2020
Corporate Responsibility Report

Letter from the Chairman and CEO

While the events of 2020 have tested and tried the world's resolve in entirely new ways, they also revealed humanity's determination to adapt and emerge stronger. It was a profound reminder that, when pressed for more, individuals and organizations will rise to reinvent themselves and apply ingenuity to the most challenging of societal problems.

I am extremely proud of the work that IBMers have done to combat the global COVID-19 emergency, address systemic racism and establish new protocols for the future of work. At IBM:

- **We led with purpose and culture, empowering the IBMer at the center of our efforts.** As IBM focuses on leadership in the era of hybrid cloud and AI, we are taking a number of decisive steps to create a culture where all employees can thrive. In March 2020, we transitioned 95 percent of IBMers to remote work within days, and throughout the year, we launched global initiatives to support the health and well-being of IBMers amid the pandemic. Today, we are shaping the future of work for a post-COVID era, building on our longtime approach to flexible and collaborative innovation. We are making every effort to address employee needs and commitments for empathy, transparency and social responsibility in this new era.

- **We applied science and technology to accelerate discovery, provide trusted information and respond resiliently to the pandemic.** We helped organize the High Performance Computing Consortium to equip scientists around the world with free access to supercomputing capacity in support of COVID-19 research. We created and applied technology solutions, like IBM's Watson Assistant for Citizens and the IBM Digital Health Pass, to help governments and municipalities of all sizes disseminate information about COVID-19 testing and best practices. Organizations from more than 25 countries turned to Watson Assistant, IBM's AI-powered virtual assistant for business, to field COVID-related questions from customers, employees and the general public. Use of Watson Assistant grew 60 percent between January and December 2020.

Arvind Krishna
Chairman and
Chief Executive Officer

- **We reinforced our fight against climate change with leadership and innovation.** Environmental leadership has been foundational to IBM's culture of corporate responsibility. This is evident in our pledge to reach net zero greenhouse gas emissions by 2030 and in our support of the Climate Leadership Council's bipartisan plan to reduce carbon-based emissions through the implementation of a carbon tax, with the proceeds of the tax to be returned to citizens through a carbon dividend. Yet making the world more sustainable will require innovation. We're working with clients to apply our hybrid cloud and AI technologies to some of the world's most significant sustainability challenges in areas like agriculture, transportation and the modernization of our electric infrastructure. At the same time, we are applying

Trust is IBM's license to operate. We have earned this trust through our policies, programs and projects, and by advocating for the responsible use of technology.

the expertise of IBM Research® to help accelerate the discovery of new materials to help capture and remove carbon emissions from the atmosphere.

- **We reaffirmed IBM's commitment to address long-standing social injustices, accessibility gaps and growing socioeconomic differences.** In 2020, we strengthened our reporting and accountability on diversity and inclusion. We sunset our general-purpose facial recognition and analysis software products, and sponsored OneTen to help train Black candidates to fill 1 million professional roles over the next 10 years. We launched Open P-TECH®—a free digital education platform for workplace and digital skills—to engage educators and students during remote learning, and we committed to providing 1,000 paid internships for US P-TECH students in 2021. Our SkillsBuild® platform provided valuable reskilling support for job seekers during a most challenging macroeconomic environment. Call for Code for Racial Justice activated IBM's ecosystem to develop open source projects focusing on police and judicial reform and accountability, diverse representation, and policy and legislative reform.

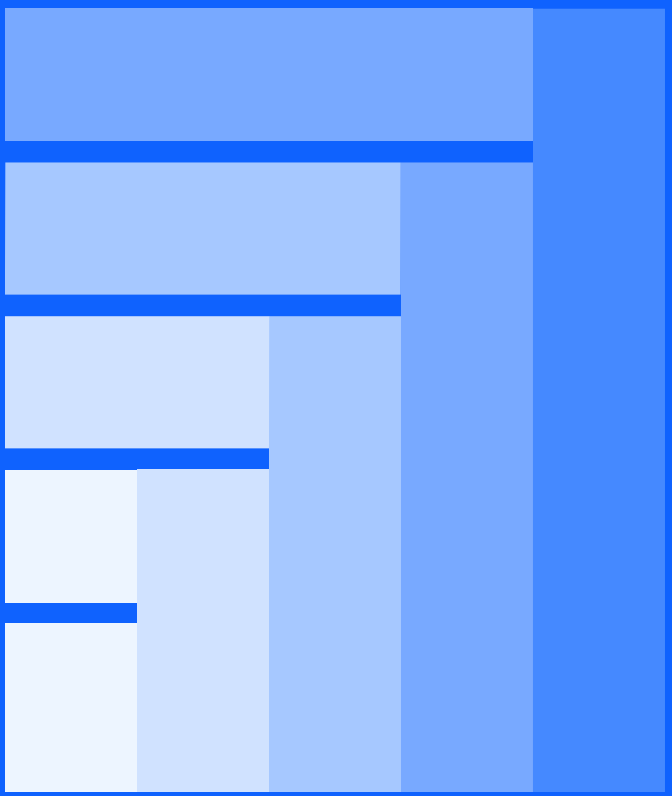
- **We worked to earn the trust of our clients and society.** I cannot emphasize this enough: trust is IBM's license to operate. We have earned this trust through our policies, programs and projects, and by advocating for the responsible use of technology. This can be seen in our work with the Vatican to develop principles for ethical AI, through our leadership in data privacy, and through our firm opposition to the use of IBM technology for mass surveillance, racial profiling, violations of basic human rights and freedoms, or any purpose inconsistent with IBM's values and Principles for Trust and Transparency.

In the pages that follow, you will find example after example of how IBMers applied their talents and technology last year to counter some of the world's most challenging problems. Their remarkable resilience and ingenuity underscore IBM's collective commitment to emerge stronger by building a more sustainable, equitable and secure future.

Arvind Krishna
Chairman and Chief Executive Officer

Building a more sustainable, equitable future

IBM's commitment to corporate responsibility has been essential to its success for over a century. Although 2020 presented many challenges, we are determined to emerge stronger and remain steadfast to the values that have served our company well—by operating with trust and transparency, protecting the environment, supporting the IBMer, driving social impact at scale, and setting the standard for Good Tech.



Our ESG strategy reflects IBM's belief that corporate responsibility drives long-term value not just in our business, but also for IBM stakeholders, including clients, shareholders, employees and the societies in which we operate. We engage stakeholders on material ESG issues such as protecting the environment, supporting employees and maintaining rigorous governance practices. We set goals, measure our progress and report the results as matters of transparency and accountability.

This approach includes a wide range of partnerships, collaborations and engagements, because we recognize that large societal challenges cannot be overcome by any single industry sector or public entity. These engagements often create opportunities for IBM's innovation and expertise to address critical challenges—from helping clients save energy to creating a more sustainable food supply, to assisting COVID-19 research with AI and supercomputing.

This report shares IBM's recent progress and current work to help build a more sustainable, equitable future for our company and its stakeholders. IBMers take pride in our company's history as a vanguard in environmental protection, inclusive employment policies and more—and we take seriously the obligation to continue our legacy of corporate responsibility.

Operating with trust and transparency

A foundation of trust

Trust is a foundational aspect of IBM's business. Today, in societies that are increasingly connected and sometimes wary of new technologies, maintaining trust has led IBM to focus on ethical technology development, on building privacy and security into our products and services, and on sharing our experience and expertise with the world.

People expect all data, especially personal information, to be used responsibly and kept secure, and IBM agrees—so we take clear positions on data privacy, data security, and the positive effect regulations can have on our industry. Our products and services have powerful features to govern access to data, enabling IBM's clients to be more proactive about their privacy practices and ready to comply with new regulations.

Trust is also essential to society's acceptance of technologies such as AI, which are increasingly used to inform decisions that affect people's lives. IBM is embedding ethical governance throughout our development work, and building software and systems that can help clients proceed responsibly. We also share IBM's expertise with our industry, seek alliances to promote technology ethics, and oppose the use of IBM technology for any purpose inconsistent with our Principles for Trust and Transparency, including mass surveillance or racial profiling.

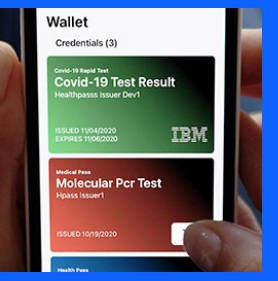
"IBM will continue bringing the best of our technology and expertise to aid the pandemic recovery and other challenges. This work is guided by our AI Ethics Board and adheres to long-standing principles that have earned IBM the trust of society and our clients for over a century."

Christina Montgomery
Vice President and Chief Privacy Officer

IBM's culture of ethics and integrity defines how we do business and conduct all our relationships. All IBMers review the IBM Business Conduct Guidelines each year, and IBM requires its 15,000 suppliers to meet our ethical business standards—and to have management systems for social and environmental responsibilities—as part of their commercial relationship with IBM.

You can learn more about IBM's commitments to security, privacy, ethical AI and more at the IBM Trust Center.

IBM AI Ethics Board



IBM's AI Ethics Board is a central, cross-disciplinary body that fosters a culture of ethical, responsible and trustworthy AI and other technologies throughout IBM. It supports a centralized governance, review and decision-making process for our tech ethics policies, practices, communications, research, products and services.

For example, the board was consulted from the earliest conceptual stages of the IBM Digital Health Pass, developed to assist pandemic recovery. Generic "vaccine passports" could result in privacy concerns or inequitable access, so IBM's solution was designed to share personal information only after individual consent and to enable everyone to benefit. Our board engaged in the development stages, with reviews continuing as the solution is deployed.

Protecting the environment

Our ambitious energy and climate goals

IBM has committed to achieve net zero greenhouse gas (GHG) emissions by 2030. We announced this goal in February 2021 and will meet it by further improving our operations' energy efficiency, procuring electricity for our operations from renewable sources, and then using technologies to remove carbon in an amount that equals or exceeds our residual emissions.

We do not purchase unbundled Renewable Energy Certificates to comprise any percent renewable if IBM cannot credibly consume the electricity those certificates represent. In addition, we do not equate the purchase of nature-based carbon offsets to any reduction of IBM's emissions. Our plan includes several interim goals:

- Increase our average data center cooling efficiency 20 percent (compared to 2019), and implement an additional 3,000 conservation projects across IBM by 2025.
- Procure 75 percent of the electricity we consume worldwide from renewable sources by 2025 and 90 percent by 2030. This includes power IBM generates on-site or contracts to purchase, as well as renewable electricity already in the grid mix received from utilities.
- Reduce GHG emissions 65 percent by 2025, measured against 2010 and adjusted for acquisitions and divestitures. This rate of reduction exceeds what scentists from the UN Intergovernmental Panel on Climate Change indicate is necessary to limit Earth's warming to 1.5 degrees Celsius above pre-industrial levels.

Our strategy's final element anticipates new technologies to capture or remove carbon, and IBM is contributing to their development. Launched in 2020, the IBM Research Future of Climate initiative includes a focus on the accelerated discovery of materials for carbon capture.

These goals and our ongoing work to achieve them continue a legacy of environmentally responsible business. IBM formalized its environmental policy in 1971 and has maintained a global Environmental Management System for decades. You can find more detail on our goals and programs in the environment section of this report.

Pursuing efficient emissions capture

IBM Research expects that new solutions will enable more efficient capture of carbon dioxide (CO_2) emissions within five years, and is working to help make that possible.

Current approaches to capturing emitted CO_2 work, but they are energy-intensive and costly. We need new materials and processes, so IBM's Future of Climate initiative is creating a cloud-based knowledge base of existing methods and materials, and applying AI to help scientists define properties of molecules to consider for CO_2 capture and separation.

We are also exploring ways to transform captured CO_2 into useful materials such as feedstock or plastic. The goal is to make CO_2 capture and reuse efficient enough to scale globally.

"IBM's goals to conserve energy, increase energy efficiency, use renewable electricity, reduce greenhouse gas emissions and reach a state of net zero continue a decades-long commitment to environmental leadership. Our goals are ambitious, science-based and prioritize the reduction of emissions, which we believe is the most important element in our shared fight against climate change."

Wayne S. Balta
Vice President,
Corporate Environmental Affairs and
Product Safety, and Chief Sustainability Officer

Supporting the IBMer

A renewed commitment to progress

The events of 2020 amplified the need for swift and greater progress from society and businesses. Although COVID-19 disrupted all our lives, many working women were particularly challenged and millions left the workforce. We also witnessed social injustices that sparked a global movement, bringing conversations about inequality to the forefront. In response, IBM is accelerating its diversity and inclusion journey with a focus on four strategic areas.

We have intensified our commitment to advocacy efforts aimed at driving systemic, sustainable improvement in opportunities for diverse communities. For example, IBM has created more equitable pathways for people to acquire tech skills, and much of our hiring now prioritizes skills over academic degrees. These opportunities can help close economic divides and bring more women back into the workforce.

IBM strives to create a culture of conscious inclusion and active allyship in which every IBMer is an upstander—standing up for justice, fighting bias and supporting every colleague. For example, our Be Equal® campaign has engaged tens of thousands of IBMers worldwide to pledge their commitment to allyship.

We want all IBMers' employee experience to help them thrive and bring their authentic selves to work. IBM provides a wide variety of development and career acceleration programs, including many that champion diverse communities. This commitment has led to a range of industry-leading innovations, such as same-sex partner benefits for IBMers in 50 countries.

IBM harnesses data transparency and AI to enable accountability, action and outcomes for increased diversity representation at every level of our company. While we have taken significant actions and made progress, we continue to address underrepresentation at all job levels.

The IBM 2020 Diversity & Inclusion Report includes more detail on IBM's priorities, programs and progress, along with stories of IBMers that illustrate how life-changing diversity and inclusion in action can be.

"I believe diversity is a fact, but inclusion is a decision. If we want to tap into peoples' creative potential, inclusion must be infused in everything we do—from how we select and develop our people, to programs, policies and values which ultimately shape our culture over time."

Obed Louissaint
Senior Vice President,
Transformation and Culture

IBM HBCU Quantum Center

IBM's quantum computing education and research initiative for Historically Black Colleges and Universities (HBCUs), announced in 2020, is aimed at fostering a diverse and inclusive quantum workforce. The multiyear investment is designed to prepare and develop talent at HBCUs from all STEM disciplines for the quantum future. In six months, the center's membership grew from 13 to 23 HBCUs.

The IBM Academic Initiative is also supporting HBCUs with in-kind donations of technology, assets, resources and skills development valued at $100 million.

These investments are intended to create innovative experiences for HBCU students to acquire the skills necessary to unlock economic opportunity—and to help quantum computing develop with a diverse community of researchers and professionals.

Driving social impact at scale

Skills for new collar careers

Today's digital transformation is creating millions of jobs that require new skills, and IBM is helping people worldwide to pursue these "new collar" IT careers through skills training at no cost.

SkillsBuild is IBM's open, online learning program offering over 1,000 interactive courses in cybersecurity, data analysis, cloud computing and other technical disciplines, as well as courses to build workplace skills such as collaboration and presentation. Courses are available in multiple languages, with content that includes contributions from industry leaders such as Red Hat® and cybersecurity company Fortinet.

P-TECH school model

P-TECH high schools integrate college courses with their standard curriculum, provide students with mentoring and paid workplace experience from local industry partners, and help them graduate with an associate degree—all at no cost.

IBM launched P-TECH in 2011 with a single public school in Brooklyn, New York. Today, there are 266 P-TECH schools in 28 countries, partnered with 209 colleges and 600 companies. IBM is affiliated with 59 schools, and has committed to providing 1,000 paid IBM internships for students in the US.

All P-TECH schools have open enrollment, with no grade or testing requirements for admission, and many serve disadvantaged communities to help foster greater diversity in our industry.

Participants start by identifying a learning path that fits their interests and aptitude, and completing courses can earn them IBM-branded digital badges for use in online profiles to certify their skills to potential employers. Worldwide, 215,000 people have joined SkillsBuild and completed 341,000 learning hours.

SkillsBuild is now available in 141 countries and collaborates with 90 nonprofit agencies worldwide to provide mentoring and project-based learning, and to help find local job opportunities. Many learners begin with no IT experience and are ready for a job in six months—as in India, where over 4,000 SkillsBuild learners have found full-time employment.

The program is also intended to help narrow the IT skills gap for people underrepresented in our industry. Among learners who participate through our nonprofit partners, over 40 percent are women, and more than half come from a racial or ethnic minority in their location.

SkillsBuild is one of many IBM initiatives to make IT skills more accessible and help people without advanced degrees to join our industry. IBM's Veterans Employment Initiative offers no-cost IT training, and our apprenticeship program has produced 500 full-time IBMers in three years. And the Open P-TECH online platform offers early skills training to students ages 13–20 worldwide.

"The COVID-19 pandemic, combined with rapid technological developments, is profoundly changing the workplace. At the same time, businesses are increasingly seeking to build strong and diverse talent pipelines. IBM SkillsBuild is designed to give aspiring professionals a powerful set of resources at no charge to help them cultivate meaningful careers."

Justina Nixon-Saintil
Vice President and Global Head,
Corporate Social Responsibility

Good Tech

AI that accelerates a search for new medicines, developers creating novel solutions to address social inequities, doctors with faster access to critical information amid a pandemic—these, and countless more stories of innovation engaging societal challenges, are what we mean by Good Tech.

Good Tech

Coding for justice

Call for Code is the largest tech-for-good initiative of its kind, with over 400,000 developers from 179 countries creating open source solutions since 2018 to address natural disasters, climate change and COVID-19.

Call for Code for Racial Justice, announced in 2020, invited this powerful network of innovators to apply their skills toward combating the challenge of racial injustice across three focus areas: police and judicial reform and accountability, diverse representation, and policy and legislation reform. The initiative originated in June 2020, with Black IBMers and allies creating an internal IBM program called the Call for Code Emb(race) Challenge.

Solution for small farmers

The 2020 Call for Code Global Challenge winner was Agrolly, an app designed to provide small rural farmers with affordable access to AI-powered data and insights about weather patterns and crop characteristics, as well as advice on what to grow—and how and when to grow it.

The Agrolly team includes developers from Brazil, India, Mongolia and Taiwan who have seen firsthand the effects that climate change was having on their communities. They have already provided hands-on training to more than 500 rural farmers using the app, and are working with IBM Service Corps on a deployment plan to improve and test their technology in 2021.

By February 2021, seven projects had been open sourced—shared online so that others can contribute their code and enhance them. Among them is Five Fifths Voter, a web app designed to help minorities exercise their right to vote by determining optimal voting strategies and limiting suppression issues. Another app, Legit-Info, helps individuals understand how local legislation can have significant impacts on areas as far-reaching as jobs, the environment and safety.

The Call for Code Initiative was created in 2018 by David Clark Cause and founding partner IBM, joined by United Nations Human Rights and the Linux Foundation. Participants build applications on open source–powered software, including Red Hat OpenShift®, IBM Cloud®, IBM Watson®, IBM Blockchain, atmospheric data from IBM's Weather Company and resources from ecosystem partners. Winning teams of the Call for Code Global Challenge receive $200,000 and support from IBM Service Corps, technical experts and ecosystem partners to incubate their technology, open source their code and deploy their solution in communities around the world.

The initiative's 2021 Global Challenge seeks solutions that combat climate change in three focus areas: clean water and sanitation, zero hunger, and responsible production and green consumption. Learn more and join the effort at callforcode.org.

"We are so excited to receive the enthusiastic support of the open source community and our ecosystem of partners across our Call for Code work, helping us drive progress and leverage technology to combat racial injustice and climate change."

Ruth Davis
IBM Director
of Call for Code

Good Tech

A new course for ocean research

"By leveraging AI and other new technologies, and developing a new class of efficient, crewless and environmentally friendly ships, MAS will herald a new era of marine exploration. We hope to continue to use the technologies from MAS as a platform for many years to come, and hopefully she will inspire the next generation of ships."

Brett Phaneuf
Co-Founder of ProMare and Director of the Mayflower Autonomous Ship Project

Oceans cover 71 percent of Earth, generate more than half our oxygen, regulate global climate and act as a crucial sink of excess heat and carbon. With this vital resource more polluted and acidic than ever, as well as stormier and warmer, an innovative project is launching a new era of research to help us better understand and protect the world's oceans.

The Mayflower Autonomous Ship (MAS) is designed to provide a flexible, cost-effective and safe option for gathering critical data about the ocean. The project is led by marine research nonprofit ProMare with support from IBM and a global consortium of partners. The ship's maiden voyage will trace the route of the original Mayflower from Plymouth, England, to Massachusetts.

Putting a research vessel to sea without an onboard crew requires complex autonomous systems, so ProMare needed a technology partner with deep expertise in AI, automation and edge computing, as well as experience in scientific research and shipping. IBM joined the effort in 2019 and developed systems that enable MAS to navigate autonomously and avoid ocean hazards, employing a range of IBM technologies, solutions, and expertise. IBM Research is now the project's lead scientific partner, helping with the ocean research that the ship will carry out.

The sleek, highly stable trimaran ship travels at up to 10 knots, driven by a solar-powered, hybrid-electric propulsion system. MAS carries three pods containing an array of sensors and scientific instrumentation to support research in marine mammal activity, ocean chemistry, ocean microplastics and other vital areas.

ProMare and IBM hope MAS will launch a new era of ocean research, with a blend of crewed and autonomous vessels and devices, large and small, collaborating to increase the quantity and quality of data. IBM also believes its work on MAS could foster practical, sustainable advances for other organizations that operate on or near the ocean.

Good Tech

Data to help fight COVID-19

As the COVID-19 pandemic began to spread in early 2020, emergency room and ICU clinicians worldwide relied on disparate sources of treatment information—but many resources were outdated, not easily accessed or irrelevant to this new disease.

The need for more data—more quickly and from more sources—led researchers in Australia to found the COVID-19 Critical Care Consortium. Working with the University of Queensland, they launched a study of treatment and outcomes of patients in participating hospitals. Soon after, IBM contacted the consortium and offered to help.

The consortium had developed a prototype dashboard to access the data, but it was better suited to researchers than to ICU clinicians in protective equipment who needed fast access to relevant information. Within eight weeks, and in collaboration with clinicians, IBM designers and developers began testing a new “connected clinician” app that’s accessible via web browsers on phones, tablets and desktop computers, and that provides a fast, highly visual user experience.

IBM Services designed and developed the dashboard apps, while IBM Cloud served as the scalable development platform and IBM Security provided tools to encrypt and secure sensitive data. In addition, IBM Service Corps provided expertise on a pro bono basis and IBMers continue to work with the consortium on system improvements.

More than 370 hospitals and affiliated research facilities in over 50 countries now participate in the consortium, contributing to a global database of COVID-19 in critically ill patients. With the consortium’s data and apps available to clinicians worldwide, low- and middle-income countries can benefit from research developed in high-income countries, and all can share treatment insights.

While the clinical app is built to empower clinicians, the patient database also provides statistics related to hospital bed resourcing and forecasting. This growing database also could enable AI to generate curated knowledge and insights, assisting work to learn more about the virus and defeat it.

“COVID Critical, working with IBM, has created a resource that everyone in different countries can access in the same way. If used properly, the global data can assist clinicians to make informed decisions regarding all aspects of intensive care management, treat patients and help us go back to work, play, travel and education. Technology and data used smart is the way forward.”

John Fraser
Professor and Director of the Critical Care Research Group at the University of Queensland, Australia

Good Tech

Innovative AI for health science

IBM Research is exploring innovative new ways that AI technology can advance healthcare, from developing new therapeutic drugs to predicting the onset of Alzheimer's disease.

One effort has produced an AI system that can help speed up the design of new antibiotic molecules, which are urgently needed to treat bacteria or fungi that have developed a resistance to existing drugs. In the US alone, nearly 3 million people have antibiotic-resistant infections every year, but very few new antibiotics are being developed because drug design is an extremely difficult and lengthy process.

The IBM system is trained with the available peptide molecules that also include known antibiotics, then uses that information to design new molecules, and finally analyzes their potential effect using simulations. In 48 days, the system generated and tested 20 novel peptides, finding two that appear promising and show broad-spectrum antimicrobial potency and low toxicity in wet lab experiments. IBM has also applied this same technology to the computational design of antiviral molecules targeting the virus that causes COVID-19, and shared those results under an open license.

These projects are early examples of "accelerated discovery," which IBM believes will lead not only to effective new therapeutics, but also to materials that enable more efficient carbon capture from the atmosphere, and more.

IBM Research also worked with Pfizer to develop an AI model that helps predict the eventual onset of Alzheimer's disease within healthy people by analyzing short, simple language samples. The samples came from participants in the Framingham Heart Study, which has tracked various health aspects of 5,000 people and their families since 1948.

Our model is about 70 percent accurate, compared to 59 percent accuracy of clinical methods that rely on biomedical data. We hope this research can lead to the development of a simple and accessible metric to help clinicians assess the risk of Alzheimer's disease, leading to earlier intervention.

A new AI model, developed by IBM Research and Pfizer, uses short, non-invasive speech samples to help predict the eventual onset of Alzheimer's disease in cognitively healthy individuals.

Good Tech

Blockchain for greater transparency

Most people are willing to change their purchasing habits if they reduce their negative impact on the environment, according to a 2020 survey from the IBM Institute for Business Value, and 71 percent of those surveyed who indicated that traceability is very important are willing to pay a premium for it. Industries are responding with solutions that employ blockchain technology to provide greater transparency into how their goods are produced.

The **Norwegian Seafood Association** joined IBM and IT company Atea to deploy a system that tracks fish from their source through processing and export, enabling suppliers to satisfy consumers' demand to know that their seafood is produced in a sustainable, healthy manner. **Farmer Connect** is using the IBM Food Trust™ platform to build a more efficient supply chain for coffee farmers, while enabling consumers to trace their coffee from its source with its Thank My Farmer app.

Textile company **KAYA&KATO** is developing a blockchain network with IBM to create transparency about the origin of garments they manufacture, from the fiber used to the final product, so consumers can be assured their clothes are sustainably produced. New fashion brand **Covalent** makes accessories from AirCarbon, a carbon-negative biomaterial made by microorganisms and using renewable power. Consumers can track their Covalent products' carbon footprint and supply chain with a blockchain-powered system. Other fashion companies are exploring blockchain as a way to combat counterfeit goods by giving consumers a reliable way to verify a product's authenticity.

The **Responsible Sourcing Blockchain Network** is a consortia-based initiative, built on the IBM Blockchain Platform and assured by RCS Global, that is providing the transparency, trust and security needed to demonstrate responsible sourcing for cobalt and other minerals. Initial deployment has been in the automotive sector, where rapid growth in electric vehicle production is driving demand for responsibly sourced lithium-ion batteries.

71%

The 2020 IBM Institute for Business Value survey found that 71 percent of those surveyed who indicated that traceability is very important are willing to pay a premium for it.

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Operating with trust and transparency

Ethics and security

Trust has always been a foundational aspect of IBM's business, but today it's more important than ever. People rightly expect companies to use personal information responsibly and keep it secure, and many of those companies rely on IBM as the steward of their data. Trust is also essential to society's acceptance of technologies such as AI, which are increasingly used to inform decisions that affect people's lives.

This is why IBM today is so focused on building trust, privacy and security into our technologies and offerings—and in sharing our experience and expertise with the world. Although IBM does not typically do business directly with consumers, we take clear positions on data privacy, security and the positive role that regulations can play in helping our industry earn even greater trust from society.

IBM continues to assert the three Principles for Trust and Transparency we established in 2018: that the purpose of AI is to augment human intelligence, that data and insights belong to their creator, and that new technology, including AI systems, must be transparent and explainable.

You can learn more about IBM's commitments to security and privacy, as well as our internal management programs and more, at the IBM Trust Center.

Technology ethics

New and emerging technologies such as AI hold tremendous promise to improve our lives. However, IBM believes that this potential cannot be achieved unless we proceed responsibly, embedding ethical principles into applications and processes. Trust is the essential foundation for these innovations to succeed.

While AI is today the most prominent focus of technology ethics, IBM believes all technologies should be deployed with the aim of optimizing their benefits while reducing risks and adverse outcomes for all stakeholders, and in a manner that prioritizes the well-being of humans and the environment.

This ethical governance should apply to existing technologies and emerging ones, such as quantum computing and neurotechnologies. That's why IBM's corporate directives include ethics by design, and we are focused on embedding ethical governance widely into our development work, building systems that can help clients proceed responsibly, sharing IBM's expertise with our industry, and taking clear positions on the use and potential misuse of new technologies.

IBM is among more than 100 entities participating in the Global AI Action Alliance, an initiative of the World Economic Forum established in January 2021 to accelerate the adoption of inclusive, transparent and trusted AI globally. The GAIA's goals are to identify and implement tools and practices for ensuring that AI systems are ethical and serve all society members, and to provide a community for learning and rapid scaling of proven approaches, as well as a forum to accelerate collective action. IBM CEO Arvind Krishna is co-chair of the GAIA steering committee.

The University of Notre Dame and IBM established a Technology Ethics Lab in July 2020 to research and promote the ethical application of advanced technologies, including AI and quantum computing. Funded by a 10-year, $20 million IBM commitment, the lab conducts applied research and brings together experts, policymakers and industry leaders to address technology ethics questions and develop practical applications for a wide range of topics.

Only by embedding ethical principles into AI applications and processes can we build systems based on trust. Learn more about IBM's multidisciplinary, multidimensional approach to trustworthy AI at our AI Ethics webpage.

IBM was also one of only two companies asked by the Vatican in 2020 to be the first signatories to the Rome Call for AI Ethics, which advocates for a human-centered approach to AI that helps guide IBM's AI development.

Internally, our efforts are overseen by IBM's AI Ethics Board, a central, cross-disciplinary body that fosters a culture of ethical, responsible and trustworthy AI and other technologies throughout IBM. Its mission is to support a centralized governance, review and decision-making process for IBM's tech ethics policies, practices, communications, research, products and services. It reports to the highest levels of our company and is co-chaired by IBM's chief privacy officer and IBM's AI ethics global leader.

The AI Ethics Board was consulted from the earliest conceptual stages of the IBM Digital Health Pass, developed to assist our recovery from the pandemic. Generic "vaccine passports" could result in privacy concerns or inequitable access, so IBM's solution was designed to share personal information only after individual consent and to enable everyone to benefit from the solution. Our ethics board has been engaged in the development stages, with reviews continuing as the solution is deployed.

Engaging clients and our industry

IBM's clients share our need for trust from their customers and societies. In an IBM-commissioned global survey of 4,500 technology decision-makers, 78 percent said it is very or critically important that they can trust their AI's output to be fair, safe and reliable, while 83 percent agreed on the importance of being able to explain how AI arrived at a decision.

To help address these needs, IBM has announced plans for new IBM Watson capabilities and IBM Services® designed to help organizations manage AI capabilities throughout their entire lifecycle. For example, IBM Research developed a methodology for "AI FactSheets" that would increase transparency of AI services, and these capabilities are being embedded into Watson Studio and IBM Cloud Pak® for Data. IBM Services for AI at Scale, a new consulting offering, is designed to help clients deploy and manage AI capabilities that are not only scalable, but also trustworthy and environmentally sustainable.

IBM also offers several open source AI governance toolkits. AI Fairness 360 helps examine, report and mitigate bias in models throughout the AI application lifecycle. AI Explainability 360 includes metrics for explaining

a model's processes and decision-making. Adversarial Robustness 360 helps researchers and developers defend and verify AI models against attacks.

IBM has been an industry leader in releasing numerous public policy positions with concrete, actionable recommendations regarding the development, regulation and ethical use of AI. For example, IBM CEO Arvind Krishna's letter to the US Congress in June 2020 said that IBM "firmly opposes and will not condone uses of any technology, including facial recognition technology offered by other vendors, for mass surveillance, racial profiling, or violations of basic human rights and freedoms." In September, IBM called for facial recognition to be included in America's list of export-controlled technologies, recognizing its potential use "to suppress dissent, to infringe on the rights of minorities, or to erase basic expectations of privacy." Learn more about IBM's AI-related positions at THINKPolicy.

You can find more at ibm.com about IBM's multidisciplinary, multidimensional approach to AI ethics or read the IBM Institute for Business Value's 2020 research insight, "Advancing AI ethics beyond compliance."

Data privacy

The benefits of our connected world rely on many types of data being generated, managed, shared and used, but sharing data responsibly requires protecting privacy. For IBM, this applies to data used in our own operations as well as to our work helping clients manage and protect their customers' data.

IBM's positions on data privacy are straightforward. Consumers everywhere deserve consistent privacy protections—such as knowing what personal data is collected, and being able to access it, delete it or opt out of having it collected at all without a legitimate reason. IBM also believes that companies should be accountable for protecting consumer data collected, and governments should establish stable policy environments, which encourages new services and technologies to grow.

To enable this outlook, IBM's products and services have powerful features to govern access to data with the flexibility needed to meet privacy regulations and policies, as well as to offer greater control to end users. These capabilities position IBM (and our clients) to be more proactive about privacy controls, ready to comply with new regulations or to adjust privacy practices in response to customers' expectations. IBM believes that robust privacy controls have become an essential capability, one we are focused on expanding throughout our offerings.

As a global business, IBM complies with data privacy laws in all countries and territories in which we operate by maintaining strong governance processes to address new regulations and industry standards. Beyond compliance, IBM encourages governments to make privacy a priority and has called for an approach that promotes innovation, protects consumer rights and ensures accountability.

Within IBM, we continue to increase our investment in IBMers' education about the importance of privacy to IBM's business. Our global workforce education program, Privacy@IBM, includes a data privacy course that's mandatory for every new IBMer, and is taken annually by all active full- and part-time employees. A version is also made available to IBM contractors and to employees of IBM subsidiaries. New in 2021, IBMers can earn the IBM Privacy Foundations Badge by completing a course with over four hours of content about IBM policies, processes and best practices relating to the handling of personal data.

IBM supports the National Institute of Standards and Technology's Privacy Framework, released in January 2020. As individual US states consider regulations to protect citizens' privacy, IBM believes a consistent national standard is preferable and the NIST's proposal is flexible enough to implement while driving accountability. Learn more at THINKPolicy.

IBM's privacy efforts continue a legacy of responsible data stewardship. IBM was among the first companies to appoint a chief privacy officer (in 2000) and establish a genetics privacy policy (2005). We were an early leader in developing and adopting the EU Data Protection Code of Conduct for Cloud Service Providers, and in securing certification under the

EU-US Privacy Shield. IBM was also the first company to be certified under the APEC Cross-Border Privacy Rules.

Data security

The security of IBM's data—as well as data that clients entrust to our products and services—is critical to our company's success. Our clients' growing use of hybrid cloud services accentuates the need for robust and uncompromising cybersecurity.

IBM maintains a multifaceted risk-management approach to identify and address cybersecurity risks. This includes a foundation of policies and procedures upon which IBM manages its infrastructure and data, as well as ongoing assessments of technical controls and methods for identifying emerging risks. IBM's security monitoring program and incident response process applies to all IBM operations worldwide, identifying and responding to threats and attacks on networks, end-user devices, servers, applications, data, and cloud solutions in IBM's operating environment.

The IBM products and services our clients rely on must also maintain leading-edge levels of security, so we have implemented IBM Security and Privacy by Design, a set of practices for all IBM business units to assess threats, test protections and verify that security requirements are met. IBM Cloud maintains a range of regulatory compliance and governance certifications worldwide, and IBM continues to deploy innovative security features into products such as the IBM z15™ enterprise system.

IBM also fosters a culture of security awareness and responsibility among its workforce with online training, educational tools, videos and other awareness initiatives. All new IBMers and contractors take cybersecurity education within 30 days of joining IBM, and are required to repeat this training annually.

Management and policies

IBM's Enterprise and Technology Security group works across the company to protect IBM, its brand and its clients against cybersecurity risks. Within that group, IBM's chief information security officer leads a team responsible for information security strategy, policies, standards, architecture and processes. The IBM Board of Directors and its Audit Committee also receive regular updates from IBM's security management and other cybersecurity experts.

IBM maintains extensive corporate directives authorizing and requiring information security activities, including the creation and implementation of standards, processes and procedures. The IBM CISO reviews and approves these directives and other corporate policies annually.

Our enterprise IT security policy and related standards are based on various industry best practices, including but not limited to the National Institute of Standards and Technology and the International Organization for Standardization. They are tested and certified regularly through a combination of frameworks and assessment activities, including Service Organization Control 1, SOC 2, the Sarbanes-Oxley Act, the Federal Risk and Authorization Management Program, the Health Insurance Portability and Accountability Act (HIPAA) and others. IBM also undergoes numerous internal and external audits, and each offering team conducts ongoing self-assessments.

Learn more about IBM's internal IT security principles at the IBM Trust Center.

Governance

IBM's legacy of ethics and responsible business practices continues today in how we govern our operations and conduct relationships. We cultivate a company culture of integrity among IBMers worldwide, and require the same commitment from our suppliers and IBM Business Partners.

Business ethics and integrity leadership

Today, more than ever, trust is our license to operate. Trust starts with our employees and leaders and extends to our business partners and suppliers. We teach, listen and collaborate as we strive to maintain IBM as the gold standard in good tech, ensure that we live our IBM Values each day, and operate with ethics and integrity in all that we do.

Teach—Every year, employees worldwide participate in IBM's Business Conduct Guidelines (BCG) program to certify their understanding of IBM's code of business conduct and ethics and recommit to doing business with integrity. The IBM BCG policy is available in 26 languages, and the accompanying online course, which includes interesting scenarios depicting ethical dilemmas that employees may face day to day, is available in 20 languages. In 2020, IBM again achieved 100 percent participation in the annual BCG program.

The IBM Trust and Compliance team also deploys online integrity training targeting IBMers in specific career situations, such as when they are new to IBM, new to management, or new to emerging markets. Tens of thousands of IBMers take these additional modules each year. Beyond the online training modules, in a typical year, IBM Trust and Compliance also conducts extensive in-person training on topics including public procurement, business amenities, anti-corruption, speaking up and nonretaliation, being a gatekeeper and fraud prevention. These integrity summit training initiatives are sponsored and attended by our business leaders, setting the right tone from the top. They are customized to highlight the particular risks facing the particular audience.

In 2020, the COVID-19 pandemic required us to adapt how we deliver integrity education, and Trust and Compliance quickly embraced virtual learning, leveraging new tools and applications, such as live polling, to host integrity summits around the world and drive learner engagement and participation. We also provided specific training on compliance and ethics risks that emerged as a result of the global pandemic.

Listen—IBM's internal reporting channel enables employees to report concerns or suspected violations of our BCGs, as well as unethical or unlawful behavior within IBM. We also have similar reporting channels for suppliers, business partners and others to raise concerns. Learning about issues and concerns allows IBM to intervene early, investigate and remediate.

Our annual Global Integrity Survey, launched in 2010, enables IBMers to provide feedback on their perception of ethics and integrity within IBM. The insights gained from the surveys help us gauge employee sentiment regarding speaking up, retaliation and "doing the right thing." We also use the results to develop action plans to enhance training on targeted topics. Measuring employee sentiment and collecting employee concerns help us continue to drive a culture of accountability across IBM.

Collaborate—IBM's commitment to ethics and integrity leadership extends to employees of IBM Business Partners and our suppliers, who we expect to meet our ethics and integrity standards as part of their partnership commitment to IBM. In 2020, IBM provided online education to nearly 26,000 representatives of partners and suppliers worldwide.

And we strive to break barriers internally as well, by collaborating with other internal teams, such as Business Controls, Enterprise Risk Management and Corporate Assurance and Advisory Services, to discuss and address specific risks, share relevant learning and experiences, and coordinate mitigation of current and emerging compliance risks.

ESG management system

IBM's long-term performance strategy integrates economic, environmental, and societal performance and leadership. IBM's Board of Directors and its committees have oversight responsibility for these areas and under their guidance and supervision, IBM senior management is responsible for the company's environmental and social performance. Two groups help to integrate corporate responsibility across the business:

The Corporate Responsibility Executive Steering Committee provides leadership and direction on key corporate responsibility issues, and approves organization-wide goals. It meets monthly, chaired by the Vice President for IBM Corporate Social Responsibility, and includes senior executives from functional areas across IBM. Each functional area is responsible for developing its goals and strategy.

The Corporate Responsibility Working Group manages IBM's corporate responsibility activities and stakeholder engagement. It includes representatives from functional areas across IBM and meets at least monthly to review key policy and strategic issues, and to make recommendations to the Corporate Responsibility Executive Steering Committee. IBM's Corporate Social Responsibility function, which reports to the chief communications officer, coordinates day-to-day CSR-related activities.

Policy advocacy

IBM engages with leaders worldwide on ideas to help address national challenges and spur growth and innovation in the digital economy. However, IBM does not espouse partisan or political points of view and has never made political contributions nor endorsed candidates for office. IBM does not have a political action committee, and does not engage in independent or electioneering communications as defined by law.

IBM is committed to meaningful management and oversight, and accurate reporting with respect to our public policy engagement, including with respect to trade associations.

We are proud of the consistently high ratings we receive from independent analysts who examine corporate practices on lobbying and political spending, including the Center for Political Accountability and Transparency International UK. More information about our public policy governance and public reporting is available on our public policy expenditures webpage.

IBM asserts definitive positions on a range of public policies and proposals. Some relate to the responsible use and regulation of technology, drawing on IBM's long experience with the benefits and challenges often inherent to innovation. Other positions, such as our endorsement of the US Equality Act, are informed by IBM's decades of leadership in diversity and inclusion. Our positions on many current issues are contained in this report, but you can find more at the THINKPolicy blog and at the IBM Policy Lab, which we established in 2020 to offer actionable recommendations for harnessing innovation's benefits while ensuring trust.

IBM does not espouse partisan or political points of view and has never made political contributions nor endorsed candidates for office.

Enterprise risk management

Risk is inherent to innovation, leadership and business. IBM recognizes that imprudently accepting risk, or failing to identify and appropriately mitigate risk, could impact our business and its stakeholders. Accordingly, IBM takes a consistent, systemic and integrated approach to enterprise risk management (ERM), designed to identify, mitigate and manage significant risks throughout the company. Our ERM function looks across organizational silos and develops a holistic, enterprise-level view of risks through a cumulative assessment of risks across the organization. Finally, the program assesses interdependencies between risks, and collaborates with risk owners to optimize actions across entities.

Our ERM program continually assesses emerging risks—including those resulting from an evolving regulatory environment, operations, the financial environment, and strategic planning and execution—and promotes proactive steps across businesses and regions. Our processes also assess environmental and climate-related risks, and in 2020 we considered risks arising from the COVID-19 pandemic. (See this report's environment section for information about our energy and climate goals, and other environmental performance indicators.)

We continually review and update our enterprise-level risk map to refine the focus of risks for our senior management. IBM conducts external research, holds discussions with leading consultants on the changing risk environment, and conducts robust internal insight-gathering through senior-level executive interviews, surveys, design thinking sessions and risk analytic data.

IBM has developed tools that employ analytics and AI technologies to assist our ERM processes. Our Country Financial Risk Scorecard is an analytic tool that identifies emerging risk areas and alerts leadership to them. It enhances the risk awareness of IBM leaders at the country or regional levels, helping to improve local resiliency to risks. Scenario Planning Advisor is an AI tool developed jointly with IBM Research to combine human domain knowledge with machine reasoning and planning to project a wide range of scenarios and emerging risks. Additionally, analytic and AI technologies are embedded throughout our processes, such as acquisitions, supply chain and continuity, to better manage associated risks. In 2020, we continued to enhance Scenario Planning Advisor's capabilities to enable additional use cases, including across the controls and compliance processes.

IBM's risk management governance begins with the board of directors, who are responsible for risk oversight, assessment of our ERM approach, and oversight of management's ERM execution. Each of the board's three committees examines specific risk components:

- Audit Committee — Financial and audit risks identified through IBM's enterprise management framework, including those related to cyber, privacy and AI ethics.

- Executive Compensation and Management Resources Committee — Risks related to compensation programs and employee engagement as an indicator of company culture, as well as diversity/inclusion and IBM's evolving skill needs.

- Directors and Corporate Governance Committee – Risks associated with government and industry regulations, as well as corporate social responsibility, sustainability, environmental and other societal and governance matters.

Supply chain

IBM uses its position as a global company with more than 15,000 suppliers—and total spending of $24.2 billion in 2020—to promote a commitment to social responsibility throughout our supply chain and our industry.

IBM's operations abide by the Responsible Business Alliance (RBA) Code of Conduct, and we require the same of IBM's first-tier suppliers of hardware, software and services. IBM was a founding RBA member in 2004, and we participate actively in the code's evolution to incorporate socially responsible requirements in areas such as human trafficking and worker health and safety. RBA's code expanded in 2020 to require more public reporting on environmental impact and minerals sourcing, starting in January 2021.

IBM requires all first-tier suppliers to have management systems for social and environmental responsibilities, or to deploy them within a year of starting to do business with IBM. Our suppliers must establish goals, disclose results, cascade IBM's requirements to their next-tier suppliers and more—details are available at our website.

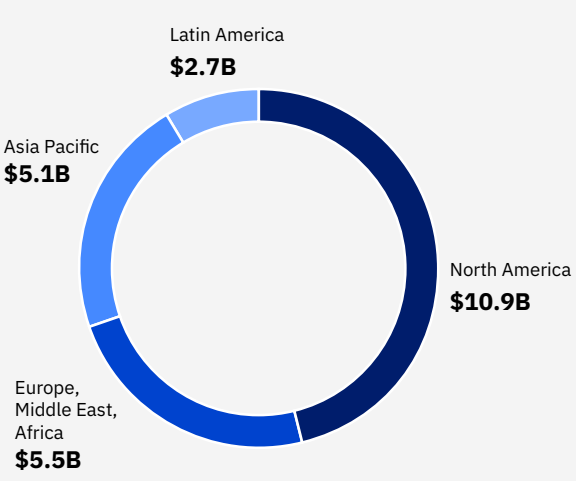
IBM supports suppliers' responsibility efforts by providing or facilitating education and training. We have extended online access for many suppliers to the RBA learning academy and have developed other materials to augment the RBA courses. IBM continuously updates these programs to address areas where assessments reveal improvement is needed.

We also encourage suppliers to publish reports on their corporate responsibility programs and results. In 2020, 65 percent of our top 100 suppliers did so (up 5 points from 2019), and 50 percent of those followed Global Reporting Initiative guidelines (as does IBM). These companies are listed in this report's appendix, with links to their reports.

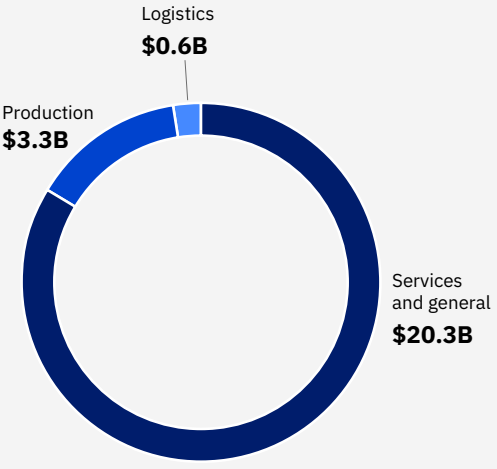
IBM collaborates with industry groups, academics, nongovernmental organizations (NGOs) and professional associations to improve supply chain social responsibility, and we encourage our suppliers to participate. IBM's

2020 spending by region

IBM spent $24.2 billion in 2020 directly with more than 15,000 suppliers in over 100 countries.



2020 spending by category



commitment to supply chain social responsibility extends to collaboration with external organizations, such as the Mexican NGO Centro de Reflexión y Acción Laboral, to address mutual concerns regarding working conditions in the supply chain in Mexico.

Supplier diversity

IBM established a supplier diversity program in 1968, and since 2003, has expanded it to all countries where IBM operates. Diverse suppliers provide products and services in every IBM procurement category, and we believe that supply chain diversity stimulates growth in a global marketplace and drives development in growing economies.

Supply chain diversity is essential to our business and that of our clients. IBM submits quarterly reports on diversity spending to more than 200 clients. Likewise, IBM requires our first-tier suppliers to report their own diverse-supplier expenditures, which enables us to help diverse-owned businesses to grow and potentially become first-tier suppliers to IBM.

In 2020, IBM spent $2.1 billion with first-tier diverse suppliers worldwide (our 13th consecutive year over $2 billion). In the United States, since 2000, IBM has spent at least $1 billion with first-tier diverse suppliers annually.

Our program includes suppliers that are majority owned and operated by people from a racial or ethnic minority (as defined in each country or region), women, military veterans, LGBT individuals or people with disabilities. Opportunities are also expanded for nonprofit organizations that hire disabled persons, and for US HUBZone companies. You can learn more about our program at the IBM Global Procurement website.

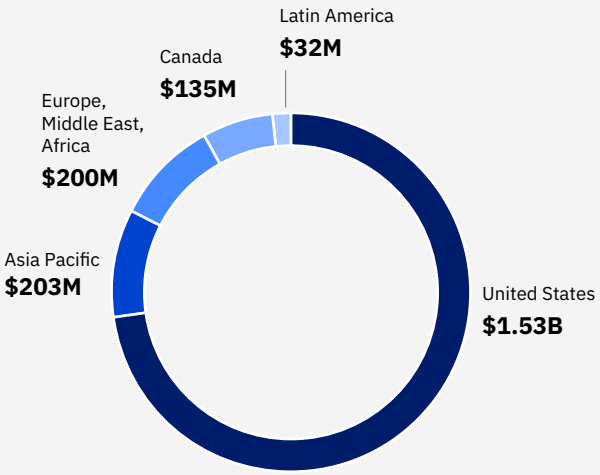
Supplier audits

IBM annually requests a portion of its supply chain to undergo RBA-validated audits to ensure those suppliers are properly following the RBA code and meeting IBM's standards for environmental and social responsibility. Since 2004, IBM has driven 2,124 full-scope audits across its global supply chain.

In 2020, although the COVID-19 pandemic made on-site audits difficult, we worked through the RBA to coordinate audits of services suppliers remotely for the first time. In total, 46 of our suppliers participated in full-scope audits in 2020—75 percent of our original plan for the year. The most frequent nonconformance in 2020 assessments was to the RBA code provision for working hours (found in 17 percent of the audits); see the graphs below for more detail on 2020 audit results.

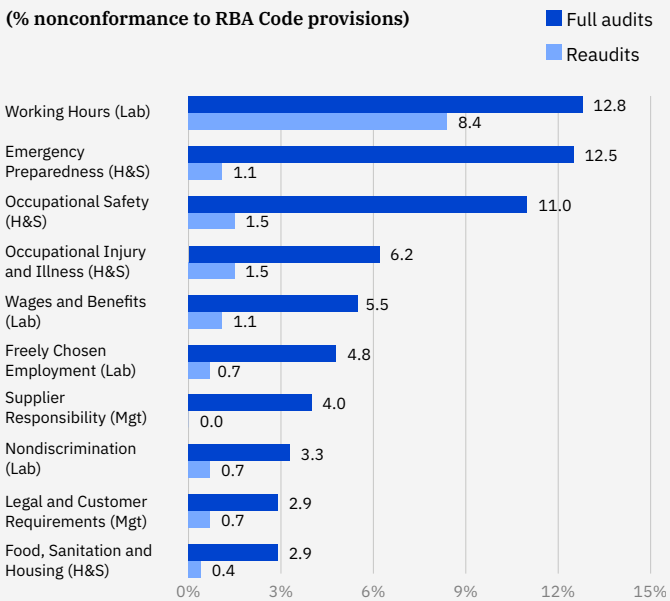
Diverse spending worldwide

IBM spent $2.1 billion directly with first-tier diverse suppliers in 2020.



2020, improved nonconformance rates from reaudits

(% nonconformance to RBA Code provisions)



In 2020, 24 reaudits were reported (21 Production Procurement and 3 Services and General Procurement) with a total of 213 findings rectified. The same set of suppliers reported a total of 273 nonconformances on their initial audit activity.

If an RBA audit reveals nonconformance, our Supply Chain Social Responsibility team works with suppliers to review their corrective action plans for any issues identified and suggests remedies that have proven beneficial in the past. IBM requires reaudits for these suppliers to assess their progress toward full conformance. In 2020, RBA reaudited 24 suppliers with a combined 273 nonconformances in their initial audits, and confirmed that 213 had been fully resolved.

When reaudits find continuing issues, IBM Global Procurement engages closely with the affected suppliers to drive substantive change. Our executive team reviews audit results monthly, and IBM's chief procurement officer reviews them quarterly.

Mineral sourcing

IBM maintains robust policies, participates in industry initiatives and engages our suppliers to ensure that focused minerals used in IBM hardware products are ethically and responsibly sourced. IBM is an active member of the Responsible Minerals Initiative, and our minerals policy is aligned with the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

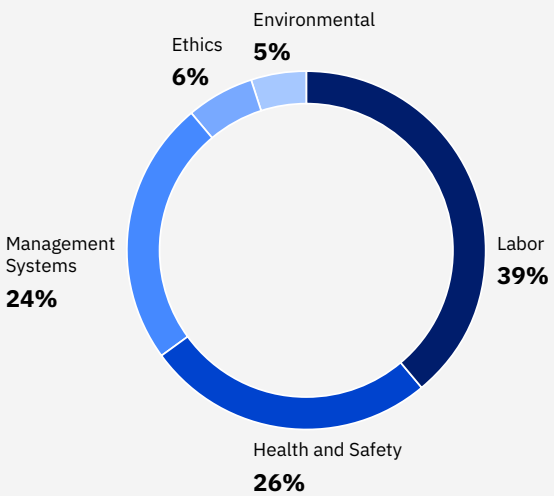
Our responsible minerals policy requires in-scope suppliers to source 3TG minerals (tantalum, tin, tungsten and gold) from ethical smelters or refiners (SORs) conformant with or active in a recognized third-party validation scheme, or from 100 percent recycled or scrap sources. IBM first achieved 100 percent validation of these requirements in 2019 and repeated that in 2020, working with our suppliers and third-party organizations to validate 250 SORs despite the challenges of the pandemic.

We also continue to work with RCS Global on developing the Responsible Sourcing Blockchain Network, which uses IBM blockchain technology to trace multiple minerals from their origin to end use.

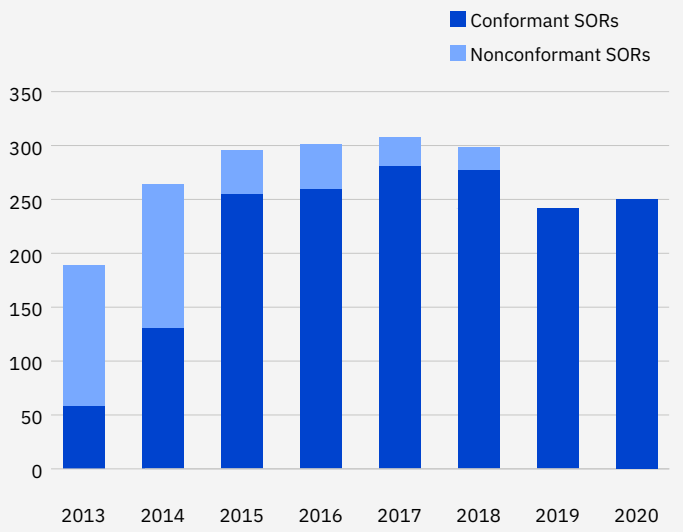
You can learn more about IBM's responsible minerals policy and due diligence process, and find our 2020 Conflict Minerals Report, at IBM's Responsible Minerals webpage.

2020 distribution of nonconformances by section of the RBA code of conduct

(46 full audits)



2013-20 3TG smelter or refiner validation



IBM's Responsible Minerals Policy requires in-scope suppliers to source from SORs conformant or active in a recognized third-party validation scheme such as the RMAP, LBMA, RJC CoC, or Ti-CMC, or from 100 percent recycled/scrap sources. For more detail on accepted validation schemes and our work in this area, see the 2020 IBM Conflict Minerals Report.

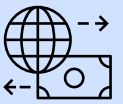
Protecting the environment

IBM is committed to environmental leadership in all of its business activities and has reported annually on its environmental progress for over 30 years. This section includes highlights from our environmental programs and 2020 performance. For more detailed information, see IBM's complete environmental report.

Policy and management

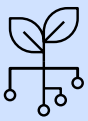
IBM's corporate environmental policy provides the strategic framework for the company's global environmental management system (EMS). The policy outlines 11 objectives that address environmental considerations of our business. IBM has sustained a formalized EMS for decades and it is continually updated to reflect our business and its intersections with environmental matters. In 1997, IBM became the first major multinational company to earn a single global registration to the ISO 14001 EMS standard, which we have maintained continuously. We also maintain a single global registration of our EMS to the ISO 50001 standard for energy management systems.

IBM's enterprise risk management (ERM) process considers environmental risks, including those related to climate change as identified by the Financial Stability Board Task



IBM endorses a plan from the Climate Leadership Council to tax CO_2 emissions, with proceeds returned to citizens as a "carbon dividend." This represents the most realistic and appropriate opportunity for agreement on a carbon emissions policy that is mindful of both the environment and the economy. Learn more at ThinkPolicy.

Force on Climate-Related Financial Disclosures. (See more about our ERM on page 21.) In addition, our separate EMS includes a process for identifying and assessing significant environmental aspects of our business. Senior management assesses and manages environmental and climate-related risks and opportunities, and updates the IBM Board of Directors and its Directors and Corporate Governance Committee about these matters. That committee also reviews IBM's performance against its environmental goals and other key performance indicators annually.



In March 2021, IBM became a founding member of the European Green Digital Coalition and pledged to continue developing digital technologies and services that are more energy- and material-efficient, along with methods and tools to measure the environmental impacts of these technologies.

Updated energy and climate goals

IBM has a long history of leadership in climate protection. We continue to work rigorously to conserve energy and procure a greater percentage of the electricity we consume worldwide from renewable sources to further reduce our greenhouse gas (GHG) emissions. IBM updated its energy and climate goals in February 2021 and announced a new goal to achieve net zero GHG emissions by 2030. IBM's approach is to prioritize the reduction of its emissions via energy conservation, energy efficiency, and the use of renewable electricity. We do not use the purchase of financial certificates to comprise any percent renewable if IBM cannot credibly consume the electricity those certificates represent, and we do not purchase nature-based carbon offsets to comprise any of our emissions reductions. IBM's goals are global, include all of our operations, and will result in real reductions in GHG emissions. Here is how IBM will reach net zero GHG emissions by 2030:

- Continuing to drive energy conservation throughout our business. This includes at least 3,000 new conservation projects to avoid the consumption of 275,000 megawatt-hours (MWh) of energy from 2021 to 2025. We will also increase our average data center cooling efficiency by 20 percent by 2025 (versus a 2019 base year).

- Procuring 75 percent of the electricity we consume worldwide from renewable sources by 2025, and 90 percent by 2030. This includes renewable electricity that is part of the grid mix IBM receives from utilities, in addition to renewable electricity IBM generates on-site or that IBM contracts to purchase beyond what is in the grid mix.

- Reducing our GHG emissions 65 percent by 2025 against base year 2010, adjusted for acquisitions and divestitures. This is our fifth GHG goal since we established our first goal in 2000. Its base year (set at 2005 in our previous goal) was adjusted to better align our reporting with the UN Intergovernmental Panel on Climate Change (IPCC) recommendations. IBM's planned reductions exceed the rate recommended by the IPCC to limit Earth's warming to 1.5 degrees Celsius above pre-industrial levels—which is key to meeting the Paris Agreement's objectives.

- Using feasible technologies, such as carbon capture, to remove emissions in an amount equal to or exceeding IBM's residual emissions (projected to be less than 350,000 metric tons of carbon dioxide equivalent) in 2030 and beyond.

The final element above will require new technology-based solutions, and IBM is contributing to that effort. In 2020, IBM Research launched its Future of Climate global initiative, which includes a focus on accelerated materials discovery for carbon capture. In January 2021, IBM joined the new MIT Climate and Sustainability Consortium, dedicated to advancing large-scale, real-world implementation of solutions to address climate change.

2020 environmental results

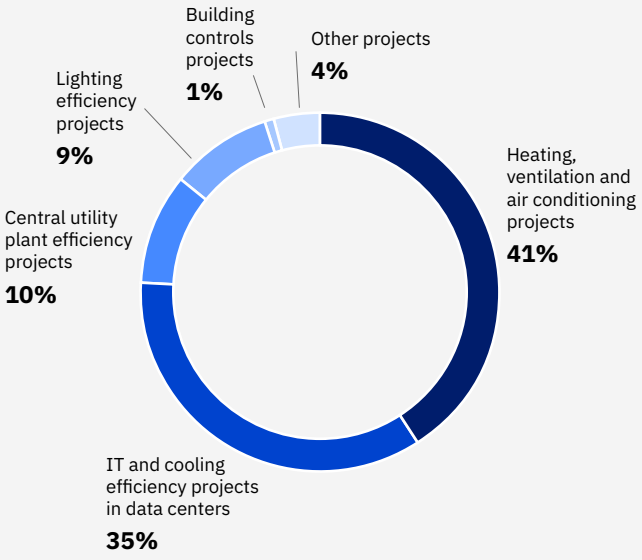
Energy consumption and conservation
Greater efficiency in IBM's operations reduces energy consumption and avoids carbon dioxide (CO_2) emissions. In 2020, IBM's total energy use of 4,118,636 MWh was down 7.6 percent versus 2019. The reduction is attributable to both increased efficiency as well as impacts of the COVID-19 pandemic.

IBM employs rigorous conservation strategies at facilities worldwide, and in 2020—even during the COVID-19 pandemic—we implemented nearly 1,400 energy conservation projects at more than 230 locations, avoiding 145,500 MWh of energy use and 51,000 metric tons of CO_2 emissions, and saving $15.4 million. These projects enabled energy conservation savings equal to 3.5 percent of our total annual consumption. The avoided emissions were equivalent to removing more than 11,000 passenger vehicles from the road during the year.

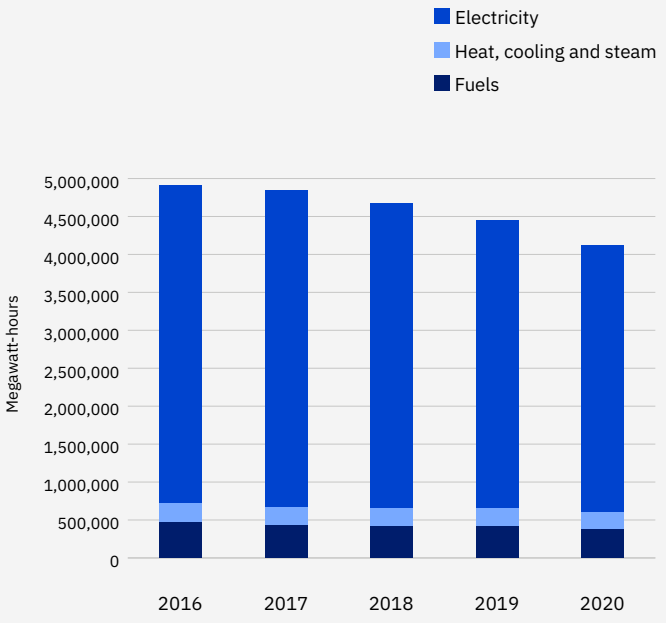
Our data centers delivered 35 percent of these savings via more energy-efficient equipment, increased virtualization that resulted in better utilization of IT systems and more efficient cooling systems. Additional savings resulted from IBM's Smarter Buildings solution, which analyzes a building's data to find inefficiencies. The solution is deployed at 25 major IBM campuses covering 190 buildings. During 2020, using this solution resulted in the avoidance of 9,800 MWh of energy and $877,000 in expense.

From 1990 through 2020, IBM conserved 9.8 million MWh of energy, saving $661 million and avoiding 4.6 million metric tons of CO_2 emissions—equivalent to more than two times IBM's current, annual energy consumption.

2020 energy conservation savings by project type



Total energy consumption



Use of renewable electricity

In 2020, 59.3 percent (2,083,000 MWh) of the electricity consumed across IBM's global operations came from renewable sources, surpassing our previous goal of 55 percent by 2025 five years early and placing us on track to meet our updated goal of procuring 75 percent of the electricity IBM consumes worldwide from renewable sources by 2025. The renewable electricity total includes 43.3 percent directly contracted from IBM's power suppliers, in addition to the other 16 percent already in the electricity mix we received from the grid.

IBM's strategy is to purchase renewable electricity that is generated in the grid regions where our consumption occurs, creating incentives for suppliers to increase renewable generation where IBM operates. IBM does not purchase unbundled Renewable Energy Certificates to comprise any "percent renewable" if we cannot credibly consume the electricity those certificates represent.

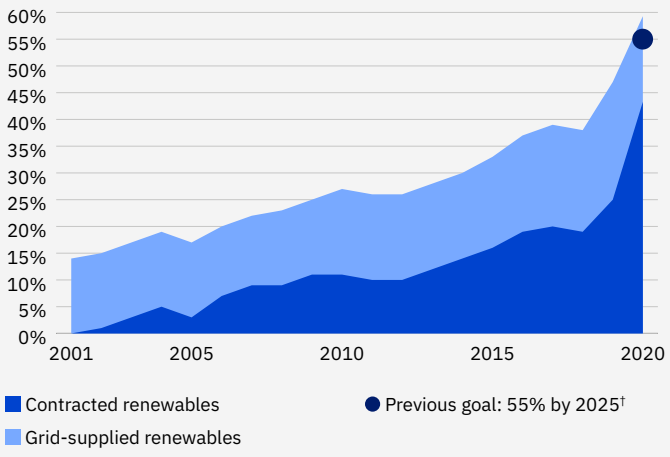
CO_2 emissions reduction

In 2020, our operational CO_2 emissions decreased by 56.6 percent against base year 2005, adjusted for acquisitions and divestitures—surpassing our goal of 40 percent by 2025. IBM's CO_2 emissions reduction goal covers IBM's Scope 1 emissions associated with on-site use of fuels, Scope 2 emissions from our purchases of electricity, heat, steam and cooling, as well as Scope 3 emissions associated with our electricity consumption at IBM data centers located in facilities managed by third parties (also known as colocation data centers) where IBM does not procure the energy or control the operations of the buildings.

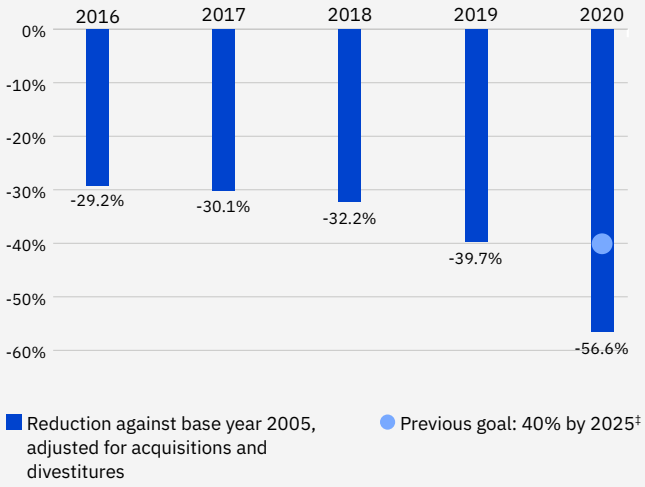
These reductions were attributable to a significant increase in the percentage of electricity we procure from renewable sources, a decrease in IBM's total energy consumption partly driven by COVID-19, and a lower overall carbon intensity of the grids from which we consume electricity.

For details on IBM's complete GHG emissions inventory, please see our GHG emissions inventory webpage.

Renewable electricity use as a percent of IBM's total electricity consumption



Operational CO_2 emissions reductions against base year 2005



†IBM established a more ambitious, third-generation renewable electricity consumption goal in February 2021, which calls for IBM to procure 75 percent of the electricity we consume worldwide from renewable sources by 2025, and 90 percent by 2030. We will begin reporting against that goal for the 2021 reporting year.

‡IBM established a more ambitious, fifth-generation GHG emissions reduction goal in February 2021, which calls for IBM to reduce GHG emissions 65 percent by 2025 against base year 2010. We will begin reporting against that goal for the 2021 reporting year.

Materials conservation and biodiversity
Preserving water resources and safeguarding watersheds are important environmental protection priorities. IBM's water use is primarily associated with cooling and humidity control at offices and data centers, domestic consumption at the workplace, testing of building fire protection systems, and landscape irrigation. IBM's current water conservation goal is to achieve year-to-year reductions in water withdrawals at larger IBM locations and data centers in water-stressed regions. In 2020, withdrawals at these locations decreased by 6.7 percent versus 2019. The reduction is attributable to new conservation projects as well as to impacts from the COVID-19 pandemic which required many employees to work from home.

IBM has sustained a voluntary environmental goal for the responsible sourcing of paper and paper/wood-based packaging since 2002. It requires that the paper and paper/wood-based packaging directly procured by IBM come from suppliers that source from sustainably managed forests where such sources exist. To meet the requirements of this goal, suppliers must either disclose their sources for paper and paper/wood-based packaging to IBM, or provide evidence that their sources have been certified to be from sustainably managed forests by an accredited third-party certification program. In 2020, over 99 percent (based on spend) of the paper and paper/wood-based packaging IBM directly procured worldwide came from suppliers that warranted that the source was derived from sustainably managed forests.

To help combat pollinator biodiversity loss, IBM announced a new global pollinator garden initiative in March 2021. We are leveraging a 30-year collaboration with the Wildlife Habitat Council to provide educational material to IBMers identifying suggested plants for their region, along with planting instructions, to increase pollinator-friendly habitats around the world. We also set a goal in April 2021 to plant 50 pollinator gardens at our locations globally by year-end 2023.

Pollution prevention
IBM manages its waste through a comprehensive, proactive program that defines our strategic practice, in order of preference, as: prevention, reuse, recycling, recovery, other treatment and land disposal.

In 2020, our operations generated 22,200 metric tons of nonhazardous waste worldwide. We sent 83.8 percent (by weight) for reuse, recycling or recovery—surpassing our goal of 75 percent.

In April 2021, IBM announced a new goal, building upon IBM's prior nonhazardous waste recycling goal first set in 1988. Our new goal is to divert 90 percent (by weight) of IBM's total nonhazardous waste from landfill and incineration by 2025 through reuse, recycling, composting and waste-to-energy processes. Further, we will limit our use of waste-to-energy processes to no more than 10 percent (by weight) of the diverted waste.

IBM also set new goals in 2021 to reduce plastic use in our cafeterias and product packaging. For IBM-managed cafeteria operations globally, our goal is to eliminate nonessential, single-use plastic items (e.g., cups, straws, cutlery, plates, carry bags and food containers) by 2025. For packaging, our goal is to eliminate nonessential plastics from the packaging of IBM logo hardware by year-end 2024. For essential plastic packaging, our goal is to ensure such packaging is designed to be 100 percent reusable, recyclable or compostable, or incorporates 30 percent or more recycled content where technically feasible.

Product energy efficiency
IBM can reduce the energy use of its clients by increasing the efficiency of our products.

In August 2020, IBM announced its next-generation IBM Power 10 processor, built using 7-nanometer process technology. The processor is expected to deliver up to a 3x improvement in energy as compared to the IBM POWER9™ processor.† We plan to roll out our first systems with these processors in the second half of 2021. Systems built around the IBM POWER® processor have a 30-plus-year history of improved system performance. From the release of the first system using POWER1 processors in 1990 to the release of our POWER9-based servers in 2017, the IBM POWER family has consistently used processor-level innovation to improve performance and energy efficiency. This has been demonstrated with IBM delivering five of the Top 15 most energy-efficient supercomputers on the semiannual Green500 list (as of November 2020)—more than any other vendor.

†3x performance is based upon pre-silicon engineering analysis of Integer, Enterprise and Floating Point environments on a Power 10 dual socket server offering with 2x30-core modules vs. POWER9 dual socket server offering with 2x12-core modules; both modules have the same energy level.

IBM's next-generation mainframe enterprise platform, the z15, uses 20 percent to 30 percent less power than a comparably configured IBM z14®, and improves computing power delivered for each kilowatt-hour of electricity consumed by 31 percent.

IBM was a charter member of the Environmental Protection Agency's ENERGY STAR computer program in 1992 and continues to qualify eligible products to its criteria. In 2020, IBM had four POWER9-based servers eligible for ENERGY STAR and all were certified. In addition, three storage products were certified to ENERGY STAR.

Product reuse and recycling

IBM develops products with consideration for their reuse, recyclability and recoverability, with the goal of extending product life and minimizing the amount of product waste sent to landfills or for incineration. Our goal is to reuse or recycle end-of-life products such that the amount of product waste sent by our operations to landfills or incineration for treatment does not exceed a combined 3 percent (by weight) of the total amount processed. In 2020, IBM processed more than 16,900 metric tons of end-of-life products and product waste, with 96.5 percent (by weight) reused, resold or recycled, 3.0 percent sent to waste-to-energy for final disposition, and 0.5 percent sent directly to landfills or incineration for treatment. Since we began reporting this work in 1995, IBM has processed 2.4 billion pounds of products and product waste worldwide. More information about these programs is on our product recycling programs webpage.

IBM's environmental milestones

- **1973** – Established a global energy conservation program, and issued a corporate policy on this topic the following year.
- **1992** – Charter member of the US Environmental Protection Agency's ENERGY STAR computer program.
- **1994** – Voluntarily began annual disclosures of CO_2 emissions associated with our energy consumption.
- **2000** – First CO_2 emissions reduction goal set when we helped the World Wildlife Fund create its Climate Savers program.
- **2001** – First contracted purchases of renewable electricity for use in operations.
- **2007** – First published IBM's position on climate change.
- **2015** – Voiced our support for the Paris Agreement, and reaffirmed our support in 2017.
- **2019** – Founding member of the Climate Leadership Council, supporting its plan for a carbon tax with a "carbon dividend."
- **2021** – Committed to net zero greenhouse gas emissions by 2030.

Supporting the IBMer

Health and safety

IBM implements its commitment to employee health, safety and well-being through programs and innovative solutions across our global organization. The COVID-19 pandemic has created an especially challenging environment for helping our 345,000 IBMers worldwide stay productive while prioritizing their health and safety. IBM's pandemic response is guided by four principles:

- Employee health is our top priority.
- Our plan and response are data-driven and evidence-based.
- We comply with all government requirements.
- We focus on business continuity and maintaining critical operations.

In March 2020, IBM quickly transitioned 95 percent of its global workforce to remote work, leveraging the IBM hybrid cloud platform to provide key collaboration tools. Throughout 2020, we conducted virtual check-in sessions and pulse surveys around the globe in support of workforce well-being. We provided wellness and mental health guidance, as well as management support to help IBMers stay well physically and mentally. We also provided global and local pandemic updates, establishing a 24/7 "Ask Health & Safety" team to address questions and concerns.

IBM established a range of evidence-based preventative measures to protect IBMers and prevent secondary virus transmission, and we adjust them regularly in response to local conditions and legal requirements. For example, we have restricted nonessential travel and in-person meetings, limited access to IBM locations, and manufactured and provided three-layer masks to all IBMers working in IBM and client sites. Contractors and visitors were also provided three-layer masks when coming into our workplaces. We've also identified job roles that entail distinct risks—for instance, traveling to and visiting a client's site—and provide those IBMers with specialized training and support.

Employees' mental health was already an IBM priority before the pandemic imposed new levels of stress. All IBMers worldwide have confidential, 24/7 access to critical mental health support through employee assistance programs and other mental health resources. On World Mental Health Day in 2020 (October 10), IBM held a campaign focused on mental well-being in which approximately 10,000 IBMers participated in global and local webinars and nearly 1,000 took part in the #IBMmentalhealthmatters pledge.

IBM established its Health and Safety Management System in 1999 to integrate health and safety programs globally with evolving business needs. Our programs are focused on identifying, assessing and addressing health and safety risks that IBMers may be exposed to based on their line of work, or on emerging risks, such as mental health issues or the current pandemic. IBM's HSMS is certified corporation-wide to the ISO 45001:2018 global health and safety standard.

Diversity and inclusion

While IBM has been a leader in corporate diversity and inclusion for decades, we saw 2020 as a reset and look to 2021 and beyond with a renewed conviction and deeper commitment. We are channeling what 2020 taught us into outcome-oriented, rigorous actions focused on four strategic areas:

- Advocacy: IBM works to drive systemic change that creates opportunity for diverse communities.
- Allyship: IBM provides training and support to help every IBMer be an upstander through inclusive behaviors.
- Employee experience: IBM champions all diverse communities of IBMers and supports all employees to thrive and bring their authentic selves to work.
- Accountability: IBM harnesses data transparency and AI to enable accountability, action and outcomes for increased inclusion and diversity representation at every level of our company.

IBM Work From Home Pledge

I pledge to be **Family First.**
I pledge to support **Flexibility for Personal Needs.**
I pledge to support **"Not Camera Ready"** Times.
I pledge to **Be Kind.**
I pledge to **Set Boundaries** and **Prevent Video Fatigue.**
I pledge to **Take Care of Myself.**
I pledge to **Frequently Check In** on people.
I pledge to **Be Connected.**

Please see the IBM 2020 Diversity & Inclusion Report for more detail on IBM's diversity and inclusion efforts and progress. The report shares stories of IBMers that illustrate how diversity and inclusion in action can be life-changing. It also includes data on our progress in diversity across representation groups, and details IBM's programs to support career growth, engagement and well-being, as well as our investments in IBMers who are developing their skills and leadership potential.

Skills and leadership development

IBM's strategy for its employees' learning and leadership development is driven by data, rooted in science and focused on empowering IBMers to direct their own career paths.

Employees have 24/7 access to a number of advanced tools and resources that begin with Your Learning, our digital platform that uses Watson AI technology to generate personalized recommendations of skills to develop and the resources to help do it. Your Learning Boost is a supplemental, personalized app that enables peer-to-peer collaboration and social sharing of IBMers' learning goals and achievements.

Your Career at IBM, launched in 2020, is designed to help IBMers understand the skills they have, gain clarity on skills they need, and open doors to new roles and career opportunities at IBM. The online platform connects IBMers to certification programs as well as comprehensive coaching and mentoring to supplement their development and growth.

These platforms have helped drive continuous learning deeper into our company culture—in 2020, IBM invested $308 million in learning programs while IBMers logged an average 88 learning hours (increased from 77 in 2019) and earned 638,000 digital badges for completing courses (35 percent more than in 2019).

Cultivating leadership skills helps both our managers and the teams those managers lead, so IBM invests in their development as well. In 2020, IBM created a new series of offerings to help leaders manage through the pandemic. Virtual First Leadership covers topics such as making effective decisions, driving outcomes and fostering team resilience in a virtual work environment. We also held a "Leading Positively Through Change" workshop and presented a series of guest lectures on "Leading in Challenging Times."

Apprenticeships and returnships

IBM launched its registered apprenticeship program in 2017 to provide a new entry point into IBM for individuals with relevant, but not advanced degrees—what we refer to as "new collar talent." Our competency-based program enables apprentices to be paid while they learn essential skills for various strategic roles. The program began with software engineering but has expanded to more than 20 occupations, including data science, cybersecurity and design. We expect to add 450 apprentices annually, and more than 500 past participants are now full-time IBMers.

IBM's Tech Re-Entry Program seeks people looking to rejoin the workforce after a career break. This paid "returnship" helps individuals modernize their skills with learning plus mentorship from IBM experts. This program will be available in nine countries by year-end 2021 and will be essential in providing opportunities to people whose careers were disrupted by the COVID-19 pandemic.

We believe the apprenticeship and returnship model can help close the opportunity gap, and in turn, narrow the skills gap in IT. We joined with the Consumer Technology Association in 2019 to create the CTA Apprenticeship Coalition, which IBM chairs. Its mission is to help companies launch their own apprenticeship programs and create a corps of skilled workers to fill millions of open new collar jobs across the United States. More recently, we became a founding members of the OneTen Coalition and the NYC Jobs CEO Council, and a chair of the Business Roundtable's Multiple Pathways Initiative. All of these efforts work to improve opportunities for new collar talent by scaling these types of new collar programs and encouraging more companies to adopt skills-first talent strategies.

Driving social impact at scale

Skills

Our world's digital transformation is creating opportunities across a range of technical disciplines, and IBM is helping people develop the skills needed for these new collar careers. We focus on vulnerable populations to help narrow the digital skills gap.

Online training programs
SkillsBuild is IBM's free, digital training program that helps adult learners develop valuable new skills and find jobs, regardless of their background or education. Begun as a pilot program in 2019 in nine countries, it expanded in 2020 to operate in 141 countries, offering over 1,000 courses in cybersecurity, data analysis, cloud computing and many other technical disciplines, as well as workplace skills, such as collaboration and design thinking. Participants can earn IBM-branded digital credentials that can be used in resumes and online to certify their relevant skills, and a global network of 90 nonprofit partners helps connect learners with local job opportunities. Most learners start with no experience and can be ready to apply for IT jobs within six months through participation in hands-on, project-based learning and mentoring support. Among the first participants in India, more than 4,000 have found full-time employment. As of May 2021, 215,000 people have joined SkillsBuild and completed 341,000 learning hours.

Our Veterans Employment Initiative provides free data analytics software training, certification and job placement assistance to help military veterans transition to civilian careers in the US, UK, Australia and Canada. During the pandemic in 2020, the program migrated from in-person training to offer its courses via SkillsBuild. Thousands of veterans have participated, and many are today working as data analysts and cybersecurity professionals.

Open P-TECH, launched in March 2020, is a learning program that's helping students ages 13–20 build skills and explore career options. Since its launch, 280,000 students from 140 countries joined the program, completing nearly a half million learning hours and earning over 30,000 digital badges. Open P-TECH's no-cost curriculum is already in

11 languages and includes introductory courses in cybersecurity, AI, quantum computing and other IT areas, as well as a design fundamentals course (developed with Adobe), a primer on preparing for your first job (developed with NAF) and much more. Additional resources provided for teachers help them lead hands-on projects and classroom discussions, and an educator dashboard lets teachers and schools track students' progress.

Academic programs
IBM's P-TECH education model combines high school and college courses to provide students a no-cost associate degree along with mentoring, paid workplace experience from industry partners, and a no-cost associate degree upon graduation—equipping them to start a new collar career, continue their education or both. Since its 2011 launch, the program has grown to include 266 schools in 28 countries (with more scheduled to open in 2021) and partnerships with 209 colleges and 600 companies. As of March 2021, IBM is affiliated as an industry partner with 59 schools across all countries where P-TECH operates.

Our STEM for Girls program, launched in India in 2019, is helping improve STEM education and career pathways for girls in government high schools by promoting digital literacy, coding/tech skills, career development, and girls' empowerment. Its three-year goal is to reach 200,000 girls, and the program has already engaged 140,000 in 1,200 schools. IBM has launched similar programs in Taiwan, Italy, South Korea, Canada, Egypt, Ethiopia, Ghana and South Africa, and plans to continue its expansion globally.

The IBM Global University Programs organization provides students and faculty with resources for teaching, research and skills training via four initiatives:

- The IBM Academic Initiative provides students and faculty at accredited institutions with self-service access to select IBM resources at no charge for classroom and noncommercial research purposes. In 2020, we distributed 200,000 assets to 44,000 users.

- The IBM Skills Academy offers "train the trainer" sessions to faculty members, to help empower college and university students with high-demand technology skills. During the COVID-19 pandemic, we transformed the program to a 100 percent cloud-enabled digital offering.

- IBM University Awards support basic research, curriculum innovation and educational assistance through monetary and in-kind awards in areas fundamental to innovation and strategic imperatives to IBM.

- The IBM University Guest Lectures program mobilizes a global network of technical subject matter experts who serve as IBM Academic Ambassadors to speak on topics in their expertise to students in university settings. Lectures are available in the classroom, virtually and on demand.

IBM supports the reauthorization of an expanded Perkins Career and Technical Education Act to improve its relevance to the modern job market. We support similar improvements to the Higher Education Act, and passage of the National Apprenticeship Act, to help Americans from all backgrounds find pathways to 21st century career skills and jobs. Learn more at the IBM Policy Lab.

Communities

Call for Code invites developers to create sustainable projects that address social and humanitarian issues using open source technology—and then helps deploy the top solutions with a $200,000 grant and support from IBM Service Corps. Launched in 2017 with partners David Clark Cause and United Nations Human Rights, the initiative has drawn 15,000 submissions from 400,000 developers in 179 countries. In 2020, the program launched Call for Code for Racial Justice, and its 2021 challenge seeks solutions that help address climate change in three areas: water, agriculture and consumption. The 2020 winner, Agrolly, provides rural farmers affordable access to AI-powered data and insights about weather patterns and crop characteristics, as well as advice on selecting and cultivating crops.

IBM Volunteers® supports active and retired IBMers who donate their time and expertise to schools and community organizations. It helps them find volunteer opportunities and

offers activity kits with resources to deliver engaging projects ranging from robotics and recycling to AI and safe tech. Volunteers can also obtain IBM grants for the organizations they support. The program has 77,000 registered users, and in 2020 it recorded over 2 million hours of volunteer service—its best year by far. Responding to the pandemic, IBMers in Italy began helping teachers learn to use teleconferencing tools for remote learning in an effort that spread to include 2,000 IBMers in countries across Europe and South America, reaching 1,000 schools. You can learn more about IBM volunteers' impact in communities at ibm.org, including our 2020 IBM Volunteer Excellence Award winners.

IBM Service Corps gives IBMers the opportunity to use their professional skills to help communities tackle complex challenges in education, health, disaster preparedness and economic development. Since 2008, IBM has deployed over 5,000 employees in teams to undertake 1,500 projects in 40 countries. In response to the pandemic, we launched Reigniting Small Business in 2020 to help job seekers pursue new careers in technology and help business owners gain skills to relaunch their businesses in turbulent times. The initiative provides webinars on finance, real estate, law, digital marketing strategy and business development, as well as mentoring from IBM and others, in communities across eight countries. Other 2020 engagements included the following:

- In the United States, we helped the Institute for Educational Leadership develop an "opportunity index" that assesses local economic, educational, health and community attributes in order to target services to those with the greatest needs.

- In Australia, we worked with the Taronga Conservation Society to develop a solution to predict trends, migration patterns and reproduction rates for species affected by natural disasters.

IBM Science for Social Good partners IBM Research scientists and engineers with academic fellows and subject matter experts from NGOs, public sector agencies and social enterprises to tackle emerging societal challenges using science and technology. One current project, in collaboration with the Center for the Governance of Change, is an AI-powered analysis of the curricula at universities in the US and Europe, along with the skills sought in current job listings. Its goal is to help academic and vocational institutions to ensure students are prepared for today's labor market. Since Science for Social Good was launched in 2016, it has undertaken 35 projects with 21 partner organizations.

IBM Research is using AI to accelerate the process of developing and identifying drugs to treat diseases, including COVID-19. One project is aimed at drug discovery, which requires the synthetization of thousands of molecules to develop a single preclinical lead candidate. This typically long and costly process could be faster if AI can generate molecular candidates predicted to have favorable properties. Another effort, working with the nonprofit Reboot Rx, used AI to analyze 170,000 studies and trials on treating COVID-19 in cancer patients to produce a free resource for researchers and physicians to review such data.

World Community Grid® enables anyone with a computer or Android device to help advance cutting-edge scientific research on topics related to health, poverty and sustainability. Since 2004, more than 650,000 individuals and 460 organizations have donated unused computing power to support 31 research projects. The newest is "OpenPandemics – COVID-19," launched in 2020 to accelerate the search for COVID-19 treatments and to build a fast-response, open source toolkit that could help find treatments for other, future pandemics. The project helped researchers select, from an original group of 20,000, 70 compounds to investigate further, with lab testing underway on 25.

The Traffik Analysis Hub enables participating organizations to analyze data shared by participants, as well as open source information, with the goal to combat human trafficking. IBM worked with nonprofit Stop The Traffik to conceive and develop the hub, which is powered by IBM AI and cloud technology and has an active membership of over 80 member organizations, including nonprofits, law enforcement and financial institutions. Traffik Analysis Hub began as a partnership between IBM and Stop The Traffik, but with its technical development complete, Traffik Analysis Hub is now an NGO sustained by its membership community.

Appendix

IBM sets goals on a range of ESG issues, measures progress, and reports results as matters of transparency and accountability. The following pages include metrics on our work in many areas, as well as a list of the recognition IBM has received from publications, advocacy groups and other organizations.

Environment

IBM continues to improve the efficiency of our operations and to help protect the environment. The goals shown below were those in effect during 2020.

	2016	2017	2018	2019	2020	GRI	SASB
Energy and climate change							
Energy conservation as % of total energy use (goal 3%)	4.8	3.6	3.3	3.2	3.5	GRI 302-4	
IBM total energy consumption in megawatt-hours	4,912,714	4,845,695	4,666,514	4,455,805†	4,118,636	GRI 302-1	TC-SI-130a.1
Renewable electricity procurement as % of total electricity consumption (goal 55% by 2025)	37.0	39.0	37.9	47.5†	59.3	GRI 302-1	TC-SI-130a.1
CO_2 emissions reduction as % of 2005 base year CO_2 emissions (goal 40% by 2025)	29.2	30.1	32.2	39.7	56.6	GRI 305-5	
IBM total operational CO_2 emissions in metric tons	1,436,464	1,417,985	1,375,027	1,222,623†	880,188	GRI 305-1; 305-2	

Note: Energy and emissions goals and reporting cover all activities taking place in IBM-owned or leased facilities. These facilities include colocation data centers. Renewable electricity procurement includes contracted purchases and renewable electricity that automatically comes to IBM via routine grid power. CO_2 emissions reduction data is adjusted for acquisitions and divestitures.

†2019 data has been adjusted to correct a calculation error in figures reported in our IBM Corporate Responsibility Report 2019.

Water conservation							
% annual reduction in water withdrawals at data centers and other large IBM locations in water-stressed regions (goal year-over-year reduction)	6.6	2.9	0.4	2.0	6.7	GRI 303-3	TC-SI-130a.2
Nonhazardous waste recycling							
% by weight sent for reuse, recycling or recovery (goal 75%)	86.3	87.8	89.5	86.4†	83.8	GRI 306-2	

†2019 data has been adjusted to correct a calculation error in the figure reported in our IBM Corporate Responsibility Report 2019.

Product reuse and recycling							
% by weight of total IT product waste sent by IBM's product end-of-life operations to landfill or incineration for treatment (goal not to exceed a combined 3% by weight)	0.6	0.7	0.7	0.8	0.5	GRI 306-2	
Product energy efficiency							
Discussion of IBM product energy efficiency goals and results		IBM and the Environment Report				GRI 302-5	
Integration of environmental considerations							
Discussion of the integration of environmental considerations into strategic planning for data center needs		IBM and the Environment Report					TC-SI-130a.3

Social

IBM is committed to maintaining a diverse workforce and investing in all IBMers' individual development. We also seek to make an impact with our contributions and our spending with suppliers.

Representation and hiring trends

Applicable frameworks: GRI 405-1, SASB: TC-SI-330a.3

	2018	2019	2020
Women (global)			
Representation			
Overall	32.6%	33.3%	33.9%
Management	27.5%	28.5%	29.0%
Technical	26.2%	26.6%	28.1%
Executive	26.0%	27.6%	28.3%
New hires			
Overall	40.0%	39.1%	38.3%
Management	27.9%	29.7%	30.9%
Technical	32.5%	28.8%	30.7%
Executive	28.2%	33.5%	29.9%

	2018	2019	2020
Pan-Asian (US)			
Representation			
Overall	17.7%	18.3%	18.9%
Management	15.1%	15.8%	16.4%
Technical	23.7%	24.4%	25.6%
Executive	14.2%	15.0%	15.5%
New hires			
Overall	24.8%	23.6%	24.9%
Management	22.7%	18.5%	20.2%
Technical	32.8%	31.1%	32.0%
Executive	32.8%	31.1%	21.2%

Representation and hiring trends (*continued*)

	2018	2019	2020
Multi-race (US)			
Representation			
Overall	0.9%	0.8%	0.7%
Management	0.7%	0.8%	0.8%
Technical	0.9%	0.9%	0.8%
Executive	0.5%	0.7%	0.7%
New hires			
Overall	0.1%	0.2%	0.1%
Management	0.0%	0.0%	0.0%
Technical	0.1%	0.3%	0.0%
Executive	0.0%	0.0%	0.0%

Multi-race includes multiple race selections for self-ID.

	2018	2019	2020
Underrepresented minorities (US)			
Representation			
Overall	13.3%	13.3%	13.7%
Management	9.8%	10.3%	11%
Technical	12.0%	12.4%	12.9%
Executive	9.3%	10.4%	11.6%
New hires			
Overall	18.9%	20.7%	21.3%
Management	6.3%	11.0%	14.0%
Technical	17.7%	19.2%	21.3%
Executive	7.8%	11.4%	13.9%

Underrepresented minorities includes Black, Hispanic, Native American, and Native Hawaiian and other Pacific Islanders (NHOPI).

	2018	2019	2020
Black (US)			
Representation			
Overall	6.8%	6.8%	6.9%
Management	4.7%	4.9%	5.4%
Technical	5.7%	5.9%	6.0%
Executive	4.3%	4.8%	5.4%
New hires			
Overall	10.7%	11.2%	11.3%
Management	2.3%	4.5%	8.3%
Technical	10.0%	10.1%	11.1%
Executive	2.9%	4.8%	8.0%

Representation and hiring trends (*continued*)

	2018	2019	2020
Hispanic (US)			
Representation			
Overall	5.9%	6.0%	6.3%
Management	4.7%	5.0%	5.2%
Technical	5.9%	6.1%	6.4%
Executive	4.7%	5.2%	5.7%
New hires			
Overall	7.6%	8.8%	9.4%
Management	3.4%	5.0%	5.7%
Technical	7.1%	8.3%	9.7%
Executive	3.9%	4.8%	5.8%
Native American (US)			
Representation			
Overall	0.3%	0.3%	0.3%
Management	0.2%	0.3%	0.2%
Technical	0.3%	0.3%	0.3%
Executive	0.2%	0.3%	0.3%
New hires			
Overall	0.3%	0.4%	0.3%
Management	0.6%	1.0%	0.0%
Technical	0.2%	0.4%	0.2%
Executive	1.0%	1.0%	0.0%

The preceding figures are percentages of IBM's workforce overall (including all members of the specified community) and within employee categories: "Management" includes all executives and people managers; "Technical" includes Distinguished Engineers, Designers, IBM Fellows, etc.; and "Executive" includes Director level and above. For more, see the IBM Diversity & Inclusion Report.

	2016	2017	2018	2019	2020
Learning					
Per capita investment ($)	1,339	1,180	1,205	1,321	940
Total hours worldwide (M)	26.7	23.7	24.1	29.0	32.5
Hours per employee	56.0	59.0	61.0	77.0	88.0
Investments worldwide ($M)	498	425	419	452	308

Applicable framework: GRI 404-1

Global illness/injury rate					
Total per 100 employees	0.30	0.25	0.28	0.26	0.13

Applicable frameworks: GRI 403-9 and 403-10

Volunteering					
Worldwide retiree/employee hours (K)	1,248	1,205	1,322	1,250	2,023

	2016	2017	2018	2019	2020
Contributions by type ($M)					
Technology	171.7	229.3	287.4	629.8	317.1
Services	44.3	66.6	72.2	62.0	36.8
Cash	41.8	36.6	33.2	37.1	41.0
Total	**257.8**	**332.5**	**392.8**	**728.9**	**394.9**†
Contributions by issue ($M)					
Education	208.4	291.7	349.6	708.1	367.8
Human Services	15.9	15.2	16.6	8.2	13.7
Health	5.2	9.8	11.1	5.3	3.7
Culture	4.0	4.0	2.5	3.3	2.0
Environment	3.5	2.7	3.2	1.8	4.3
Other	20.8	9.1	9.8	2.2	3.4
Total	**257.8**	**332.5**	**392.8**	**728.9**	**394.9**†
Contributions by region ($M)					
North America	99.2	132.2	139.1	235.3	168.3
Asia Pacific	39.3	52.1	77.8	160.0	69.6
Europe, Middle East, Africa	104.2	118.3	140.1	279.3	129.1
Latin America	15.1	29.9	35.8	54.3	27.9
Total	**257.8**	**332.5**	**392.8**	**728.9**	**394.9**†

†Reflects year-to-year decrease due to COVID-19 pandemic of approximately $334M in IBM Academic Initiative software contributions reported in Education and Technology, and across all regions.

	2016	2017	2018	2019	2020
Supplier spending by category ($B)					
Services and general procurement	20.3	20.0	21.1	20.8	20.3
Production procurement	3.8	4.2	4.2	3.7	3.3
Logistics procurement	0.6	0.6	0.5	0.6	0.6
Total ($B)	**24.7**	**24.8**	**25.8**	**25.1**	**24.2**

Applicable frameworks: GRI 102-9

Supplier spending by region ($B)					
North America	10.6	10.6	11.2	11.3	10.9
Asia Pacific	7.3	7.5	7.7	7.0	5.1
Europe, Middle East, Africa	5.6	5.5	5.8	5.6	5.5
Latin America	1.2	1.2	1.1	1.2	2.7
Total ($B)	**24.7**	**24.8**	**25.8**	**25.1**	**24.2**

Applicable frameworks: GRI 102-9

First-tier supplier spending					
Total US ($B)	9.7	9.9	10.3	10.1	9.5
Diverse US ($B)	1.3	1.4	1.4	1.4	1.5
Diverse non-US ($M)	744	657	710	621	570

Governance

IBM recognizes an ethical imperative to develop and deploy new technologies responsibly, with clear purpose, and consistent with our company's long-standing values.

	2020	GRI	SASB
Data security and business continuity			
Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	IBM Enterprise IT Security IBM Security and Privacy by Design IBM Terms: Data Security		TC-SI-230a.2
Description of business continuity risks related to disruptions of operations	IBM Business Continuity		TC-SI-550a.2
Data privacy			
(1) Number of law enforcement requests for user information, (2) number of users whose information was requested, (3) % of requests resulting in disclosure	IBM 2020 Law Enforcement Requests Transparency Report A Letter to Our Clients About Government Access to Data Government Access To Data: Getting The Facts Straight		TC-SI-220a.4
Total amount of monetary losses as a result of legal proceedings associated with user privacy	A summary of the more significant legal matters involving the company can be found at: IBM Quarterly Report on Form 10-Q		TC-SI-220a.3
Description of policies and practices relating to behavioral advertising and user privacy	IBM Privacy Statement IBM's Principles for Trust and Transparency	GRI 418-1	TC-SI-220a.1
Intellectual property protection and competitive behavior			
Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	A summary of the more significant legal matters involving the company can be found at: IBM Quarterly Report on Form 10-Q	GRI 206-1	TC-SI-520a.1

Awards and recognition

IBM is recognized every year for its corporate responsibility efforts by publications, advocacy groups, governments and nongovernmental organizations worldwide. Below are highlights of our recognition from 2020 and early 2021.

Corporate social responsibility

- 3BL Media — 100 Best Corporate Citizens
- *21st Century Business Herald* (China) — Outstanding Program award for strong, persistent commitment and an innovative approach to leveraging technology and talent to address social needs
- Avtar Puthri Award for Excellence in CSR (India) — Recognizing STEM for Girls
- Bangalore Chamber of Industry and Commerce (India) — CSR Impact Award for IBM's Women Empowerment Campaign
- *China Business News* — Model CSR Company in the 2020 China CSR Awards
- *China Philanthropy Times and Economic Observer* — China CSR Excellence Award, recognizing efforts to combat the COVID-19 pandemic in Greater China and worldwide
- *CommonWealth Magazine* (Taiwan) — Excellence in Corporate Social Responsibility Award, foreign company category
- CSR China Education Award — CSR China Top 100 and Best CSR Innovation awards, recognizing IBM's commitment to education programs
- Dow Jones Sustainability Index, North America
- EcoVadis — Platinum-level CSR rating
- Ethisphere — World's Most Ethical Companies
- *Forbes* — The Just 100
- *Fortune* — World's Most Admired Companies
- Golden Peacock Global Award for Corporate Social Responsibility (India)
- Hong Kong Council of Social Service — Caring Company 2020 Award
- India CSR Awards — Best Education Project 2021 (government partnerships on AI work with CBSE) and Best Girls STEM Education project 2021 (STEM for Girls)
- Jiemian Media (China) — Award for the Highest Good, recognizing CSR sustainability, effectiveness, participation and influence
- MTC Social Responsibility Award (India) — Exemplary Leadership in CSR award for IBM's Joyeeta Das (2021)
- National Skills Network (India) — Top 10 skilling sites in India includes IBM SkillsBuild
- World CSR Congress Awards (India) — Outstanding Contribution to the Cause of Education (recognizing Girl Child)

Environment

- Best Workplaces for Commuters — 2021 list includes seven US IBM locations
- City of Austin, Texas, Green Business Leaders Program — Platinum level for IBM's Austin facility
- Colorado Department of Public Health and Environment, Environmental Leadership Program — Gold Leader for IBM's Boulder facility
- Content Marketing Institute — 2020 Content Marketing Award for Best Series of Articles, recognizing "Forecast: Change" from The Weather Company® (an IBM Business)
- Hong Kong Environmental Campaign Committee — Class of Excellence Wastewi$e Label for IBM Hong Kong
- Institute of Directors, India — 2020 Golden Peacock Global Award for Corporate Social Responsibility
- Smart Energy Decisions — 2020 Innovation Award in the Utility Partnership category recognizing IBM, NextEra Energy and Xcel Energy for enabling on-site renewables at IBM's Boulder, Colorado, facility
- Telecommunications Industry Association — 2020 Global Sustainability Award (co-winner) for the corporate category

HR/diversity

- American Indian Science and Engineering Society — Top 50 Employers
- Career Communications Group, Inc. — No. 4 for US Top 10 Industry Supporters of Historically Black Colleges & Universities
- Employers Network for Equality & Inclusion — Global Diversity Award, UK
- Human Rights Campaign — Best Place to Work for LGBTQ Equality, Corporate Equality Index score of 100%
- Great Place to Work — Great Place to Work for Race/Ethnicity, No. 5 for Great Place to Work for LGBT+, Great Place to Work for People with Disabilities in 2019 and 2020, IBM Brazil
- Latino Leaders — Best Companies for Latinos to Work (2021)
- Mediacorp — Canada's Best Diversity Employers for (2020 & 2021) IBM Canada
- Military Friendly Employer — Gold Award, Top 10 (fourth consecutive year)
- National Association for Female Executives — Top 10 Best Companies for Women Executives (Hall of Fame)
- Nikkei (Japan) Woman — Top 100 Firms for Women and Executive Promotion
- Nikkei (Japan) — Employer of Choice for Women's Advancement
- US Safety Prevention Awards — Four IBM locations received gold and silver awards for workplace injury/illness incidence rates well below the U.S. Bureau of Labor Statistics industry average
- *Working Mother* magazine — Top 10 lists for: 100 Best Companies, Best Companies for Multicultural Women and Best Companies for Dads
- Working Mother and Avtar (India) — Top 10 Best Companies for Women in India (fifth consecutive year); "Champion of Inclusion" for Most Inclusive Companies in India Index (second consecutive year)
- Zhaopin.com — Best Employers for Females in China (fourth consecutive year)

Supply chain

- Billion Dollar Roundtable — Corporate leadership award to IBM's Michael Robinson (2021)
- *Black EOE Journal* — Best of the Best for promoting the advancement of African Americans in the following categories: Employer, Supplier Diversity Program, LGBTQ+ Friendly Company (2020 & 2021)
- Employers Network for Equality & Inclusion — Global Diversity award
- *Forbes* and Statista — America's Best Employers for Diversity (2020 & 2021), and Best Employers for New Graduates (2021)
- *Minority Business News USA* magazine — 2020 Best of the Decade in Supplier Diversity; USA All-Stars of Supplier Diversity list included IBM's Supplier Diversity team; Champion of Supplier Success list included IBM's Michael Robinson; Buyer of the Year list included several IBMers
- National Business Inclusion Consortium — Top 50 Best of the Best Corporations for Inclusion
- OMNIKAL — Omni50 list of America's Top 50 Organizations for Multicultural Business Opportunities (No. 5 in 2020)
- *U.S. Veterans Magazine* — Included among Top Supplier Diversity Programs for veteran-owned businesses
- VIQTORY — Top 10 Military Friendly Program (2021)
- WEConnect International — Top Global Champions for Supplier
- Diversity and Inclusion (No. 1 in 2020, No. 3 in 2021)
- WEUSA — Champion of Supplier Success to IBM's Michael Robinson (2021)
- Women Presidents' Educational Organization — Done Deals Corporate Champion Award for highest contracted spend with women-owned businesses in WPEO-NY; also recognized IBM for outstanding support of women-owned businesses
- Women's Business Enterprise National Council — Top Corporation (2020 & 2021)
- *Women's Enterprise* magazine — WE 100 list recognizing work to advance women-owned businesses; Outstanding Men of 2020 list included IBM's Michael Robinson, and 2021 Corporate Buyers of the Year list included five IBMers

Top suppliers

IBM's Production and Logistics Procurement suppliers support our hardware brands and product distribution operations, while Services and General Procurement suppliers support client services, software offerings and internal operations. Below are lists of IBM's top 50 suppliers in each category in 2020, with links to their corporate responsibility reports, if available. (Click on a company name to go to its report.)

Production and Logistics

These 50 firms receive 90 percent of IBM's spending in this category.

AcBel Polytech
Advanced Energy
Amphenol
BDT Media Automation
Benchmark
Broadcom
Celestica
Cisco
Dell Technologies
Delta Electronics
DHL
FedEx
Flextronics
Fuji Electric
Fujifilm
Fujitsu
Geodis
GlobalFoundries
Glory Ltd.
II-VI Incorporated
Intel
Iron Mountain
Jabil
Kyocera
Lenovo
Marvell
Mellanox Technologies
Mercury Corporation
Microchip Technology Inc.
Micron Technology
Molex
NEC Platform Technologies
Nippon Express
NVIDIA
Panalpina
Redsis
Samsung
Seagate
SK hynix
SMART Modular Technologies
Sony
Super Micro Computer
Teleplan
Tokyo Electron Ltd.
Toshiba
Trenton Systems
UPS
Western Digital
Wistron
Zollner Elektronik

Services and General Procurement

These 50 firms receive 45 percent of IBM's spending in this category.

Adecco
Akamai
Amazon Web Services
Aon
Apleona
Arrow Electronics
AT&T
BMC Software
Broadcom
Capgemini
CBRE
Cisco
Collabera
Compro Business Services
Computer Task Group
CRESCO Group
Dell Technologies
Deloitte
FESCO
Fujitsu
George P. Johnson
HCL Technologies
Hewlett Packard Enterprise
Infinite Computing Systems
Internet Initiative Japan
Jones Lang LaSalle
Lenovo
Manpower Group
MetLife
Microsoft
NetApp
NTT Group
Open Systems Technologies
Oracle
Persistent Systems
Pomeroy
Rocket Software
Salesforce
SAP
SDI Incorporated
Servicenow
SHI International
Sumitomo Corporation
Tech Mahindra
The Employment Solution
TIS INTEC Group
UNICOM Systems
Westcon-Comstor
Worldwide TechServices
WPP

About this report

This report covers our progress and performance in 2020 and some notable activities during the first half of 2021. In selecting content for inclusion in this report, we were inspired by frameworks and initiatives such as the Global Reporting Initiative Standards, the Sustainability Accounting Standards Board, the Financial Stability Board Task Force on Climate-Related Financial Disclosures, the Stakeholder Capitalism Metrics, and the United Nations Sustainable Development Goals. IBM's full GRI report, using the GRI Standards guidelines, can be found at IBM.org.

Business for Social Responsibility—a nonprofit consultancy dedicated to sustainability—conducted a nonfinancial materiality assessment for IBM in 2019. The results provided guidance for this report and are used to inform our ongoing corporate responsibility strategy. As we continue to innovate and evolve, IBM regularly reviews our strategy and approach to corporate responsibility.

Unless otherwise noted, the data in this report covers our global operations. The information in this report has not been externally assured by third parties, except where noted. Information about our business and financial performance is provided in the 2020 IBM Annual Report.

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