of attacks and security best practices.

IBM will fight to protect customer data through applicable legal frameworks when necessary. In 2017, IBM joined a handful of technology companies in supporting a legal challenge to a government request for customer data that, in IBM's view, did not follow proper channels and process. IBM's long-standing position is that government efforts to obtain data for law enforcement purposes should go through recognized legal channels. For more, read the statement by IBM General Counsel Michelle H. Browdy about IBM's amicus curiae brief to the U.S. Supreme Court.

Engaged with regulatory change

May 2018 brought the biggest change in data privacy legislation in two decades, when the **European Union General Data Protection Regulation** (GDPR) became effective. IBM was ready, as over the past several years it had been executing a global program to prepare its internal processes and commercial offerings. We addressed privacy with suppliers and clients where personal data is collected or processed. Worldwide, IBMers completed mandatory education to understand GDPR's impact and be able to apply its rules. IBM has also helped clients prepare for GDPR by applying the capabilities of its own readiness program. This comprehensive approach has equipped IBM with tested, robust systems that can help us prepare for upcoming legislation concerning data privacy, cybersecurity or related issues.

In 2018 and 2019, IBM completed the extensive review of the EU Data Protection Code of Conduct
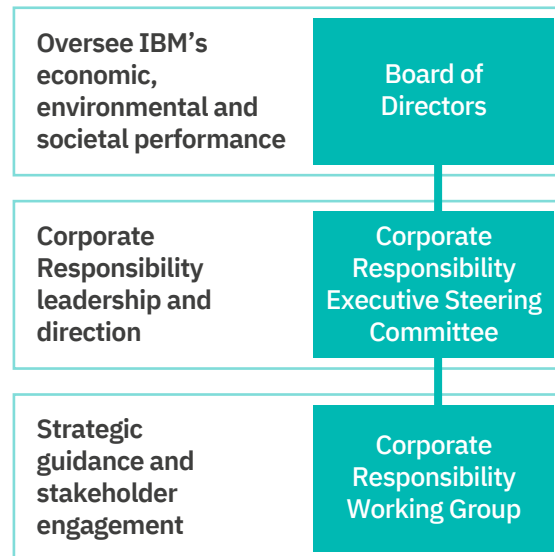
"Every effort to increase cyber resilience must be underpinned by responsible data practices. The Charter of Trust for cybersecurity reflects many of the beliefs and practices we declared last year in DataResponsibility@ IBM and that we employ across all of our business activities."

Christopher A. Padilla
Vice President, IBM Government and Regulatory Affairs

Governance

IBM's corporate responsibility management system

Oversee IBM's economic, environmental and societal performance	Board of Directors
Corporate Responsibility leadership and direction	Corporate Responsibility Executive Steering Committee
Strategic guidance and stakeholder engagement	Corporate Responsibility Working Group

for Cloud Service Providers (EU Cloud Code of Conduct), further developing its substance and aligning its provisions to the GDPR. The EU Cloud Code of Conduct General Assembly has finalized work on the Controls Catalogue, which provides extensive implementation guidance for cloud providers and aligns the code's provisions to articles of GDPR and to European and international security standards such as International Organization for Standardization (ISO), System and Organization Controls (SOC), and Cloud Computing Compliance Controls Catalogue (C5). The code's release will be an important milestone and foundation for data protection in the cloud. The EU Cloud Code of Conduct General Assembly will submit the code for approval as part of the formal process, and will continue its constructive dialogue with supervisory authorities.

Prior to 2018, IBM was among the first companies to be certified under the Asia-Pacific Economic Cooperation (APEC) Cross-Border Privacy Rules system.

Governance at IBM

IBM maintains a rigorous system of corporate governance formed by our long-standing culture of ethics and integrity. We are committed to addressing challenges with transformative leadership, innovation, values and a broad ecosystem of IBM Business Partners and alliances. Senior management, overseen by the Board of Directors, is responsible for IBM's

A look inside an IBM Cloud data center in Dallas, Texas

economic, environmental and social performance, as well as for adherence to our overall compliance programs. Corporate responsibility is integrated across the business through two forums:

The Corporate Responsibility Executive Steering Committee provides leadership and direction on key corporate responsibility issues. Chaired by the vice president for IBM Corporate Social Responsibility (CSR), the committee comprises senior executives from functional areas across IBM, each responsible for developing its own corporate responsibility goals and strategy. Organization-wide goals are approved by the steering committee.

Governance

The Corporate Responsibility Working Group manages IBM's corporate responsibility activities and stakeholder engagement. It comprises representatives from 10 functional areas across IBM (with global representation) and meets at least monthly to review key policy and strategic issues, and make recommendations to the steering committee. IBM Corporate Social Responsibility, which reports to the chief communications officer, coordinates daily CSR-related activities.

Stockholder engagement

Our investor outreach program is a year-round process that includes discussion of IBM's business and long-term strategy, executive compensation programs and practices, Board compensation and refreshment, corporate governance, and corporate responsibility and sustainability. Each year, IBM proactively engages with stockholders owning a majority of the company's outstanding shares. As we continue to enhance our engagement efforts, we held an investor webcast in 2018 devoted entirely to sustainability topics including corporate citizenship, diversity and inclusion, supply chain, environment and governance.

Public policy and political accountability

IBM is committed to leading on public policy issues that are relevant to IBM and the world. An overview of IBM's principal policy positions is available on our key policy issues website. IBM is also committed to meaningful management, oversight, and accurate reporting with respect

to our public policy engagement, including with respect to our trade associations. More information about our public policy governance and public reporting is available on our public policy expenditures website.

IBM has a long-standing global policy against political contributions of any kind, even when permitted by law. Therefore, IBM does not have a Political Action Committee (PAC), does not engage in independent or electioneering communications as defined by law, and does not provide any financial support to political parties or candidates.

We are proud of the consistently high ratings we have received from independent analysts who examine corporate practices on lobbying and political spending, including the Center for Political Accountability and Transparency International UK.

Enterprise risk management

IBM has a systemic and integrated approach to enterprise risk management (ERM), designed to identify, manage and mitigate risks throughout our company. The IBM Risk Management Framework aligns to industry standards and good practices, focusing on leadership, programs and practices, enablement and effectiveness supported by a strong, risk-aware culture.
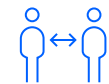
Leadership and governance

An overall review of risk is included in the Board of Directors' consideration of IBM's long-term

IBM Risk Management Framework
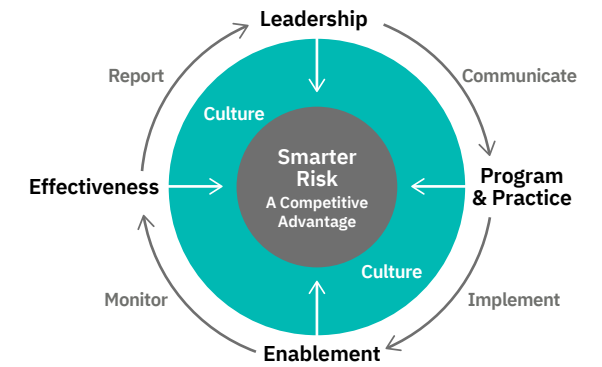
Governance

The Ethisphere Institute recognized IBM as one of the World's Most Ethical Companies.

strategies, transactions and other matters presented to the Board. Furthermore, the Board is responsible for overseeing management's execution of its responsibilities and for assessing IBM's approach to risk management. The Board exercises these responsibilities regularly as part of its meetings and through its three committees, each of which examines various components of enterprise risk as part of their responsibilities.

The Audit Committee continuously reviews financial and audit risks identified through IBM's enterprise management framework. The Executive Compensation and Management Resources Committee is responsible for assessing risks relating to IBM's compensation programs and employee engagement as an indicator of company culture, as well as IBM's evolving demands for talent. The Directors and Corporate Governance Committee oversees risks associated with government and industry regulations, as well as corporate social responsibility, sustainability, environmental, and other societal and governance matters.

Our Enterprise Risk Management Executive Council, comprising 17 senior managers representing different units, functions and regions, meets regularly to help consider and address the management of enterprise risks. In 2018, we refreshed the ERM Council with eight members' rotations. To foster collaboration and transparency, participants share risks and mitigating actions so that the council can effectively manage risk across the entire enterprise, identifying best practices from one part of the business to standardize and apply across units globally.

In 2018, IBM established a Risk, Integrity and Compliance Leadership Committee comprising

Building the right board for IBM: Key director attributes
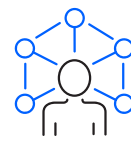
Business operation, innovation, and transformation experience

100% of IBM Directors have led complex organizations

The ability to comprehend and analyze complex matters is key to the IBM Board's oversight of the Company's innovation and transformation. All IBM directors have led large organizations, crucial experience for understanding and overseeing the scale, scope, and complexity of IBM's business.

Industry expertise

Director-wide industry experience includes:

— Technology
— Financial Services
— Healthcare
— Pharmaceuticals
— Energy
— Chemicals
— Transport & Logistics
— Manufacturing
— Private Equity
— Research & Development
— Government

IBM's directors have experience leading organizations in a variety of industries that enhance the Board's knowledge. Their perspectives on contemporary business issues and experience running data-intensive organizations are an asset to the Company and to our shareholders.

Global perspective

Every IBM Director has international experience

Our business success is derived from an understanding of diverse business environments and economic conditions, and a broad perspective on global business opportunities. The Board's diverse and international experience is crucial for IBM, which operates in more than 175 countries.

Governance

representatives from IBM's controls, trust and compliance, risk, and internal audit organizations, who periodically meet to discuss specific risks, share relevant learning and experience, and coordinate activities to best position IBM to promptly, effectively and efficiently mitigate current and emerging compliance risks.

Risk assessment and management

Our company-wide approach to identifying and managing risk is based on the ISO 31000 Risk Management and the Committee of Sponsoring Organizations of the Treadway Commission (COSO) ERM guidance. In adapting this guidance, IBM considers and assesses potential strategic, financial, operational, regulatory and other risks arising from various factors such as changes in the external business environment, the company's strategy, and where and how we do business. Throughout 2018, we held in-depth discussions with leading consultants on emerging risks and conducted a robust internal study that included polling, surveys and interviews of approximately 150 senior executives. We also held a design thinking session with leaders from IBM's strategy organization, to increase focus on identifying emerging strategic risks. As a result, we updated our enterprise-level risk map and refined the focus for our senior management for 2019.

IBM's ERM processes include the identification and management of environmental and climate-related risks. See the Environment section of this report for more, along with information about our objectives for energy conservation and other key environmental performance indicators.

Analytics and cognition are becoming essential technologies for risk management, infusing insight into the process when combined with big data. Our award-winning Country Financial Risk Scorecard identifies emerging risk areas and alerts leadership. In 2018, we streamlined its reporting process and integrated it into the senior financial risk management cadence. We also continued collaboration across risk management and IBM Research to enhance our patented, cognitive-based scenario analysis tool to automate identification of emerging risks and project possible future scenarios and implications. We improved its identification of future scenarios and digestion of aggregated emerging stories, and leveraged it for strategic analysis in several key countries. The tool enhances our global country and regional leaders' risk awareness and ability to improve local resiliency to risks.

The framework's success is predicated on a strong culture of risk awareness, identification, analysis and mitigation. To support this, IBM continued to deploy education and provide awareness and transparency through global blogging, case studies, external perspectives and business leader risk and tool training. In 2018, more than 30 focused awareness sessions were held and IBMers worldwide collaborated in

internal social communities, engaging with a range of materials and risk management experts, to broaden their risk education.

Community engagement helps advance the risk management knowledge of our current and future business leaders. In 2018, we participated on four ERM councils including advisory board membership for two university ERM programs. We also led a peer group council, and delivered presentations on contemporary risk best practices at various industry events.

150 senior executives
participated in a 2018 internal study as part of IBM's risk assessment and management.

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IBMers are responsible for this company's success — always.

In 2018, we continued to expand the ways IBM welcomes and supports a diverse workforce, and we advocated for inclusive social policies around the world. We're dedicated to all IBMers' professional growth and personal well-being, and we're helping to create new paths for people to join our industry.

Mentoring new collar students

In the 2019 school year, there will be:

200 P-TECH schools serving

125,000 students across

16 countries and

11 U.S. states

Danille Jager is helping P-TECH students thrive in Newburgh, New York.

"My teachers raised me," recalls Danille Jager, an Education Program Manager at IBM. "I grew up in a single-parent household, raised by my dad who worked nonstop to keep food on the table. School was my escape, my safe place, and my freedom."

These days, Jager identifies closely with the teens she mentors at the IBM-sponsored P-TECH™ school in Newburgh, New York, a grades 9-14 program in one of the most economically challenged communities in New York State. She is IBM's full-time liaison to the school, where she pairs students with IBM mentors, arranges workplace and STEM experiences, and collaborates with teachers, administrators and the local school district and community college.

She says that the teens at her school "are incredible and inspire me each day. Four of them are now working at IBM, and my heart bursts with pride for all that they're accomplishing. It's so rewarding to see the success of our students, interns, apprentices, and graduates."

Danille laughs when she explains how the student community has embraced her. "I've been named 'P-TECH Mom' by my summer interns and the students threw me a surprise birthday party this year," she says. "I teach Workplace Learning classes here on 'IBM Fridays' and spend time face to face with many of the students. The students have welcomed me more and more into their school."

The school has become the kind of place she relished when she, herself, was a teen, and when school was a refuge. "The teachers are supportive beyond measure. P-TECH is a family."

> "My heart bursts with pride for all that they're accomplishing."

Danille Jager
IBM Education Program Manager

The IBMer

We are dedicated to the success of all IBMers worldwide, through an inclusive workplace experience that supports their growth and well-being.

Diversity and inclusion

Diversity of thought, experience and personal identity among IBMers improves our company's innovation, agility, performance and engagement. This principle drives our efforts to have all IBMers feel safe and confident being their full selves at work — and to advocate for inclusion outside our company.

IBM's first nondiscrimination policy was groundbreaking for 1953, when CEO Thomas Watson Jr. formalized an existing, progressive practice to hire "regardless of race, color or creed." IBM later added sexual orientation (1984), gender identity and expression (2002) and genetics (2005) to the policy. Today, we feel responsible not only for maintaining that heritage, but also building upon it.

Our support of **LGBT+** IBMers includes a formal program to support transitioning transgender employees in the workplace. IBM supports gender affirmation treatment benefits in nine countries and in 2018 we released Gender transition in the global workplace, a first-of-its-kind white paper developed with the Human Rights Campaign to share our approach and detail the benefits of transgender transition support and inclusion. Also in 2018, we launched the commercially available LGBT+ Ally Championship Badge for allies who have demonstrated advocacy and support for the LGBT+ community.

Neurodiversity is an emerging aspect of our persons with disabilities (PwD) programs, because neurodiverse IBMers can offer different perspectives valuable to product development and client service. Working with nonprofit agency Specialisterne, we launched the IBM IGNITE employment program in the U.S. and through it have hired six IBMers with Autism Spectrum Disorder (ASD). We are expanding

2018 IBM Volunteer Excellence Award winners Amit Banik, Sampoorna Dasgupta, Howard Zhang, Naveen Senthilkumar, and Wyatt Clarke helped United Way of Westchester and Putnam (N.Y.) to improve service via analytics.

The LGBT+ Ally Championship Badge is earned by allies who are aligned with the LGBT+ community.

The IBMer
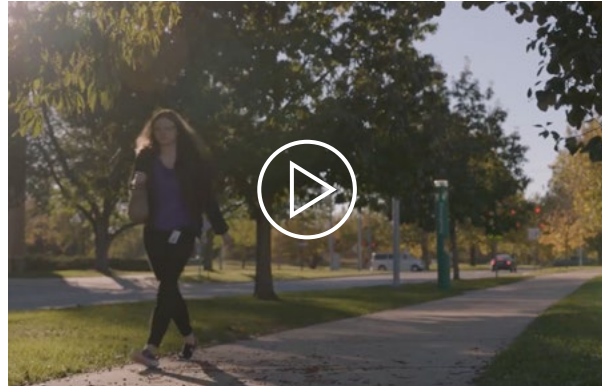
When neurodiversity works | 2:54

"We're taking into account the great diversity people bring, and that is going to add value for our clients."

Christine Bartlett
IBM Lansing Client Innovation Center

the initiative to Australia, Argentina, Brazil and Canada in 2019, with the goal of creating 300 jobs for individuals with ASD by 2020. Also in 2018, we launched People with DisABILITIES education to challenge preconceptions about PwD and help managers and employees be "disability confident" while advocating for a more inclusive workplace.

Continuing our focus on the **advancement of women**, the IBM Institute for Business Value surveyed 2,300 organizations about gender equality in their leadership, identifying obstacles to change as well as the advantages of establishing gender parity as a formal business priority. In March 2019, we published the study as Women, Leadership, and the Priority Paradox and launched Be Equal — inviting IBMers, clients and society to make #BeEqual pledges of support for gender equality in business leadership. Be Equal will continue to expand to promote equality for all. Learn more and make your pledge at ibm.com/beequal.

Public advocacy
IBM advocates for inclusive public policies because we want IBMers and their families of all backgrounds to be engaged, productive and safe in the communities where they live and work.

In 2018, we continued to stand with Deferred Action for Childhood Arrivals (DACA) recipients — children raised in the United States after their parents brought them into the country without legal immigration status — by asking Congress to find a solution for Dreamers to stay living and

working in the United States. IBM CEO Ginni Rometty and 100 other CEOs signed a letter sent by the Coalition for the American Dream, urging lawmakers to pass legislation protecting Dreamers. IBMers who are also DACA recipients were in Washington, D.C., to stand with the coalition. IBM continues to work with the Coalition for the American Dream to provide Dreamers a permanent solution.

IBM is a leader in advocating for the fair and equal treatment of the LGBT+ community. In 2018, we opposed legislation in Israel that would discriminate against same-sex couples that want to have a child through surrogacy, and expressed support for marriage equality in Taiwan, Northern Ireland and the Czech Republic. In the United States, IBM opposed efforts in Massachusetts to roll back transgender rights, and has remained one of the strongest corporate advocates calling for passage of the Equality Act to extend civil rights to the LGBT+ community.

In 2019, IBM supported passage of the Equality Act, which would amend existing laws to provide consistent, explicit protections for LGBT+ employees in the United States. Ginni Rometty stated IBM's position in a letter to the U.S. Congress, and IBM Chief Diversity and Inclusion Officer Tia Silas testified before the House Judiciary Committee — IBM was the only company invited to testify.

IBM Dreamers at Ellis Island
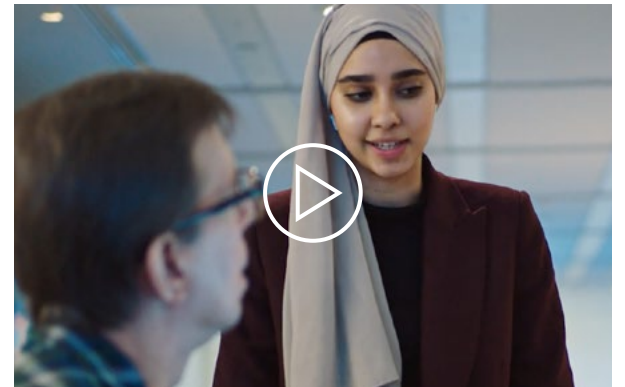
Anthem: Be Equal | 2:18

Be Equal
Ambassador badge

The IBMer

Andrew Richards and Leslie Gibson at the Toronto Salvation Army, where 400 IBMers volunteered to help with food donations.

Employee well-being

IBM has no greater resource than its people. This enduring belief underlies our commitment to a culture of health and safety, integrated throughout our business through programs driven by evidence-based strategies, real-time insights and innovative solutions.

In 2018, we updated **IBM's Culture of Health and Safety** policy to continue meeting IBMers' needs through compliance with legal requirements, targeted efforts to reduce evolving health and safety risks, and a commitment from senior management to encourage employee participation in continually improving the design and experience outcomes.

Established in 1999, our **Well-Being Management System** (WBMS) sets a consistent worldwide approach to implementing IBM's Corporate Policy 127 on health and safety. It follows International Organization for Standardization standards including proactive planning, execution excellence, measurement, and continuous improvement of employee health and well-being. In 2018, Bureau Veritas again recertified our WBMS through the Occupational Health and Safety Assessment Series 18001 certification process.

Our 2018 efforts included these highlights:

— In Canada, the Ontario Workplace Safety and Insurance Board recognized IBM's workplace safety record by returning over CA$750,000 of IBM's 2018 worker's compensation insurance premiums as a rebate.

— IBM India's two-month walkathon challenge drew 20,000 participating IBMers to help raise funds for the education scholarships of 275 girls.

India's Walkathon Challenge drew

20,000

participating IBMers to help raise funds for

the education scholarships of

275 girls.

The IBMer

Above: Thank you card for IBM retirees from students at Boston's Sister Mary Hart Children's Program. **Right:** IBMer Barbora Lebedova (left) and Yaritza Cuevas on a Corporate Service Corps joint deployment with Johnson & Johnson employees in Chile, October 2018.

Leadership development

Programs that develop IBMers' skills represent investments in IBM itself. Our innovative digital learning platform uses Watson® AI technology to develop personalized plans for each IBMer, available 24/7 with resources to develop skills aligned with our company and each IBMer's needs, interests and career goals.

In 2018, we refined the way we identify, assess and develop IBM's high-potential employees and future leaders. Managers lead the process to identify skills and business roles to develop, and the IBMers can be aligned with roles and assignments that complement their existing experience to build a broader perspective on our company and the marketplace.
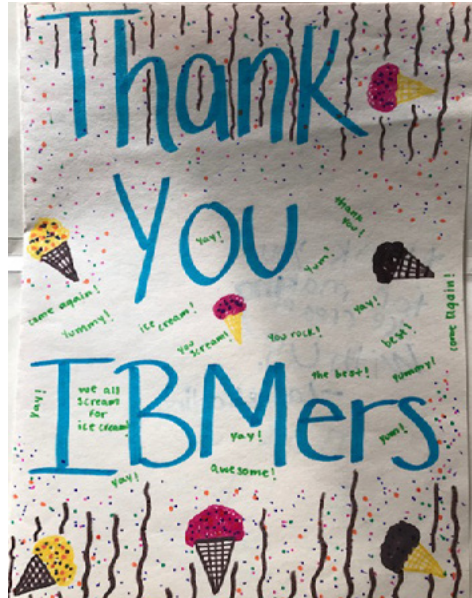
To support managers, IBM has developed a system of success indicators and data with individual, annual assessments based on behavioral science. The system is regularly refined based on managers' feedback. In addition, we launched in 2018 the **Positive Leadership Edge** program, designed to raise awareness of the qualities and habits of effective leaders. Interactive coaching sessions with experts, followed by ongoing reminders and prompts, are designed to help maintain managers' focus on transforming our company and to promote habits that engender engagement and productivity in their teams. Following the 2018 initial deployment, we are expanding the program in 2019.

Corporate Service Corps (CSC) combines leadership development with the opportunity for IBMers to work with colleagues on projects designed to have a positive social impact around the world. The program deployed over 500 IBMers to 24 countries in 2018 and plans to expand participation significantly beyond 2019.

500+
IBMers deployed by CSC to 24 countries in 2018

At IBM, social responsibility means business.

Whether helping clients or tackling societal challenges, we bring innovation, expertise and a dedication to the success of organizations that build stronger communities worldwide. We focus particularly on education, health, and disaster resiliency.

Making tech for good: Project OWL

Left: The Project OWL team traveled to Puerto Rico for two weeks in 2019. **Above:** A Project OWL duck transmitter.

The winner of the first Call for Code Global Challenge keeps people connected after disasters.

100,000+
developers participated in the 2018 Call for Code Global Challenge

Hurricane Maria hit Puerto Rico with enormous force in 2017, killing thousands of citizens and leaving ruined infrastructure across the island. According to Nazario Lugo, president of Puerto Rico's Association of Emergency Managers, one of the biggest crises in the storm's wake was communication. Telephone service was down; the island depended on one working radio station and a lot of improvisation.

Now, a small team of developers is working to deploy a new approach that can be used for post-disaster communication. Their Project OWL (for Organization, Whereabouts, Logistics) hardware/software solution can help create a temporary, low-cost network to keep people and emergency workers in touch.

Project OWL won the first Call for Code Global Challenge, which asked developers around the world to create new tools using open source-based technologies for humanitarian crises. Created by David Clark, CEO of David Clark Cause, and launched by founding partner IBM, along with support from the United Nations Human Rights Office, the Red Cross and the Linux Foundation, Call for Code offers a $200,000 prize to fund the development and execution of each year's winning effort. Call for Code's mission is to rally developers to use their skills and the latest technologies — and to create new ones — to drive positive and long-lasting change across the world.

In the aftermath of Maria, says Project OWL team leader Bryan Knouse, "We were thinking, 'How can we make this in a way so stupidly simple to be used that you don't even have to
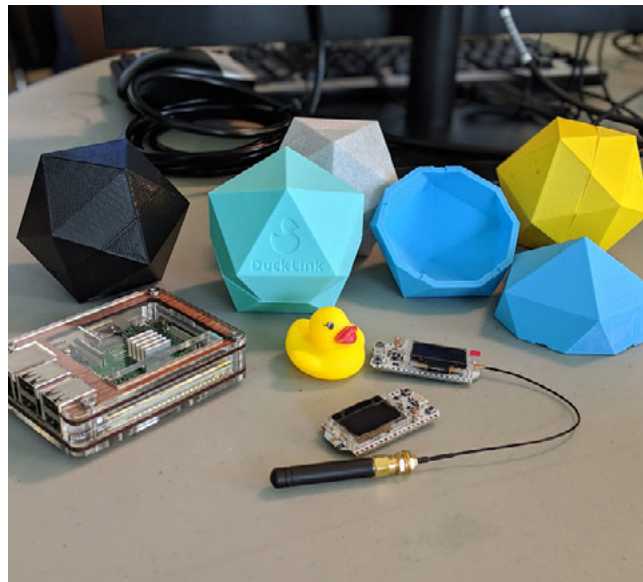
"The most important thing to me will be to deploy this for real."

Daniel Krook
Chief Technology Officer of Code and Response™

Making tech for good: Project OWL

"It's really hard to tell people who have been through a disaster, 'Download this app.'"

Bryan Knouse
Project OWL team leader

Hardware from Project OWL, known as DuckLinks, can float in flooded areas.

think about it?' It's really hard to tell people who have been through a disaster, 'Download this app, or go to this website.'"

Project OWL uses small, low-cost transmitters to create a low-frequency wifi network, which it calls "Ducklink." (Their prototype low-power transmitters are called ducks.) In early 2019, the team traveled to Puerto Rico to pilot prototypes. The tiny transmitter boxes emit a low-frequency Wi-Fi connection that users can link to via smartphones. Once connected, a pop-up box in English and Spanish automatically appears and people can enter information including name, location, number of pets, medical needs and hazards such as fallen trees, downed power lines, fires or blocked roads. The information is relayed back through the Ducklink network and eventually to emergency officials.

During the test, Knouse's computer dings every few minutes with messages that included names, location and details of a roving group that popped up on a map with messages such as "Help me please!" and "NEED WATER!!!" The team later met with members of a local Boys and Girls Club to introduce the technology to young users in hopes they could teach and share it with their neighbors.
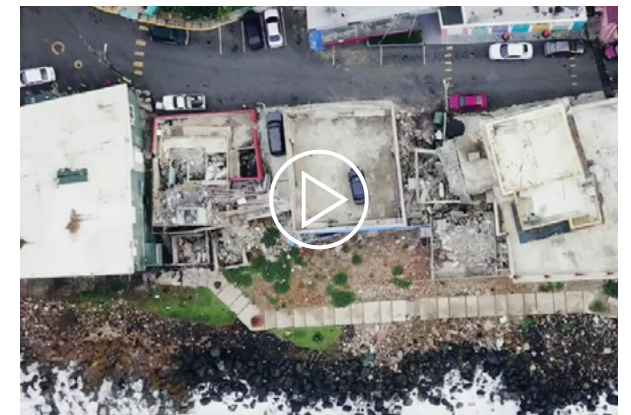
The Project OWL pilot: Puerto Rico | 2:12

CALL FOR CODE

Social impact

Our social responsibility work mirrors our business — innovation, expertise and a dedication to the success of organizations that build stronger communities.

Education and skills

AI and intelligent automation could lead to 120 million workers in need of new skills over the next few years, according to recent IBM research. At the same time, new collar opportunities are growing and many IT skills are in high demand — cybersecurity could have 3.5 million unfilled jobs by 2021, for example. Our initiatives are intended to help address these challenges by promoting STEM skills to kids, supporting new collar skills education, and collaborating to create new paths into the tech workforce.

The **P-TECH™ school model** we co-founded in 2011 continues to grow. There will be 200 schools open in 16 countries and 11 U.S. states in 2019, with more than 600 affiliated businesses. They combine high school and college coursework in a six-year program that can equip graduates with job-ready skills, work experience including paid internships and mentoring, and a no-cost associate degree. We hired 99 P-TECH students as interns in 2018, 11 alumni have gone on to earn bachelor's degrees and 30 P-TECH graduates were hired full-time at IBM. We're now focused on helping to expand the P-TECH network, enable collaboration among its schools, and develop online educational resources for teachers and students. Learn more at ptech.org.

Top: #SheCanSTEM event with P-TECH students at IBM Poughkeepsie, October 2018. **Above:** Norwalk (Conn.) Early College Academy P-TECH graduates, May 2019.

"Social impact is built into our business. We apply our technology and talent to make a positive impact — through our operations, in our practices and by taking clear stands on issues that matter. That's what #GoodTechIBM means in practice."

Guillermo Miranda
Vice President & Global Head, IBM Corporate Citizenship / CSR

Social impact

Reinventing careers with IBM apprenticeships | 3:33

"I want in
on this program.
And here I am."

Tara
IBM Apprenticeship Program
participant

Our **Veterans Employment Accelerator** program helps address the growing need for cybersecurity professionals with data analytics skills, while assisting military veterans to transition into civilian careers. We provide free training and certification in IBM i2® Analyst's Notebook® and QRadar® software, and work with nonprofits and other organizations to help veterans find jobs. More than 300 veterans in the U.S., U.K. and Canada participated in 2018, and since 2016 nearly 300 have found data analysts jobs — including 36 IBMers. For 2019 we plan to launch Veterans Skills Network, a digital learning and networking service with career mentoring and job placement assistance.

The **IBM Apprenticeship Program** is a new opportunity for people without advanced degrees to join IBM as apprentices to develop technical skills in a highly structured training and mentoring program. Hundreds are already enrolled, and in January 2019 we launched a coalition with the Consumer Technology Association to promote apprenticeships for new collar work across industries, with plans to add 450 apprentices at IBM each year through 2023. Learn more at ibm.com.

IBM Global University Programs collaborate with schools worldwide to provide resources for teaching, research and skills training in blockchain, cybersecurity, AI, data science and other high-demand areas. This includes the IBM Academic Initiative, offering faculty and students free access to IBM technology for learning and

noncommercial research. IBM Skills Academy is a new program that trains faculty and equips them with prebuilt curricula, cloud-based labs and other resources to help teach eight in-demand technology skills. Dozens of U.S. schools are now implementing the program, and expansion is underway to Europe, China and Latin America. Lean more at ibm.com.

Two new initiatives target **STEM education for women in India**. Working with seven state education departments and the STEM for Girls program, IBM intends to reach 200,000 girls over three years to develop computational thinking capabilities and life skills to build confidence in pursuing STEM careers. Separately, with the Ministry of Skill Development and Entrepreneurship we're enabling a two-year advanced diploma in cloud and data at 100 Government Industrial Training Institutes, half of which are for women. That program will reach 1,000 students over three years and IBM plans to provide five-month internships for 100 each year, starting in 2019. These and similar ongoing efforts could benefit more than 1 million female students by 2022.

Teacher Advisor With Watson is a free online resource that uses AI to interact with teachers, assess their needs and recommend resources from a library of 10,000 lessons, activities and more. The content is curated by our nonprofit partner UnboundEd and initially focused on math education for students aged 5-14. Watson can save teachers time by responding quickly to inquiries and suggesting relevant,

200,000
girls over three years
in public schools

STEM
education for
women in India

across

7 states
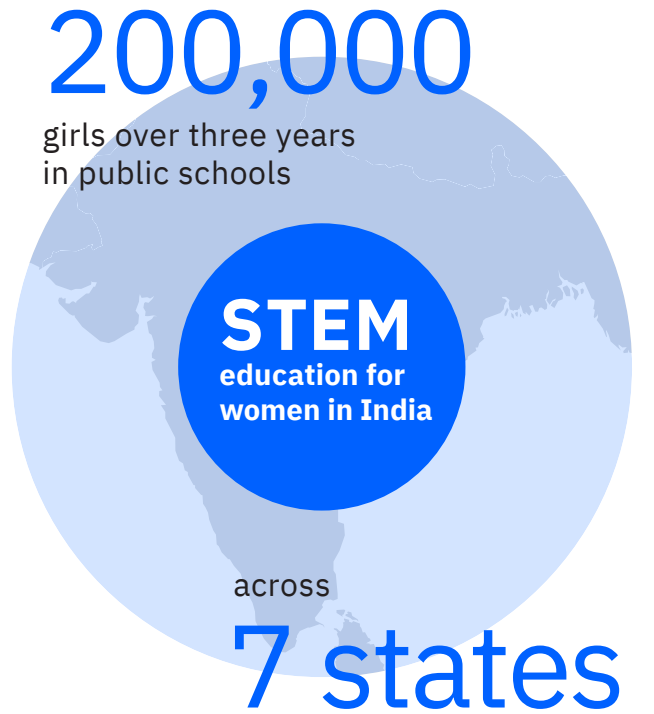
Teacher Advisor With Watson | 2:27

Social impact

Collaborating for disaster preparedness in Chile | 4:53

"Multi-sector collaboration is super important so we can be prepared for the next event."

Piera Curotto Covarrubias
Corporate Citizenship Manager
IBM Chile

high-quality resources aligned to curriculum standards. In 2018, we began working with the National Center for Learning Disabilities to develop resources that support students with learning and attention issues, and launched a pilot deployment in India. We're making the system more openly accessible to educators everywhere, and working to integrate Watson functions on other websites popular with teachers. Since 2017, Teacher Advisor has grown to 15,000 registered users and is available to anyone — try it or learn more at teacheradvisor.org.

All Things STEM is our volunteer initiative intended to reach 1 million students annually with activities to promote STEM careers, introduce 21st-century skills like machine learning or AI, and more. Launched in January 2018, it offers free resources anyone can use to lead volunteer events, and by year-end IBM employees and retirees held sessions with more than 3.2 million students worldwide. See what's available or learn more at ibm.com.

Community resiliency

IBM supports organizations that build stronger communities around the world by sharing our expertise and finding new ways to apply technology to a range of social challenges.

Corporate Service Corps (CSC) deployed 37 teams of IBMers to 24 countries in 2018, engaging nearly 150 social organizations on projects designed to improve education, health, economic development and community resiliency. CSC helps address local challenges while developing our company's leaders with an immersive, culturally enriching experience. CSC's collaboration with the Peace Corps continued with projects in Mexico and the Philippines in 2018, and we worked with Johnson & Johnson on an engagement in Chile addressing disaster preparedness. For the first

IBMer Aparna Satoor on a Corporate Service Corps engagement in Chile, October 2018.

Global corporate contributions 2018

IBM's total contributions have nearly doubled in three years, from $205 million in 2015 to $393 million in 2018 including services, technology and cash. The regional distribution reflects our global, fully integrated business. By issue, 89% of IBM's contributions support education initiatives and organizations, with the rest devoted to issues including human services, health, culture and the environment.
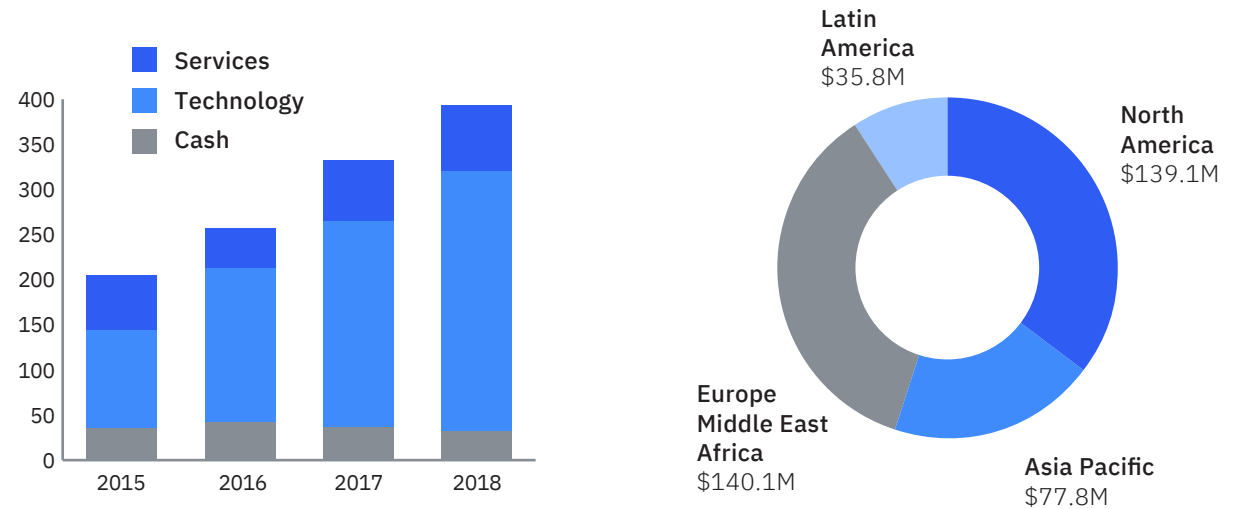
Latin America $35.8M
North America $139.1M
Asia Pacific $77.8M
Europe Middle East Africa $140.1M

Social impact

time, CSC went to major metropolitan areas in Australia (Brisbane), Canada (Halifax) and the United States (Chicago, San Francisco and New York). Since its launch in 2008, CSC has sent more than 4,000 IBMers to 44 countries.

In 2019, CSC teams will deploy to North Carolina and California to assist with disaster preparedness work following Hurricane Florence and the California wildfires. We are also piloting new models for deploying teams, with the goal of including significantly more participating IBMers in 2020. Learn more at ibm.com.

We delivered 311 **IBM Impact Grants** valued at $9 million in 2018, to nonprofit and educational organizations in 31 countries. The grants provide pro bono consulting and software solutions to help recipients serve their communities more effectively. Since 2009, we've delivered more than 3,000 grants worth $95 million.

In India, we joined the SRF Foundation to develop an online mentoring platform that the National

Institution for Transforming India (NITI Aayog) has deployed in schools across the country. In Thailand, we worked with nonprofit Freeland to develop a Center of Excellence that uses IBM i2 intelligence analysis software to help identify human and wildlife trafficking networks. Our grant of IBM SPSS® analytics software is helping Women's World Banking, a U.S.-based agency working for women's financial independence in emerging markets, to refine its offerings through improved research. We also worked with the U.S. Chamber of Commerce to study perceptions of companies' disaster response work, using Watson capabilities to analyze social media — read more in our copublished paper, The Impact of Disasters on Brand Sentiment.

IBM Research is working with a nonprofit in Cincinnati, Ohio, to help improve social services for disadvantaged people. CityLink Center coordinates the services of multiple agencies to help its clients out of poverty through counseling and education on employment, wellness, personal finance and workforce skills. IBM researchers developed a system that analyzes CityLink's data to find links between successful outcomes and the way services are delivered — in their sequence, duration, via one-on-one counseling or group sessions. Initial results confirmed many practitioners' intuitions, but also found new insights that could help CityLink refine its services and improve more lives.

3,000 researchers

12 labs

6 continents

IBM Research is pioneering the most promising and disruptive technologies that will transform industries and society.

"Countries that invest in closing the gender gap accelerate economic growth and distribute the benefits of that growth to more of their citizens."

Mary Ellen Iskenderian
President and CEO, Women's World Banking

311
IBM Impact Grants
in 31 countries
2018

3,000
IBM Impact Grants
since
2009

Social impact

The new **Traffik Analysis Hub** (TAHub) analyzes information shared by NGOs, governments, financial institutions and other participants to identify possible human trafficking activity. TAHub continues IBM's five-year collaboration with Stop the Traffik, and combines Watson AI technologies with enterprise-grade security that participating organizations require. In early 2019, we developed an updated version of a smartphone app that people can use to report suspicious activity anonymously. Learn more at traffikanalysis.org.

IBM and Convoy of Hope Deliver Hurricane Relief in North Carolina | 2:25

IBM Volunteers, our global program to support IBMers' service in their communities, recorded 1.3 million volunteer hours in 2018 and 22 million since its inception in 2003, across 94 countries. The initiative helps active and retired employees apply their professional skills to community needs with a wide range of resources to help organize and deliver effective volunteer support. Also in 2018, IBM made $3.8 million in IBM Community Grants to 2,500 schools and organizations in 49 countries where IBMers volunteer. Learn more and find volunteering resources at ibm.com/volunteers.

Health

Accurate, relevant and timely information is a vital resource for healthcare professionals, whether for treating patients or managing resources to support wider populations. IBM works with a range of nonprofit, academic and government entities to explore how information technology can help improve access to high-quality healthcare worldwide.

IBM Health Corps sends experts to work with nonprofit and academic organizations to develop innovative solutions that can expand access to healthcare. We focus on helping to improve the quality and availability of information that health professionals use to serve patients or communities. Learn more at ibmhealthcorps.org about our current work and these projects from 2018:

IBM Volunteers recorded:

1.3 million
volunteer hours in 2018

22 million
volunteer hours since 2003

across
94 countries

Social impact

"We always put the end-user front and center, understand their real problems. We don't create technology just because we can, but because it's useful for a real end-user. We actually make something better for them."

Anne Stevens
IBM Health Corps, India participant

— With Partners in Health, we developed a system to track patients' chemotherapy regimens within OpenMRS, an open source medical record system, with the goal of replacing handwritten instructions vulnerable to human error. The program will start in Haiti and later include Rwanda and some other lower-resource countries.

— With CARE India, we're exploring how integrating data from different healthcare IT systems could improve patients' access to essential medications. We've developed a prototype that integrates datasets, then analyzes and visualizes healthcare data to help provide insights on drug expenditures and supply chain patterns.

— We worked with the Utah Area Health Education Centers Program and the Utah Medical Education Council to develop a more flexible and accurate digital model of a local population's healthcare needs, to help them improve the allocation of primary care workers and make better-informed decisions about medical education and payment models.

IBM began a pilot deployment in Nigeria and Zambia of the **IBM Cancer Guidelines Navigator**, initiated in 2017 by IBM Health Corps, the American Cancer Society and the National Comprehensive Cancer Network. Oncologists can access cancer care guidelines and expertise on best practices to help design customized treatment plans more quickly, for the most prevalent cancer types in sub-Saharan

Africa. We will deploy it to additional countries in 2019 and expand its body of knowledge.

Healthcare-related research is also a priority of **World Community Grid®**, which harnesses computing power donated by people worldwide to deliver massive processing capabilities for humanitarian projects. Past and current projects include treatments for cancer, HIV/AIDS and the Zika virus, as well as a groundbreaking study of the human microbiome. Learn more or join at worldcommunitygrid.org.

IBM Research scientists are developing a way for AI to help the search for antibiotics able to treat drug-resistant infections, which cause 700,000 to 5 million annual fatalities worldwide and are the sixth-leading cause of death in the U.S. Researchers use machine learning to identify greater numbers of more diverse and previously unknown sequences of natural peptides. These peptides — linked amino acids that form a compound — are produced by all species of

Using design thinking to tackle dengue fever | 3:06

"Design thinking methodology can help not only on dengue fever but also any public health problems."

Dr. Elle Jian
Taiwan Centers for Disease Control

Our goal:
To support

10,000
disaster response personnel

Social impact

IBM disaster relief and recovery — 2019 | 3:10

"The IBM team stepped in and said 'we will make it happen.' That's the exact kind of partner you need."

Rachel Krausman
United Way Worldwide

life, including "good" bacteria, which can help the body naturally defend against aggressive infections. Using AI to find and simulate "PepCVAE- generated" sequences of peptides might open the door to many more and stronger antibiotic candidates to defend against drug-resistant "superbugs."

IBM Research–Africa and the University of Oxford have used AI to help officials identify affordable and effective long-term strategies to control malaria. Researchers ran machine-learning-driven simulations for a five-year scenario in western Kenya to assess the effect of distributing insecticide-treated nets as well as spraying insecticide, finding that a dual strategy could prove more effective than nets alone when allocating limited resources. In a related project, IBM researchers are working to implement blockchain within computer simulations such as the OpenMalaria project, which crunches epidemiological and meteorological data to help predict the success of interventions against malaria. A blockchain record could build confidence in simulation results among the many organizations that collaborate to fight malaria.

Disaster response and resiliency

The technology and expertise IBM applies to clients' operations can, and should, also assist organizations that prepare for, respond to, and recover from disasters. That's the basis of our disaster response efforts — marshaling

capabilities throughout IBM more than 80 times since 2001 to help humanitarian organizations and governments be more effective.

In 2018, IBM responded to Hurricanes Florence (in North and South Carolina) and Michael (Florida), floods in Japan and India, California wildfires, and the Indonesia earthquakes and tsunami. IBM also continued projects from our 2017 responses, continuing our commitment of $4 million in consulting and services grants to support recovery from Atlantic hurricanes (Harvey, Irma and Maria), and grants valued at $500,000 for the Mexico earthquake.

California wildfires
For the first time, IBMers offered three days off work to volunteer

Mexico earthquake (2017)
Seven workshops on disaster readiness planning held in 2018, six planned for 2019

Hurricane Florence
North Carolina
Hackathon event held to match Call for Code applications with local recovery needs

Hurricane Michael
Florida
Bilingual online chatbot deployed to augment telephone information service

Japan flooding
Disaster Information Management System deployed to support evacuations

Kerala flooding
India
State government received technology support and Weather Company data to assist planning

Indonesia earthquake and tsunami
Grant planned for national meteorological agency, exploring technology support of planning and relief

$4 million
to support recovery from Atlantic hurricanes
—

Social impact

IBM and United Way Worldwide launch CARLA | 1:47

In the aftermath of Florence, we held an event at our Research Triangle Park site in North Carolina, inviting IBMers to explore how solutions from Call for Code might help affected communities. Earlier in 2018, the first Call for Code initiative asked software developers worldwide to create open source solutions to assist disaster preparedness and recovery — and 100,000 developers from 156 countries submitted 2,500 applications. (See page 39 for more on Call for Code.)

To assist recovery from Michael, we worked with United Way to train and deploy a chatbot to augment telephone services in Florida, enabling residents to get information online about food, shelter, evacuation routes and other vital storm-related topics. It uses IBM Cognitive Automated Response Learning Agent (CARLA) technology to understand and answer typed inquiries in English or Spanish, and will be available to assist other preparedness or recovery efforts in Florida if needed.

IBM volunteers assist with recovery from Hurricane Florence, North Carolina, 2018.

The American Red Cross recognized 100 years of support from IBM with its Centennial Partnership Award.

Sustainable Development Goals

Adopted in 2015, the 17 U.N. Sustainable Development Goals (SDGs) establish a framework to build an inclusive and sustainable world and provide an opportunity for IBM to build upon its collaboration with stakeholders from a cross section of communities, governments, and the social sector. IBM is uniquely positioned to contribute towards the achievement of the 17 SDGs through the proactive management of the company's internal operations and supply chain, corporate social responsibility programs, diversity and inclusion practices, and most importantly, the IBM products, solutions, and services that IBM offers to clients.

Products, services, and solutions

IBM's products, services, and solutions enable clients to conserve natural resources, reduce the environmental impacts associated with their operations, and make informed decisions that drive improved sustainability.

Supply chain

IBM addresses the environmental and social responsibility aspects of the Company's global supply chain which encompasses more than 13,000 members. Initiatives include:

— Responsible sourcing of packaging materials.
— Conducting environmental supplier audits.
— Fostering supplier diversity.
— Applying the Responsible Business Alliance (RBA) Code of Conduct.

Workplace diversity and inclusion

IBM's workforce diversity and inclusion programs are helping to promote gender equality. Programs such as Tech Re-Entry, Business Resource Groups, and Constituency Councils are creating an equal opportunity workforce that celebrates diversity, inclusion, and innovation.

Environmental programs

IBM is contributing to the U.N. SDGs through its global environmental management system, product stewardship, energy and water conservation, climate protection, pollution prevention, and product recycling efforts.

Social impact

Through an integrated portfolio of programs, IBM's corporate citizenship initiatives are contributing to the 17 U.N. SDGs by applying IBM technology and talent to create innovative solutions for education, economic development, environmental sustainability, healthcare, and more. Programs include:

— Corporate Service Corps
— IBM Volunteers
— Impact Grants
— Teacher Advisor With Watson
— IBM Health Corps
— P-TECH schools

Performance summary

Environment

IBM maintains goals covering the range of its environmental programs.

Energy conservation

IBM's goal is to achieve annual energy conservation savings equal to 3% of IBM's total energy use in IBM managed space and data centers located in third-party co-location facilities.

Energy conservation KPI	2014	2015	2016	2017	2018
As % of total energy use	6.7	6.1*	4.8*	3.6*	3.3

*Data has been restated to reflect our goal's expanded scope, which now includes data centers in third-party managed facilities.

Renewable electricity procurement

IBM's second-generation renewable electricity procurement goal is to procure 55% of the electricity IBM consumes globally from renewable supplies by 2025, including both the amount directly contracted by IBM and amounts received automatically through the grid regions in which we operate.

Renewable electricity procurement KPI	2014	2015	2016	2017	2018
As % of total electricity consumption	30.1	32.7*	37.0*	39.0*	37.9

*Data has been restated to reflect the expanded scope of our goal, which now includes data centers located in third-party managed facilities, and was further revised to address an error in the original report published in July 2019.

CO_2 emissions reduction

Our fourth-generation CO_2 emissions reduction goal is to reduce operational CO_2 emissions associated with IBM's energy consumption at both IBM and third-party managed locations 40% by 2025 against the 2005 baseline, adjusted for acquisitions and divestitures.

CO_2 emissions reduction KPI	2014	2015	2016	2017	2018
As % of 2005 baseline CO_2 emissions	24.2	22.6*	29.2*	30.1*	32.2

*Data has been restated to reflect our goal's expanded scope, which now includes data centers in third-party managed facilities.

Water conservation

IBM established a new goal in 2016 to achieve year-to-year reductions in water withdrawals at data centers and other large IBM locations in water-stressed regions.

Water conservation KPI	2016	2017	2018
% annual reduction in water withdrawals at data centers and other large IBM locations in water-stressed regions	6.6	2.9	0.4

Nonhazardous waste recycling

Our goal is to send an average of 75% (by weight) of the nonhazardous waste generated at locations managed by IBM to be recycled.

Nonhazardous waste recycling KPI	2014	2015	2016	2017	2018
% by weight sent for recycling of total generated*	85.9	85.2	86.3	87.8	89.5

*Nonhazardous waste does not include sanitary wastewater transported to publicly owned treatment systems.

Product energy efficiency KPI

IBM's product energy efficiency goal is to improve the computing power delivered for each kilowatt-hour of electricity used for each new generation of servers. In early 2019, IBM released three POWER9-based servers, the S922, S924 and E950. These products improved the work delivered per unit of power consumed, as measured by the Standard Performance Evaluation Corporation (SPEC) Server Efficiency Rating Tool (SERT), by 30-60% over previous generation POWER8-based servers.

ENERGY STAR certified products KPI

IBM has a goal to certify at least two-thirds of eligible new server products – and at least one storage product in each of three categories – to the U.S. Environmental Protection Agency's (EPA) ENERGY STAR program criteria. We certified the new IBM FlashSystem 900 storage product (9840-AE3) in 2018. In April 2019, IBM certified three POWER9-based servers, the S922, S924 and E950, representing three of the four ENERGY STAR eligible POWER9 server products.

As of May 2019, IBM had three Power Systems servers and eight storage products certified to the ENERGY STAR requirements. The Power Systems servers meet the EPA's requirements for power-supply efficiency, idle power limits or power management capability, and SPEC SERT metric data reporting. The storage products meet requirements for power-supply efficiency and reporting of the Storage Networking Industry Association Emerald Power Efficiency Measurement Specification results.

Product end-of-life management

IBM's goal is to reuse or recycle end-of-life IT products such that the amount of product waste sent by IBM's product end-of-life management (PELM) operations to landfills or incineration for treatment does not exceed a combined 3% (by weight) of the total amount processed.

Product end-of-life management KPI	2014	2015	2016	2017	2018
% by weight of total processed sent by IBM's PELM operations to landfill or incineration for treatment	0.5	0.7	0.6	0.7	0.7

Performance summary

Supply chain

Social and environmental responsibility is integral to our relationships with over 13,000 suppliers worldwide.

Supplier spending by category ($B)	2014	2015	2016	2017	2018
Services and general procurement	21.6	20.3	20.3	20.0	21.1
Production procurement	7.8	4.7	3.8	4.2	4.2
Logistics procurement	0.9	0.8	0.6	0.6	0.5
Total ($B)	**30.3**	**25.8**	**24.7**	**24.8**	**25.8**

Supplier spending by location ($B)	2014	2015	2016	2017	2018
North America	11.2	10.8	10.6	10.6	11.2
Asia Pacific	9.9	8.0	7.3	7.5	7.7
Europe, Middle East, Africa	6.9	5.8	5.6	5.5	5.8
Latin America	2.3	1.2	1.2	1.2	1.1
Total ($M)	**30.3**	**25.8**	**24.7**	**24.8**	**25.8**

First-tier spending ($B) KPI	2014	2015	2016	2017	2018
Total U.S. ($B)	9.8	9.3	9.7	9.9	10.3
Diverse U.S. ($B)	1.5	1.3	1.3	1.4	1.4
Diverse non-U.S. ($M)	883	718	744	657	710

Employees

Our innovative digital learning platform uses Watson AI technology to develop personalized plans for each IBMer, available 24/7 with resources to develop skills aligned with our company and each IBMer's needs, interests and goals.

IBM is committed to reducing health and safety risks by eliminating or controlling hazards. Our health and safety programs are driven by evidence-based strategies, real-time insights and innovative solutions — to help protect IBMers, our business, and the communities that we work in.

Learning	2014	2015	2016	2017	2018
Per capita investment ($)	1,271	1,281	1,339	1,180	1,205
Total hours worldwide (M)	25.8	25	26.7	23.7	24.1
Hours per employee KPI	62.5	58.3	56.0	59.0	61.0
Investments worldwide ($M) KPI	482	484	498	425	419

Global illness/injury rate	2014	2015	2016	2017	2018
Total per 100 employees	0.42	0.33	0.30	0.25	0.28

Giving and volunteering

Volunteering	2014	2015	2016	2017	2018
Worldwide retiree/employee hours (K) KPI	1,532	1,195	1,248	1,205	1,322

Contributions by type ($M)	2014	2015	2016	2017*	2018
Technology	104.4	109.5	171.7	229.3	287.4
Services	69.2	60.0	44.3	66.6	72.2
Cash	36.8	35.5	41.8	36.6	33.2
Total ($M)	**210.4**	**205.0**	**257.8**	**332.5**	**392.8**

*2017 revised to reclassify activity from Technology to Services

Contributions by issue ($M) KPI	2014	2015	2016	2017	2018
Education	149.2	154.8	208.4	291.7	349.6
Human services	20.1	18.6	15.9	15.2	16.6
Health	3.7	3.6	5.2	9.8	11.1
Culture	3.6	3.4	4.0	4.0	2.5
Environment	3.1	0.6	3.5	2.7	3.2
Other	30.7	23.9	20.8	9.1	9.8
Total ($M)	**210.4**	**205.0**	**257.8**	**332.5**	**392.8**

Contributions by geography ($M) KPI	2014	2015	2016	2017	2018
North America	84.7	65.4	99.2	132.2	139.1
Asia Pacific	40.3	42.6	39.3	52.1	77.8
Europe, Middle East, Africa	64.8	82.2	104.2	118.3	140.1
Latin America	20.6	14.8	15.1	29.9	35.8
Total ($M)	**210.4**	**205.0**	**257.8**	**332.5**	**392.8**

Awards and recognition

Every year, publications, advocacy groups, governments and nongovernmental organizations around the world rate and recognize IBM for our corporate social responsibility efforts. We are proud to share highlights of our recognition from 2018 and early 2019.

- *CIO* — CIO 100 (2019)
- Ethisphere — World's Most Ethical Companies (2019)
- *Forbes* — The Just 100: America's best corporate citizens
- *Forbes* — World's Most Valuable Brands
- *Fortune* — Most Admired Companies
- *Fortune* — Most Powerful Women, Ginni Rometty
- Interbrand — Best Global Brands
- LinkedIn — Top Companies: Where the U.S. Wants to Work

Corporate social responsibility

- Australian HR Institute Award — Corporate Social Responsibility (P-TECH)
- *CR Magazine* — 100 Best Corporate Citizens (2018 & 2019)
- Dow Jones Sustainability Index, North America
- EcoVadis — Gold-level CSR rating
- Education Commission of the States — Corporate Award for commitment to advancing public education, citing P-TECH and Teacher Advisor With Watson
- Education Dive — Partnership of the Year
- *Fast Company* — World Changing Company of the Year (2019)
- International SOS Foundation — Duty of Care award for sustainability, citing Corporate Service Corps
- Points of Light — The Civic 50, most community-minded companies in the U.S.
- U.S. Chamber of Commerce Foundation — Citizens Award for Best Commitment to Education

Environment

- Canadian Industry Partnership for Energy Conservation — 2018 Energy Management National Award, IBM Canada
- Center for Climate and Energy Solutions and The Climate Registry — 2019 Climate Leadership Award for Excellence in Greenhouse Gas Management Goal Setting
- European Commission — 2018 European Union Code of Conduct for Data Centres Awards
- City of Austin, Texas — Austin Green Business Leaders Program, Platinum level for IBM's Austin facility
- Colorado Department of Public Health and Environment — Gold Leader in the Environmental Leadership Program for IBM's Boulder facility
- Hong Kong Environmental Campaign Committee — Class of Excellence Wastewi$e Label
- Institute of Directors, India — 2018 Golden Peacock Environmental Management Award, IBM India
- North Carolina Wildlife Federation — Business Conservationist of the Year for IBM's Research Triangle Park facility
- United Nations Sustainable Development Goals 2019 Action Award, Connectors category, citing the use case of IBM Blockchain technology by Plastic Bank in reducing ocean plastic

Awards and recognition

HR/diversity

- American Heart Association — Workplace Health Achievement, gold designation
- American Indian Science and Engineering Society — Top 50 workplaces for indigenous STEM professionals (2019)
- AnitaB.org — Top Five Companies for Women Technologists (technical workforce over 10,000)
- Asia Society — Best practice citation for recruitment and selection
- *Black Enterprise* — 50 Best Companies for Diversity
- *Black EOE Journal* — Top employers, Top supplier diversity programs, and Top LGBTQ+ friendly companies (2018 & 2019 in all categories)
- Brandon Hall Group — Excellence awards in human capital management: Gold awards for best results of a learning program, and for best unique or innovative learning and development program
- Brandon Hall Group — Excellence award in technology: Gold award for best advance in career management or planning technology, citing Watson Career Coach
- Catalyst Award for advancing women and diversity in business (IBM is the only four-time winner)
- Fairygodboss — Best Company for women (No. 13), Best company for women in technology (No. 4), and Best CEO for gender diversity (No. 4)
- *Fatherly* magazine — 50 best places to work for new dads (top 10)
- *Forbes* — America's Best Companies for Women
- Human Rights Campaign Foundation — 100% Equality Index score (2018 & 2019), and Best places to work for LGBT+ diversity
- LinkedIN — Top employer of graduates from historically black colleges and universities
- Military Friendly — Employer of the Year (2018), Top 10 Employer (2019)
- National Association for Female Executives — Best Companies for Women Executives (2018, and among the Top 10 in 2019)
- National Business Inclusion Consortium — Best-of-the-Best Corporations for Inclusion
- National Gay & Lesbian Chamber of Commerce — Best of the Best Corporations for Inclusion
- *Working Mother* — Best 100 Companies (top 10), Best Companies for Multicultural Women (2018 & 2019), Diversity Best Practices Inclusion Index, and Best Companies for Dads
- Workplace Pride Foundation — Most LGBT-Inclusive Companies

International

- Australian Network on Disability — 2018-19 Access and Inclusion Index (No. 1)
- Brazil — State government of São Paulo: Best company for employees with disabilities
- Canada — Groupe Entreprises en Santé presented our Bromont, Quebec, manufacturing site with first place in the 2018 Healthy Enterprise Awards (Work Environment category) for significant, innovative and inspiring measures in health, wellness and productivity.
- Costa Rica — Alianza Empresarial para el Desarrollo (AED): Costa Rica Incluye award for initiatives and policies that drive workplace inclusion and accessibility for people with disabilities
- Costa Rica — IAFA (National Institute for Drug Abuse Prevention): Silver award for IBM's contribution to the 2018 Deje y Gane non-smoking program, and for ongoing well-being programs
- Chile — Asociación Chilena de Seguridad recognized IBM for incurring no work-related road accidents in the first half of 2018, and for an online tool that helps IBMers plan trips using the safest route.
- India — Community Business: 2018 D&I in India Best Practice Award for Disability Confidence
- India — Community Business: LGBT+ inclusion award, and Disability Confidence
- India — Ministry of Social Justice and Empowerment, Department of Persons with Disabilities: National award for the creation of a barrier-free environment for persons with disabilities
- India — The government of India recognized IBM in 2018 for "Outstanding Work in the Creation of a Barrier-Free Environment for Persons with Disabilities."
- India — Working Mother media and AVTAR: Top 10 best companies for women in India
- Japan — Japan HR Challenge award for IBM Japan's Access Blue internship program for PwD college students
- Japan — Work with Pride: Pride index gold status, and Best practice award for IBM's LGBT+ ally badge
- Mexico — Health authorities recognized our Guadalajara and Mexico City sites for their 2018 blood donation activities, in a country where donation rates are just 5%
- Mexico — Human Right Campaign: Equidad MX certification as a best employer for LGBT employees
- Philippine Pediatric Society — Breastfeeding friendly workplace award
- Sweden — Unionen: Employer of the year for LGBT+ employees

Awards and recognition

Supply chain

- *Asian Enterprise* magazine — Top corporations for supplier diversity for Asian American and Pacific Islander owned businesses
- *Business Equality* magazine — Top companies with supplier diversity programs for LGBTQ business owners.
- DiversityComm — Top Employer, Top Supplier Diversity Program, and Top LGBT-Friendly Company
- National Center for American Indian Economic Development (NCAIED) — Recognition of IBM's 20+ years support of Indian Country
- New York and New Jersey Minority Supplier Development Council — Recognition for IBM's outstanding contribution and continued commitment to the council
- Minority Business Hall of Fame & Museum — Recognized IBM for its commitment to supplier diversity and continued support in providing opportunities to diverse business
- *Minority Business News USA* — "Best of the Decade" for commitment to supplier diversity and continued support in providing opportunities to diverse business; also selected IBM's Tim Garvey and Jessica Bolding as Corporate Buyers of the Year

- MSD China — Recognized IBM's Michael Robinson for 10 years of continuous support to provide opportunities for diverse businesses in the Asia Pacific region
- National Business Inclusion Consortium (NBIC) — "Best of the Best" corporations
- National Minority Supplier Development Council (NMSDC) — First-ever Legacy Award to IBM's Michael Robinson, recognizing individuals who have had the most significant impact on supplier diversity and NMSDC
- Omnikal — Omni50 list of the top 50 U.S. corporate and government buyers of products and services from an inclusive supply chain (2018 & 2019)
- United States Hispanic Chamber of Commerce (USHCC) — "Million Dollar Club" inclusion for IBM's dedication to Hispanic business enterprises and leadership in continuing to grow spending with Hispanic-owned businesses
- *Vetrepreneur* magazine — Best "Military Friendly Supplier Diversity Program"
- Women's Business Enterprise National Council — America's Top Corporations for Women's Business Enterprises, Platinum Level
- *Women's Enterprise USA* — Top 100 leaders in corporate supplier diversity list included nine IBMers