



IBM and the UN Sustainable Development Goals

Our continued commitment

IBM has a proud history of engagement with the communities where we operate, as well as societies globally. We share the priorities for social advancement that the 17 United Nations Sustainable Development Goals establish, and endorse the strategy of partnership that the SDGs call for, because collaboration has long been IBM's approach to engaging societal challenges.

IBM's efforts toward these goals can be seen in our environmental programs, supply chain practices, corporate social responsibility work, and our global focus on diversity and inclusion. As a business that applies technology to a wide range of challenges, IBM also uses innovation and expertise to engage the SDG effort across all 17 goals. For example, IBM is using technologies such as cloud, artificial intelligence and blockchain to devise innovative solutions in healthcare, education, agriculture, energy conservation and more. We work with social organizations, governments and commercial clients to develop many of these solutions — some of which you will find in this report, shown with the SDG that each initiative can help achieve. You can read about other projects and social impact initiatives at ibm.org.

IBM Research® is also spearheading the design of new materials to tackle pressing societal challenges, from storing energy more efficiently, to removing carbon dioxide from the atmosphere and growing food more sustainably. Material design and discovery is traditionally long and complex, typically taking 10 years and up to \$100 million to discover one new material with given properties and functionalities. IBM Research expects that time and cost to drop by 90% through the use of technologies such as AI and quantum computing. Within 5 years, we expect to make significant progress thanks to a new era of accelerated discovery. Read more at research.ibm.com/5-in-5.

Today, people rightly expect companies to participate in shared efforts to make our world more sustainable. IBM responds as we have for decades, as a company whose success relies on the trust we've built not only with clients, but also with societies of people whose lives can benefit from our work and innovation.



No Poverty

An IBM Research team worked with CityLink Center, a nonprofit organization in Cincinnati, Ohio, to model paths out of poverty by analyzing how different social services help lead to outcomes such as employment, wellness, education and housing. Learn more at ibm.com.

Plastic Bank is using a solution built on the IBM Blockchain Platform to help more than 1 billion people in areas of high poverty and high plastic pollution transform their lives by collecting and trading plastic waste for the items they need most. Learn more at ibm.com.



Zero Hunger

IBM Food Trust™ is a blockchain-enabled network that connects participants across the food supply chain through a permissioned, permanent and shared record of food system data. The network is designed to help enable a safer, smarter, and more sustainable food ecosystem. Learn more at ibm.com.

IBM is the founding partner of Call for Code, a worldwide competition that invites developers to build solutions for social challenges. The 2020 winner is an app to connect small farmers and provide them with personalized farming information by location, crop type and the stage of growth. Learn more at ibm.com.

IBM and Yara International are collaborating to build the world's leading digital farming platform, using farm and field data to improve the efficiency, transparency and sustainability of global food production. Learn more at ibm.com.



Good Health and Well-Being

IBM's COVID-19 response includes a consortium, created with The White House and U.S. Department of Energy, to give researchers free access to over 600 petaflops of computing capacity. IBM Research also provided a free, cloud-based AI service that lets scientists and academics query thousands of peer-reviewed papers and licensed databases for COVID-19 knowledge. See more on IBM's pandemic response at ibm.com.

Allied Against Cancer has deployed digital tools designed to advance treatment guidelines and the safety of chemotherapy in Sub-Saharan Africa. IBM is a founding partner, along with the American Cancer Society, National Comprehensive Cancer Network, Clinton Health Access Initiative, and African Cancer Coalition. Learn more at alliedagainstcancer.org.

Building skills for careers in tech



IBM partners with experts in the public and private sectors to help people worldwide build the skills required for today's "new collar" jobs. Our education programs are designed to have broad, lasting impact and improve access, inclusion and quality.

Quality Education

P-TECH® is a public education model focused on STEM skills and integrating secondary school, college, and workplace experiences. Partnerships between educators and industry leaders provide students the support needed for skill and degree attainment. Students are paired with mentors, participate in site visits and paid internships and are guaranteed job interviews with their industry partner. They graduate with a secondary school diploma plus a no-cost, 2-year college degree that's aligned with industry skills needs. The P-TECH model is active at more than 260 schools in 27 countries, with 600 business partners and 150,000 students in its pipeline. Learn more at ptech.org.

Open P-TECH provides free online learning on the industry-leading tech and professional skills required to be successful in careers driven by the new economy. Specifically designed for teachers and students in high school and post-secondary education, Open P-TECH offers students access to digital badges to inform and differentiate themselves in the market, and teachers have access to special content and features to help them integrate this content within their classrooms. Learn more at ptech.org.

SkillsBuild® supports adults looking to enter or re-enter the workforce – such as veterans, immigrants or refugees, or adults who want to reinvent their careers. It combines free online

learning with community college and NGO partnerships to provide supported access to IBM offerings, education, and projects to help professionals earn industry-recognized digital badges and build the skills they need for new-collar roles. SkillsBuild has 7,000 online courses available in France, Ireland, Spain, Turkey, the U.K. and the U.S. Learn more at skillsbuild.org.

Teacher Advisor With Watson® uses AI to help teachers meet the individual learning needs of each student. The free, web-based resource is focused on math education and helps teachers efficiently find quality content from its library of 10,000 lesson plans, student activities, and classroom strategies — all vetted by former educators and math coaches from UnboundEd. Our collaboration with the National Center for Learning Disabilities also enables Teacher Advisor to provide teachers with targeted strategies to support students with learning and attention issues, while a partnership with NWEA is giving teachers targeted content recommendations based on student assessments. Learn more at teacheradvisor.org.

IBM offers apprenticeships for people seeking to work in professional tech roles for the first time, as well as "returnships" for those who have left our industry's workforce. Participants train along learning paths that lead to the new-collar skills that employers value.



Gender Equality

IBM is working to increase the representation of women in our industry, through a range of initiatives worldwide. Among them is STEM for Girls India, a 3-year program to help high school girls throughout India by promoting digital literacy, coding/tech skills, career development and girls' empowerment. Its goal is to advance the STEM skills and career prospects of 200,000 girls and 100,000 boys. Learn more at ibm.org.

Our Be Equal initiative champions diversity and inclusion for everyone. Initially focused on gender equality, its goal is to drive systemic, sustainable improvement for people in every community, and to be a proxy for change more widely. Learn more at ibm.com/impact/be-equal.



Clean Water and Sanitation

Preserving water resources and protecting watersheds are important in IBM's operations. Our goal is to achieve year-to-year reductions in water withdrawals at larger IBM locations and data centers in water-stressed regions; withdrawals decreased by 2% in 2019 versus 2018. Learn more at ibm.com.

Forecast: Change is an initiative from The Weather Company® (an IBM Business) and two nonprofit partners to help combat freshwater scarcity in communities worldwide. Learn more at forecastchange.weather.com.

The Upper Tana-Nairobi Water Fund is an initiative of The Nature Conservancy to help thousands of farmers use methods that save water and reduce pollution in Kenya's Upper Tana watershed. In 2020, an IBM Service Corps team developed a data management prototype to manage and analyze the large amounts of data collected in this ongoing effort that seeks to maintain water availability and quality for 9 million people. Learn more at ibm.com.



Affordable and Clean Energy

IBM Research revealed a new battery chemistry in 2019 that doesn't require heavy metals such as nickel, cobalt, lead and cadmium, potentially offering more sustainable and lower-cost sourcing. Initial tests proved that the battery can be optimized to surpass lithium-ion batteries in a number of categories. Learn more at ibm.com.

The escalating number of resources connected to electric grids requires a fundamental rethink of the system's operation, and of utilities' roles

within it. IBM's new, global initiative supports decarbonization of large portions of the economy through clean electrification with a three-part strategy: improving network resilience and operational excellence, accelerating the integration of renewables, and enabling electrification of industries. [The Green Light](#) report from IBM highlights how organizations such as [TenneT](#) and the City of Copenhagen are enabling a new role of "Energy Integrator." Learn more at ibm.com.



Decent Work and Economic Growth

IBM Service Corps Reignite is designed to help job-seekers navigate new careers in technology, and help business owners gain skills to relaunch their businesses in challenging economic times. Launched in 2020, the program offers free online courses worldwide through SkillsBuild, as well as personalized and localized services in collaboration with a range of nonprofit and industry partners in multiple U.S. cities. Learn more at ibm.org.

Farmer Connect is a platform powered by IBM Blockchain and designed to help increase traceability, efficiency and fairness in the coffee supply chain. In 2020, IBM and Farmer Connect introduced the "Thank My Farmer" app, which connects consumers to farmers, traders, roasters and brands with an interactive map of their coffee's journey from the farm. The app also presents sustainability projects in coffee farming communities and an opportunity for consumers to support them. Learn more at ibm.com.



Industry, Innovation and Infrastructure

IBM received a record 9,262 U.S. patents in 2019, marking our 27th consecutive year of patent leadership. As part of our COVID-19 response, IBM granted free access to its portfolio of 80,000-plus patents to those developing technologies to help diagnose, prevent, contain or treat coronaviruses. Learn more at ibm.com.

IBM Research has developed an AI-enabled solution to reduce the energy consumption associated with operating heating, ventilation and air-conditioning systems in commercial buildings. Initial results demonstrate that cooling energy consumption can be reduced by up to 15% through this solution. Learn more at ibm.com.

Working to expand diversity and inclusion



IBM's culture of inclusion spans a century and continues today. For example, IBM hired women in professional roles in 1935, with a commitment to equal pay. In 1953, IBM established history's first corporate equal opportunity policy to hire qualified people "regardless of race, color or creed," and has expanded it to include sexual orientation (1984), gender identity and expression (2002), and genetics (2005).

Reduced Inequalities

IBM maintains and continually develops programs and policies that foster a company culture of inclusion in which all IBMers can thrive. IBM's history has shown that a diverse, inclusive workplace leads to greater innovation, agility, performance and engagement. This not only enables our business growth, but also creates opportunities that can contribute to reducing inequalities in society.

We recognize that women and minority groups can achieve higher representation in our industry. Within IBM's workforce, an important milestone is to meet or exceed the diversity of skilled talent in the labor market for every underrepresented group and at every level of our company.

IBM invests in helping people outside our company to develop the skills our industry requires. For example, in September 2020 we [announced](#) the IBM Quantum education and research initiative with 13 Historically Black Colleges and Universities. Together with IBM's \$100 million investment in additional HBCUs through the IBM Skills Academy Academic Initiative, we're collaborating on academic, education, and community outreach programs to help build a more diverse future workforce. In addition, IBM's Open Source Community Grants recognize nonprofit organizations committed to advancing equality — including [Black Girls Code](#), which offers opportunities in tech for over 20,000 Black girls. (See [page 03](#) for information on other education initiatives.)

IBM's success depends on its highly skilled workforce, so we continuously seek new sources of talent. In 2019, 15% of new U.S. IBMers had nontraditional backgrounds, hired based on skills rather than academic degrees alone. IBM offers

internships and work placement programs for autistic people, and currently 1,400 IBMers are members of the neurodiverse community. We also actively train and recruit military veterans, hiring 700 in 2019.

To promote greater representation throughout our workforce, IBM provides development and career acceleration programs including ones focused on women and underrepresented minority groups. These include:

- Pathways to Technical Leadership helps mid-level technical women advance.
- Elevate and Building Relationships and Influence programs help prepare high-potential women for leadership roles.
- Hispanics@IBM Influence helps Hispanic IBMers develop their external eminence.
- Mentoring and sponsorship programs pair Black, Hispanic, and Native American IBMers with career advocates and resources to advance their career potential.

IBM also advocates for legislation and public policies that promote our values of equality and inclusion, across a range of issues and worldwide. Most recently, IBM sunset general-purpose facial recognition software and IBM CEO Arvind Krishna [wrote to the U.S. Congress](#), outlining detailed policy proposals to advance racial equality. At IBM, we know that expanding opportunities to all leads not only to a stronger IBM, but also to greater fairness and equality in the communities where we all live and work.



Sustainable Cities and Communities

IBM Service Corps deploys teams of IBMers worldwide to partner with social enterprises, nonprofits and governments on issues in education, health, sustainability and economic development. Since 2008, the program has sent 4,000 IBMers to help communities in nearly 40 countries, with 1,500 pro bono projects valued commercially at over \$100 million. Learn more at ibm.org.

IBM's Global High-Resolution Atmospheric Forecasting System, from The Weather Company, now offers the whole world weather forecasts that update every hour at a 3-kilometer resolution, providing access to information that people, businesses and governments virtually anywhere can use to make better decisions. Learn more at ibm.com.



Responsible Consumption and Production

IBM's Social and Environmental Management System requires our first-tier suppliers to create their own systems for managing social and environmental responsibilities. This includes establishing voluntary, quantifiable environmental goals for waste, energy, and greenhouse gas emissions, and publicly disclosing these goals and their results. Learn more at ibm.com.

IBM established its first voluntary environmental goal to recycle nonhazardous waste streams in 1988, and in 2019 we sent nearly 89% (by weight) for recycling. We also focus on the collection and recycling of end-of-life products and

product waste, and have collected and processed nearly 2.4 billion pounds since 1995. In 2019, more than 95% of this material (by weight) was reused, resold or recycled. Learn more in the [IBM and the Environment Report](#).

IBM researchers have discovered a catalytic chemical process that digests certain plastics (called polyesters) into a substance that can be fed directly back into plastic manufacturing machines to make new products. Advancements like this can make plastics recycling more efficient and versatile. Learn more at ibm.com.

Conserving energy to address climate



IBM's formal commitment to environmental leadership in all of its business activities spans nearly five decades. IBM's corporate policy on environmental affairs, first issued in 1971, was followed by goals to reduce our use of energy (1975) and our carbon dioxide emissions (2000), and IBM began purchasing renewable electricity in 2001.

Climate Action

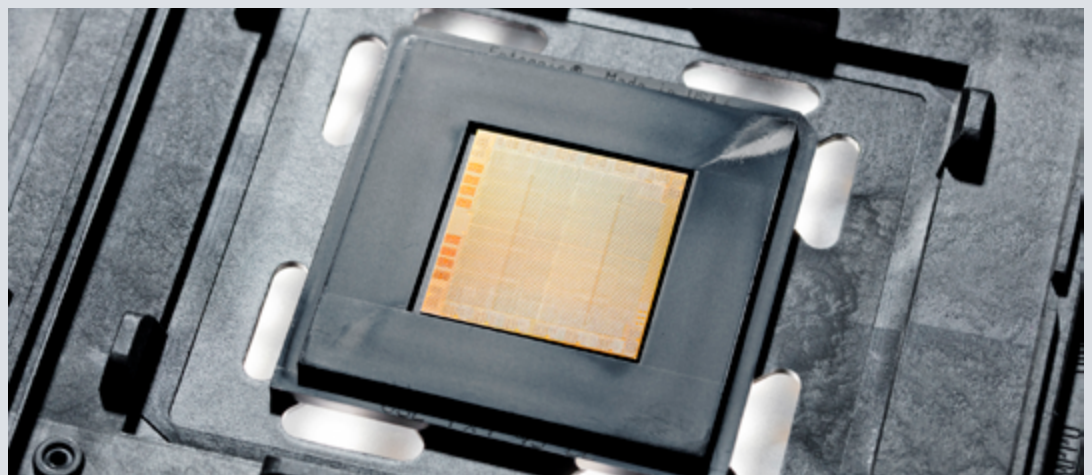
IBM has stated for more than a decade that climate change is a serious concern that warrants meaningful action on a global basis, and this remains the case today. That is why IBM supports a responsible plan to tax carbon emissions, supports the Paris Agreement, and is continually making our products and operations more efficient to reduce our consumption of energy and its related emissions.

IBM's goal is to conserve energy each year equivalent to 3% of our annual consumption through conservation projects. In 2019, more than 1,600 such projects globally delivered annual savings equal to 3.2% of our total energy use, surpassing our goal. From 1990 through 2019, IBM has conserved 7.7 million megawatt-hours of electricity, avoiding 4.5 million metric tons of carbon dioxide emissions (equivalent to the annual CO₂ emissions of 520,000 average U.S. homes) and saving \$646 million.

IBM has also been increasing its procurement of electricity from renewable sources. Our goal is to procure 55% of IBM's electricity worldwide from renewable sources by 2025. In 2019, IBM increased its renewable electricity consumption by 18%, bringing our total renewable consumption to 47%. IBM has also installed solar arrays at our data centers in Boulder, Colorado, Bastogne, Belgium, and Vaux-sur-Sûre, Belgium, in partnership with local energy suppliers.

Our goal is to reduce operational CO₂ emissions associated with IBM's energy consumption 40% by 2025 against base year 2005. This is IBM's fourth-generation goal, after achieving the previous three. In 2019, IBM reduced CO₂ emissions by 39.7% against the baseline, nearly meeting our target.

You can find more detail on all of IBM's environmental programs and performance in the [IBM and the Environment Report](#), which we have published annually for 30 years.



IBM's next-generation POWER10 processor will improve the energy efficiency of our POWER10-based products and translate into greater energy savings for our clients.



Life Below Water

The Jefferson Project at Lake George has built the world's most advanced environmental monitoring system of the physical, chemical, and biological parameters in the lake and surrounding watershed. Launched in 2013, the collaboration — among IBM, Rensselaer Polytechnic Institute and The FUND for Lake George — seeks to become the global model for sustained ecosystem understanding and protection. Learn more at jeffersonproject.rpi.edu.

A proof-of-concept project among IBM, the Global Partnership on Marine Litter, the U.N. Environment Programme and its stakeholders, including the Wilson Center, demonstrated how digital technologies can help monitor

marine pollution and fundamentally change how data, analyses and insights are accessed to enable more informed decision making. Learn more at ibm.com.

IBM is supporting the marine research organization Promare by providing advanced technologies for the Mayflower Autonomous Ship. The autonomous Mayflower will use machine learning and energy from the sun to independently traverse the ocean, gathering and transmitting vital data to expand our understanding of issues such as global warming, ocean plastic pollution and marine mammal conservation. Learn more at ibm.com.



Life On Land

IBM has a voluntary goal for the responsible sourcing of paper and paper/wood-based packaging and in 2019, more than 99% of IBM's direct procurements worldwide were warranted by suppliers as derived from sustainably managed forests. Learn more in our [IBM and the Environment Report](#).

IBM is a longtime member of the Wildlife Habitat Council and five IBM sites have achieved the council's Conservation Certification, recognizing their wildlife habitat management and conservation education programs.



The Mayflower Autonomous Ship will gather data to study ocean health.



Peace, Justice and Strong Institutions

IBM and Stop The Traffik have created the first-ever global data hub to facilitate the sharing of information about human trafficking across all industries and sectors. Powered by IBM AI and cloud technology, the Traffik Analysis Hub enables financial service companies, NGOs, nonprofits and law enforcement agencies to collaborate more systematically by enabling them to validate and map patterns, trends, and smuggling routes. Learn more at ibm.org.

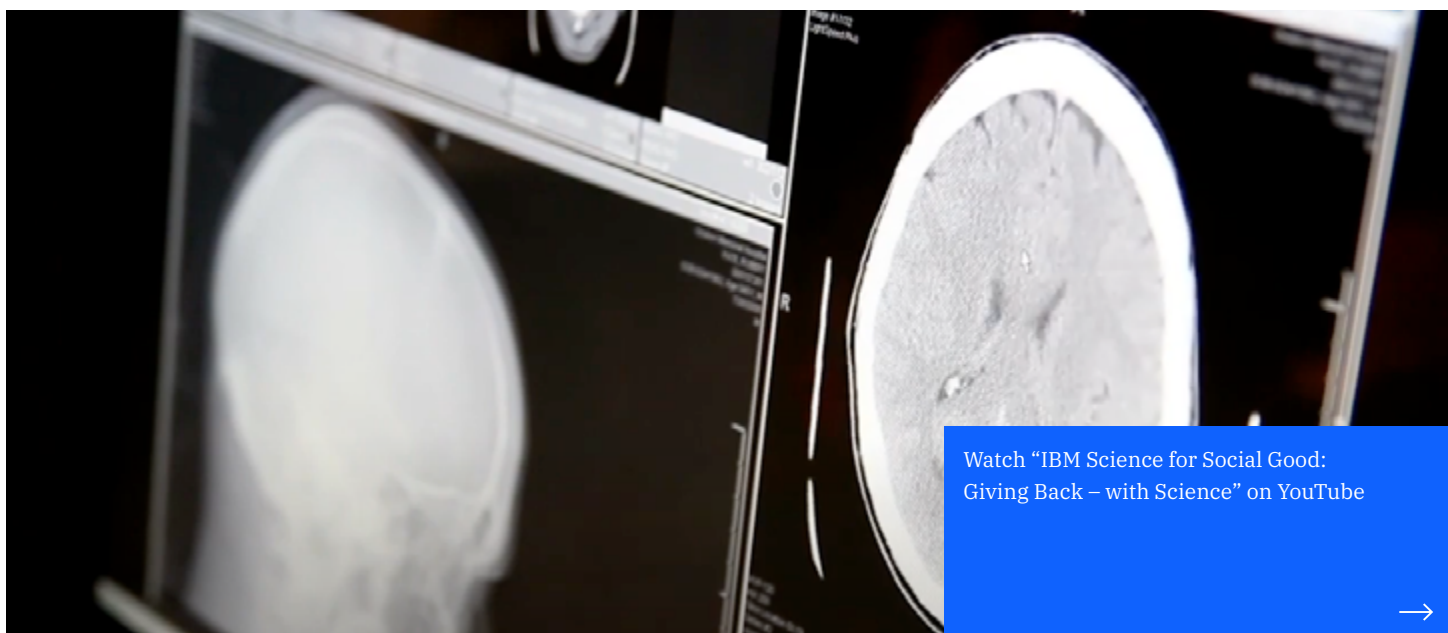
IBM firmly opposes uses of any technology for mass surveillance, racial profiling, violations of basic human rights and freedoms, or any purpose inconsistent with IBM's values and [Principles for Trust and Transparency](#). IBM has announced the sunset of our general-purpose facial recognition software, and we believe it's time for a national dialogue on whether and how this technology should be used by domestic law enforcement.



Partnerships for the Goals

IBM Science for Social Good partners IBM Research scientists and engineers with academic fellows and experts from NGOs, public-sector agencies and social enterprises to tackle emerging societal challenges. Launched in 2016, the program is built on the premise that applied science and technology can accelerate the rate and pace of solutions

through the scientific method. One current project, with the United Nations Development Programme, is using AI to automate the process that governments use to assess their development plans and strategies' alignment with the SDGs' 169 targets, to determine a country's readiness for implementation of the global development agenda. Learn more at ibm.com.



Watch "IBM Science for Social Good: Giving Back – with Science" on YouTube





© Copyright IBM Corporation 2020

IBM Corporation
New Orchard Road
Armonk, NY 10504

Produced in the United States of America

October 2020

All Rights Reserved

IBM, the IBM logo, ibm.com, IBM Food Trust, IBM Research, IBM Services, P-TECH, SkillsBuild, and With Watson are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. The Weather Company is a registered trademark of TWC Product and Technology, LLC, an IBM Company. A current list of IBM trademarks is available online at ibm.com/legal/copytrade.shtml. Other company, product and service names may be trademarks or service marks of others.