Microsoft and the UN Sustainable Development Goals

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Microsoft

Introduction and Context

Microsoft's mission — to empower every person and every organization on the planet to achieve more — aligns strongly with the United Nation's global agenda for sustainable development from 2015 through 2030. The UN General Assembly articulated that agenda in a set of 17 Sustainable Development Goals (SDGs) seeking to end poverty, protect the planet, and ensure prosperity for all.

Each of the United Nation's goals present challenges bigger than any one organization, or even one sector of society can accomplish alone. At Microsoft, we seek to apply the unique assets that a technology company of our scope and scale has towards the global, multi-sector effort needed to achieve the SDGs. Doing so is both our responsibility and an opportunity to advance societal needs and technology at the same time collaboratively.

Microsoft's commitment to corporate social responsibility requires us to be thoughtful about the impact of our business practices and policies. We believe the way we operate helps contribute to many of the UN SDGs, ranging from our employment practices to our commitments to source renewable energy to the work we do to infuse responsibility across our global supply chain.

This white paper focuses on what we feel are our unique contributions:

- the application of Microsoft's products and services to the SDGs, and
- our philanthropic and other investments targeted towards fostering the sustainable development of communities around the world.

Similarly, while Microsoft's efforts are helping advance progress towards meeting the broad range of issues covered by all 17 SDGs, we have prioritized 8 SDGs to ensure we leverage our assets for the greatest impact. The SDGs we are focusing on due to their alignment with Microsoft's business and philanthropic strategies are:

This white paper starts with our high-level vision for how the digital transformation of the global economy can and must address the key challenges underlying the UN's Sustainable Development Agenda and Sustainable Development Goals. The core of the paper provides information, case studies, and links to relevant Microsoft programs and resources related to how Microsoft is prepared to help address each of the eight SDGs that we've prioritized. We hope these examples and resource links inform and contribute

to the important work being done to meet the SDGs by the UN and governments at the international, national, regional, and local levels; non-governmental organizations; businesses; academics; and many others.

You can also find out recent information and explore case studies of how Microsoft's is helping to advance the UN SDGs at this interative website.

Digital Transformation and Sustainable Development

The world is in the midst of what some have called the fourth industrial revolution, as technology is altering our current systems of production, distribution, and consumption at an unprecedented pace. Artificial intelligence, machine learning, robotics, biotech advances and the cloud are changing our lives and shaping the lives of future generations.

With these changes come enormous opportunity and the potential to bring benefits to every facet of life. Advances in healthcare, education, communication and productivity have increased life expectancy around the globe and helped lift hundreds of millions of people out of poverty and into the middle class.

However, for a substantial part of the world, the benefits of these advanced technologies are elusive and remain out of reach. While the Internet, mobile devices, and other emerging technologies are spreading rapidly through the developing world, the anticipated digital dividends of higher growth, more jobs, and better public services have fallen short of expectations. And digital transformation raises challenges and uncertainties as well as benefits. New technologies raise new concerns about online safety and even physical safety and the long-term future of work and prospects for their children. There are legitimate concerns about whether and how technology can be used to benefit everyone, not just the fortunate few.

With our mission to empower every person and every organization on the planet to achieve more, Microsoft is working to provide technologies and promote approaches that have lasting positive impacts and remove barriers to adoption so everyone can experience the transformational benefits of the digital economy. We see technology as a powerful enabler – an agent of change to help solve many of the challenges facing the world today as governments seek sustainable growth and development models and focus on the future of our planet and its people. We also realize that technology is not a silver bullet; leaders across the public sector must also pair technology-enabled programs and initiatives with policies that benefit and enable all people and the private sector and nongovernmental organizations all have critical roles to play.

What's needed is a broadly shared and balanced set of sustainable development strategies, public policies, programs, technology solutions that will promote positive change and ensure that the benefits of cloud computing and emerging technologies.

To help catalyze this development, we've committed to working with policymakers, our partners, NGOs, and others to create a cloud for global good: one that trusted, responsible, and inclusive. To ensure our cloud offerings earn the trust of our users, in the past year we released enhanced privacy principles and actively fought for the rights of our users against unreasonable government surveillance. We work to make our cloud responsible with protections for online safety, work to balance privacy and free expression with public security, and a commitment to operating a carbon neutral cloud that is increasingly directly powered with renewable energy. And we work to make our cloud inclusive with investments to provide affordable internet access, deliver digital skills training, and make the benefits of computer science education accessible to all youth. Through Microsoft Philanthropies, we are also donating $1 billion in public cloud computing services for nonprofits around the world.

To ground this vision with some specific examples, here are a few examples of how nonprofit groups, innovative companies, governments, and individuals are using Microsoft technology to improve lives in their communities.

- Microsoft is working to help a leading international development organization Pact use data visualization to advance its projects around on the globe on topics from forest protection to fighting malnutrition. (Microsoft also has a long-term partnership to support Pact's work in the Democratic Republic of Congo to reduce child labor in mining.)
- The Lagos Solar project in Nigeria uses batteries that are charged by solar panels, along with intelligent inverters. The inverters connect to the Microsoft Azure Internet of Things technology which not only converts the battery power into usable electricity but also allows for remote monitoring and maintenance. This connection ensures clinics and schools across the state of Lagos have access to electricity when they need
- Partners in Health is using Microsoft Azure and Office 365 to communicate and share information with specialists as they provide life-saving health care for marginalized populations in remote parts of the world.
- Microsoft Cloud services are helping power an effort to reach people across Myanmar who lack access to banking, giving them opportunities for more financial stability and access to microcredit and other financial services.

Beyond the application of our products and services, some of Microsoft's programs that foster sustainable development include

- Microsoft's 4Afrika Initiative focuses on helping provide three critical areas of development for the continent – World-class skills, Access and Innovation. The 4Afrika initiative provides a set of programs to empower African youth, entrepreneurs, developers and business and civic leaders. The MySkills4Afrika program invites Microsoft employees from all over the world to contribute their time, talent and deep expertise to help build a prosperous, promising future for Africa by working with new businesses, students, NGOS, Microsoft partners and governments across the continent.
- The Microsoft Affordable Access Initiative aims to empower the billions of people worldwide who do not have affordable access to the Internet. We believe we can spark global change by fueling innovation at the local level—through partnerships, grants, investments, education, and advocacy—to create technology solutions, business models, and policies that help close the digital divide. We share information on our specific grantees and videos of affordable access programs and partnerships.
- Through CityNext Microsoft and its partners empower cities and citizens to unlock their potential by delivering innovative digital services that can help them lead safer and healthier lives, enriched by high-quality education. CityNext helps cities engage their citizens, empower city employees, optimize city operations and infrastructure, and transform and accelerate innovation and opportunity.
- Through Microsoft Philanthropies, we're working to ensure that everyone has access to the economic opportunities it provides.

The rest of this paper provides examples which are specific to the eight SDGs Microsoft has prioritized. As we reviewed these cases, we are proud of the contributions Microsoft is making on these issues but humbled by the scale of the challenges we all face. We offer our examples and approach with the hope of inspiring others across all sectors of society to join in helping the world achieve the SDGs and providing information and resources for others to use.

Microsoft provides products and services, training, and tools and resources to help governments, healthcare providers, nongovernmental organizations, and individuals understand how to apply technologies like advanced data analytics and cloud solutions to transform healthcare. Effective use of digital technology can equip health professionals to more efficiently take better care of more people, and at the same time, empower people to take better care of themselves.

Among the applications of Microsoft cloud solutions in healthcare that are saving lives and improving efficiency of healthcare delivery:

- 99DOTs is a tuberculosis medication adherence initiative that leverages the power of cloud computing and mobile technology to fight tuberculosis across India.
- Botswana Innovation Hub uses TV White Spaces – the unused frequencies in the TV spectrum – and Microsoft Azure to bring affordable internet connectivity and telemedicine services to regions of Botswana currently without adequate primary care or access to broadband.
- Children's Mercy Hospital app uses Azure and other Microsoft services to provide lifesaving interventions with babies affected with Hypoplastic Left Heart Syndrome.
- Dartmouth-Hitchcock Health System uses Microsoft Azure Machine Learning, big data, and Cortana Analytics Suite to allow nurses and specialists can track changes in patients' health status in real time.
- Elizabeth Glaser Pediatric AIDS Foundation uses powerful business intelligence (BI) and analytics tools to find new ways to use data in the drive to achieve an AIDS-free generation.
- Harris County Public Health is benefiting from a pilot project with Microsoft Research to use machine learning to automate tracking of mosquitos that can carry the zika virus and better target mosquito control programs.
- nGage Patient Relationship Management Platform uses Microsoft Azure, provides physicians with a population health dashboard to spot trends across all their patients and quickly communicate with and identify specific patients that require intervention.
- Optolexia founded by researchers at Karolinska Institute in Stockholm uses Azure Machine Learning to screen for dyslexia and help schools identify at-risk students significantly earlier than current screening tests.

- Partners in Health uses Microsoft Azure and Office 365 to communicate and share information with specialists as they provide life-saving health care for marginalized populations in remote parts of the world.
- Spain's Institute of Medical and Molecular Genetics (INGEMM) & Dravet Syndrome Foundation: uses Microsoft Azure to sequence millions of DNA strands to help uncover the causes of genetic diseases.
- PATH, a Seattle-based global health nonprofit that innovates better solutions to help the world's most at-risk groups, uses Office 365 to enable staff in remote areas to communicate with other locations, make deadlines and most importantly meet health needs.
- Weka Health Solutions uses Azure-based cloud services to manage its smart refrigerators to improve vaccine management and protect more people against diseases.

For additional information and the latest examples, please see:

Microsoft's External Health Industries Website

Microsoft Health Blog

Microsoft in Health Facebook feed

Microsoft Empowering Health Ebook

Microsoft Philanthropies Technology for Good case studies

Microsoft is working in broad partnership with educators and others to help redefine learning in and out of the classroom with immersive and inclusive learning experiences. Through our products, services, and programs we empower teachers and students to create and share in entirely new ways, to teach and learn through doing and exploring, and to accommodate any learning style.

https://education.microsoft.com/microsoft-innovative-educator-programs/mie
India case study – data to keep kids in school: https://www.microsoft.com/empowering-countries/en-us/quality-education/preventing-school-dropouts-using-ml-and-analytics/

As examples of this:

- Microsoft developed Minecraft Education Edition as a version of the popular game that is specifically designed for education with features that make Minecraft more accessible and effective in a classroom setting.
- Microsoft Innovative Educator Programs support a professional network of educators who come together to learn and share about applying technology in education.
- Skype in the Classroom is an online community Microsoft provides to enables thousands of teachers to provide transformative learning over Skype.
- Tacoma Public Schools: uses PowerBI and Azure Machine Learning for Early Warning Indicator programs to prevent dropouts, raise student enrollment and improve student and teacher performance.
- Calgary Catholic School District: uses Office 365 to enable teacher-driven choice of devices and software for use in classrooms to support individualized learning. Saving U.S.$800,000 a year with Office 365.
- Sri Chaitanya Schools (India): uses Office 365 and Power BI to run a dashboard-based system that facilitates communications between teachers, students, and parents and streamlines delivery of learning management systems content. Also uses Azure to move to 100% digital classroom format for its 12,000 students.
- Universitas Gadjah Mada: the oldest university in Indonesia, uses Office 365, OneDrive, and Skype to support interactive and long distance learning for approximately 60,000 students and 6,000 lecturers and academic staff.

Beyond our products and services, Microsoft is committed to advancing education and skills training as the core focus of our philanthropy. The focus of Microsoft YouthSpark program is to work in partnership with governments, nonprofit organizations, and businesses to concentrate on providing opportunities for

all youth to learn computer science. We are creating opportunities for young people around the world to learn computer science by partnering to build the capacity of teachers, trainers, and nonprofit organizations. In September 2015, Microsoft announced a 3-year commitment of $75 million in community investments to increase access to computer science education for all youth, and in particular for those from backgrounds under-represented backgrounds.

Microsoft YouthSpark provides cash grants to more than 100 nonprofit organizations in more than 70 countries around the world to help them build capacity to offer computer science education courses broadly in their communities, especially to young people who, otherwise, would not have access to a computer education. It also includes programs such as TEALS, which pairs volunteers from across the technology industry with classroom teachers to bring computer science courses into hundreds of high schools across the United States.

Other ways we seek to inspire young people to pursue a career enabled by technology and connect them to greater opportunities, through campaigns, such as the Hour of Code, and events such as DigiGirlz and YouthSpark Live. Also, we will connect youth to the full suite of Microsoft Imagine tools, resources, and programs to give students around the world the opportunity to learn about careers in technology, connect with Microsoft employees, and participate in hands-on computer and technical activities.

For additional information and the latest examples, please see:

Microsoft.com/edu

Microsoft Education Blog

Microsoft Educator Community

Microsoft YouthSpark Programs

Microsoft YouthSpark Stars

Microsoft has longstanding and growing investments in programs encouraging girls and women to pursue learning and careers in fields of science, technology, engineering, and mathematics (STEM). Globally, half of the youth who benefit Microsoft-funded STEM education programs are female. We also invest in efforts to promote diversity and inclusion within our workforce and the broader technology field.

As examples:

- Microsoft's Make What's Next Campaign is designed to educate girls about female inventors and encourage them to pursue careers in science and technology.
- For more than a decade we have championed DigiGirlz, which gives girls aged 14 to 18 the opportunity to learn about careers in technology, connect with Microsoft employees, and participate in hands-on computer science or computer science enabled fields.
- Through Microsoft's YouthSpark initiative, we work to increase access to computer science education and opportunities for youth around the world, including a number of initiatives focused on encouraging girls and women to explore and pursue careers in pursue careers in with a particular focus on encouraging girls' interest in STEM. Among longtime and more recent YouthSpark grantees:
    - The African Center for Women, Information & Communication Technology is providing opportunities for 4,200 youth to learn computer science skills. Underserved youth, with a strong focus on young women, will be introduced to computer science through in-person training, internships, and continued learning opportunities to advance their technical knowledge and skills.
    - The Anupdir Foundation for Social Welfare's DREAM for Women program, which establishes women-run cooperatives in rural India and provides them technology and business skills training.
    - Girls Who Code, a US NGO focused on closing the gender gap in technology with after school coding clubs and a 7-week summer immersion program for girls.
    - The POETA YouthSpark 2016 Project seeks to strengthen employability skills for at-risk youth, age 16 to 29, particularly young women, through the development of employability and technology skills. Through training classes and employability guidance, youth will develop soft skills such as problem-solving, communication, job readiness, and leadership skills, as well as technical and entrepreneurial skills. Also, an introduction to computer science will be provided to participants through tutorials and specialized workshops. The POETA YouthSpark project is available in Argentina, Brazil, Chile, Colombia, Mexico, and Peru.

- UNDP Egypt is establishing the first innovation center for women in Egypt to provide young women the skills needed to become successful developers and entrepreneurs. The innovation center will provide 1,000 young women with computer science & entrepreneurship skills, mentorship matching with industry professionals, as well as resources for further entrepreneurship and employment opportunities. Also, the innovation center will promote & provide access to computer science & coding instruction for 5,000 young girls from underserved communities through coding campaigns in their native language.

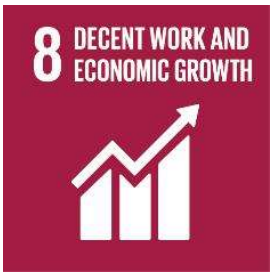
- Microsoft also works to encourage women to develop and then bring their technical skills to work for us:
  - We've recently expanded our Explore Microsoft 12-week summer internship program that strives to attract women and minorities into technical fields and to Microsoft. It is specifically designed to expose first- and second-year college students to software development and encourage students to pursue degrees in this and other related fields of study.
  - We host targeted recruiting events to encourage young women to become interested in STEM and to encourage corporate women to work at Microsoft.
  - We have ongoing partnerships with national organizations, such as the Anita Borg Institute, National Center for Women & Information Technology (NCWIT), and MentorNet.
  - We run the Microsoft Research Women's Fellowship Program to provide women pursuing PhDs with opportunities to engage with Microsoft researchers and connect with each other in a collaborative community.
  - For the past eight years, Microsoft holds a Global Women's Conference at the Microsoft Conference Center at our headquarters and on-demand via regional hubs in multiple locations worldwide. Women (and men) from around the globe came together for personal and professional development, networking, and to learn about opportunities for women at Microsoft.
  - For more than a decade we have run DigiGirlz, a Microsoft program that gives girls aged 14 to 18 the opportunity to learn about careers in technology, connect with Microsoft employees, and participate in hands-on computer and technology workshops. DigiGirlz programs now span 16 countries and have reached 26,000 participants. A key sign that this program is having a positive impact is that some of the early participants have now graduated from college and joined Microsoft as employees.

For additional information and the latest examples, please see:

"The Future Is Yours" Keynote by Toni Townes - Whitley Vice President Public Sector, Microsoft Corporation

Microsoft YouthSpark Hub

STEM Education Resources on Microsoft.com/Diversity



Microsoft works with governments, development agencies, and NGOs around the world to promote economic development around the globe. Beyond Microsoft's contributions to education outlined under SDG4, Microsoft also empowers entrepreneurs and leaders with the tools, skills and opportunities they need to unleash future opportunity.

As examples:

- Microsoft's Affordable Access Initiative seeks to empower the billions of people worldwide who do not have affordable access to the Internet. We believe we can spark global change by fueling innovation at the local level. Through partnerships, grants, investments, education, and advocacy, this project helps to create technology solutions, business models, and policies that help close the digital divide, with projects in 17 countries over the last five years. This isn't just an issue for the developing world: 34 million Americans still lack broadband internet access. Microsoft's Rural Broadband Strategy and Rural Airband Initiative is helping connect all Americans to broadband access.
- Microsoft has the largest global partner ecosystem in the high-tech industry, including small, medium-sized and women- and minority-owned businesses, in which it invests over $5 billion annually.
- Microsoft's 4Afrika Initiative focuses on helping provide three critical areas of development for the continent – World-class skills, Access and Innovation. The 4Afrika initiative provides a set of programs to empower African youth, entrepreneurs, developers and business and civic leaders. The MySkills4Afrika program invites Microsoft employees from all over the world to contribute their time, talent and deep expertise to help build a prosperous, promising future for Africa by working with new businesses, students, NGOS, Microsoft partners and governments across the continent.
- Microsoft BizSpark provides brand-new small startups access to full-featured Microsoft development tools and has supported 100,000+ startups worldwide
- Microsoft Innovation Centers: 120 locations in 33 developed and developing countries, offering practical opportunities for entrepreneurs to collaborate with software developers, IT professionals, and academic researchers.
- Among the ways Microsoft software is fostering economic development:
    - Kenya AGIN is a cloud-based service which uses farmer profile and production data to provide transparency in the agricultural value-chain to help unbanked farmers establish credit- worthiness. The solution is currently serving over 200,000 farmers in Kenya and growing, and is set to deploy to other countries in the region.

- Microsoft helped India's Ministry of Rural Development develop a skills-matching and payments solution helps 128 million laborers find work across all of India. The system, NREGASoft, is a Windows and SQL Server-based application to help 128 million workers find employment. The system matches citizens with works projects nearby, track the activity, and make payments. Officials have also relied on the system to help them manage, staff, and finance a total of 14.6 million projects. The ability to keep upgrading and expanding NREGASoft has proved a critical feature of its success.
- In Egypt, Silatech's Ta3mal program is a regional employment initiative with a variety of integrated hands-on and on-line learning opportunities to support Arab youth through training, job placement and self-employment. An online local employment portal will support workforce development for Arab youth through career planning resources, e-learning, job matching and mentoring. Computer science skills will be incorporated into the portal through online training and content. The portal is supported by integration with GSM text messaging service to reach youth with no web access and is currently available in English, Arabic, and French.

As described under SDG4, Microsoft is committed to advancing education to improve economic opportunity as a core focus of our philanthropy.

For additional information and the latest examples, please see:

Microsoft4Afrika

Microsoft Affordable Access Initiative

Microsoft Philanthropies Website

Microsoft YouthSpark Website

Microsoft works with governments, development agencies, business, and NGOs around the world in ways that advance the UN's targets under SDG9 on the development of industry, innovation, and infrastructure. In addition, Microsoft and its partners provide solutions to transform industry and manufacturing through the power of digital technology from streamlining existing processes and products to delivering new services and transforming business models.

As examples:

- Specific to the target on access to the Internet, the Microsoft Affordable Access Initiative aims to empower the billions of people worldwide who do not have affordable access to the Internet. We believe we can spark global change by fueling innovation at the local level—through partnerships, grants, investments, education, and advocacy—to create technology solutions, business models, and policies that help close the digital divide. We share information on our specific grantees and videos of affordable access programs and partnerships. As noted under the discussion of SDG8, this isn't just an issue for the developing world: 34 million Americans still lack broadband internet access. Microsoft's Rural Broadband Strategy and Rural Airband Initiative is helping connect all Americans to broadband access.
- Microsoft's 4Afrika Initiative focuses on helping provide three critical areas of development for the continent – World-class skills, Access and Innovation. The 4Afrika initiative provides a set of programs to empower African youth, entrepreneurs, developers and business and civic leaders. The MySkills4Afrika program invites Microsoft employees from all over the world to contribute their time, talent and deep expertise to help build a prosperous, promising future for Africa by working with new businesses, students, NGOS, Microsoft partners and governments across the continent.
- Through CityNext Microsoft and its partners empower cities and citizens to unlock their potential by delivering innovative digital services that can help them lead safer and healthier lives, enriched by high-quality education. CityNext helps cities engage their citizens, empower city employees, optimize city operations and infrastructure, and transform and accelerate innovation and opportunity. As an example of CityNext's application to infrastructure projects, New Zealand IT service provider LeapThought developed Fulcrum, a smart construction management solution that is helping the city of Auckland better manage transportation projects. Based on SharePoint and other Microsoft technologies, the solution makes it easy for Auckland Transport to track and manage all phases of transportation projects including property acquisitions, contract

management, and communication with interested parties. The agency estimates it will save $3 million in the first ten years, and it expects the savings to grow as Fulcrum is rolled out for use on more than 200 capital projects.

For additional information and the latest examples, please see:

Microsoft external industry pages on Discrete Manufacturing and Process Manufacturing and Resources

Microsoft CityNext website

Through CityNext Microsoft and its partners empower cities and citizens to unlock their potential by delivering innovative digital services. CityNext helps cities engage their citizens, empower city employees, optimize city operations and infrastructure, and transform and accelerate innovation and opportunity. Microsoft CityNext also addresses environmental sustainability with applications that address energy, water, building energy management, transportation, resource efficiency, and ecosystem services.

As examples:

- Microsoft partnered with the Global Initiative for Inclusive Information and Communication Technologies (G3ict) and World ENABLED to develop the Smart Cities for All Toolkit and Smart Cities for All Initiative, with the goal "to eliminate the digital divide for persons with disabilities and older persons in smart cities around the world."
- The Philadelphia Water Department (PWD) worked with Microsoft partner Opti to install smart water monitoring and control technology running on the Microsoft Azure cloud platform that manages stormwater runoff and reduces water pollution.
- Singapore is implementing a green building program across 80% of its building by 2030 with a system provided by S3 Innovate uses building sensors, Microsoft Azure IoT Suite, and advanced analytics. A Microsoft BizSpark Plus partner, S3 Innovate developed a solution that continuously monitors building cooling systems, which makes it possible for owners to perform preventive maintenance and save on energy costs.
- The Helsinki municipal bus system Helsingin Bussiliikenne Oy worked with Microsoft and the Clinton Global Initiative expand the company's data warehouse solution to collect and analyze data from bus sensors to reduce fuel consumption, improve driver performance, and make bus rides smoother and safer.
- Microsoft CityNext and Accenture Transportation partnered to develop an integrated fare management system that makes it easy for riders to move seamlessly through multiple transit authorities, manage one account online or via their mobile device, and have confidence that applicable fares and discounts will be applied. For example, PRESTO is a multi-vendor, multi-operator, regional automated fare collection system, built on open architecture and commercial off-the-shelf software, enabling customers of the participating Greater Toronto and Hamilton Area transit providers and Ottawa to pay for and use transit in multiple modes (e.g., trains, subways, buses).

- LA Department of Sanitation uses cloud-based technologies to include mobility, mapping, tracking, and dashboarding capabilities—collectively called SANSTAR—to streamline service request processing and monitor field crews' progress. Now, citizens get quicker responses, and LA improves the quality of life through more efficient waste removal operations.

For additional information and the latest examples, please see:

Microsoft CityNext Website

Microsoft's contributions to addressing climate change include our practices, what we enable our customers to do, and collaborative partnerships to apply the power of information technology to the challenge.

As examples:

- Microsoft provides a unique model to follow in our industry leading carbon neutrality strategy and carbon fee. Since July 1, 2012, Microsoft has achieved carbon neutrality across our global operations, spanning more than 100 countries, for our data centers, software development labs, offices, business air travel, and Microsoft-owned manufacturing operations. Our carbon neutral strategy hinges on company-wide accountability achieved through an internal carbon fee cascaded globally to our business groups. This chargeback model puts a price on carbon and makes the company's business divisions responsible for the cost of reducing and compensating for the carbon emissions associated with their electricity use and air travel. The carbon fee funds energy efficiency investments. The funds enable purchasing renewable energy equal to 100 percent of Microsoft's energy consumption (with the green power purchases in the same markets as our operations wherever possible) and externally certified carbon offset projects. In April 2015 Microsoft released a whitepaper describing the progress made with our carbon fee since its inception, in the hope to inspire other organizations to take similar action. Since the establishment of the carbon fee, we have purchased more than 14 million megawatt-hours (MWh) of green power; reduced our emissions by 9 million metric tons of carbon dioxide equivalent (mtCO2e); and had an impact on more than 7 million people in emerging nations through carbon offset community projects.
- As a carbon neutral cloud services provider, Microsoft offers organizations a carbon-efficient and carbon neutral alternative to running their private data centers. Moving to Microsoft cloud services for Microsoft Exchange, Microsoft SharePoint, and Microsoft Dynamics CRM capabilities can help businesses reduce energy use 30 to 90 percent per user versus running on-premises.
- Microsoft CityNext Sustainable Cities helps improve cities' sustainability with solutions that span energy, water, building energy management, transportation, resource efficiency, and ecosystem services. As examples of CityNext projects that cut carbon emissions:
    - The City of Seattle's Smart Building program to reduce downtown energy usage by 25% with cloud-based solutions provided by Microsoft and its partners.
    - Carnegie Mellon University (CMU) uses Microsoft Azure, Cortana Intelligence, Power BI, and the PI System™ from Microsoft Global ISV partner OSIsoft to reduce campus building maintenance and energy costs. Cortana Intelligence enables better fault detection, diagnosis, and more efficient operations. With these capabilities, CMU personnel gain

advanced analytics for improved operational insights and decisions, and CMU advances a way to cut energy use by 30 percent.
    - Video of the Growing Underground project uses cloud services to grow food efficiently and with fewer distribution impacts in an old underground bomb shelter below the City of London.
- Microsoft has also supported industry and multi-stakeholder initiatives to address climate policy. Among these:
    - Microsoft is a strong proponent of the Paris Agreement on climate change and strongly urged the U.S. government to remain part of the agreement.
    - We are a signatory to the Climate Declaration, a nonpartisan statement from the business community developed by Ceres and its Business for Innovative Climate & Energy Policy (BICEP) coalition, which notes that "tackling climate change is one of America's greatest economic opportunities of the 21st century."
    - We serve on the board of the Global e-Sustainability Initiative (GeSI), a collaborative effort between leading IT companies and the United Nations Environment Programme and the International Telecommunication Union. Microsoft has played a leadership role in the development of GeSI series of reports on how the ICT can address climate change (Smart 2020, Smarter 2020, and Smarter 2030). The latest Smarter 2030 GeSI report identifies ways that ICT can enable a 20 percent reduction of global CO2 emissions by 2030. The report also identifies how ICT can integrate renewables into the grid, boost agricultural crop yields by 30 percent, save over 300 trillion liters of water and save 25 billion barrels of oil a year.

For additional information and the latest examples, please see:

Microsoft Environment Website

Microsoft CityNext Website

Microsoft is joining organizations in the public and private sector to raise awareness of social issues like human trafficking and the plight of refugees, and how organizations in the public and private sector can help. Through a variety of international partnerships, programs, and initiatives, Microsoft endeavors to work toward a world where all people live with opportunity, freedom, dignity, and equality. Microsoft's sees opportunities to advance peace, justice, and strong institutions include our practices, what we enable our customers to do, and collaborative partnerships.

As examples:

- Microsoft has strong policies and systems in place to prevent corruption and bribery by our employees, our suppliers, and our third party agents.
- Microsoft's Anti-Corruption Program Management Office helped lead the US Technical Advisory Group to create and represent the US position in the development of the proposed International Standards Organization (ISO) Anti-Bribery Standard. Microsoft is also engaged in promoting anti-corruption initiatives among intergovernmental organizations and multinational companies through Microsoft's membership in the World Economic Forum Partnership Against Corruption Initiative (PACI) as an industry partner.
- In 2017 Microsoft and The Office of the UN High Commissioner for Human Rights on Tuesday announced a five-year partnership. Microsoft is providing a $5 million grant to support the work of the UN Human Rights Office. The partnership focuses on the development and use of advanced technology designed to better predict, analyze and respond to critical human rights situations around the world.
- In FY17, Microsoft Philanthropies provided more than $30 million in technology and cash donations to emergency response organizations and organizations serving refugees and displaced people including Mercy Corps, CARE, the International Rescue Committee, and NetHope. We also provide digital skills resources for nonprofits working with refugees.
- Applications our partners and we provide to customers that advance the cause of justice and the rule of law include:
    - VIEVU, a body camera company serving law enforcement agencies, partnered with Microsoft to implement a secure data storage solution uses the Microsoft Azure Government Cloud platform that complies with the U.S. Federal Bureau of Investigation's Criminal Justice Information Services (CJIS). Law enforcement agencies have seen reductions in use-of-force incidents by as much as 70% with the use of body cameras. The Microsoft cloud storage solution increases the practicability of greater quality of

policing and lowers the cost of maintaining a body camera system for law enforcement agencies by reducing the onsite data storage needs, and the IT support required to maintain the data.

- The Ivorian Commission Electorale Independante (CEI) (Independent Electoral Commission) deployed Microsoft Office 365 to achieve greater security and more mobility during elections. On top of this, they are now able to keep track of events in real time and comment on election developments instantly, have considerably more document storage space, and can communicate much more easily with colleagues around the country with greater security. After implementation of Office 365, the CEI reported improved security, greater flexibility in day-to-day operations and increased mobility.
- Microsoft provided the Supreme Court of Buenos Aires with a cloud-based media portal that provides faster, digitized service to citizens. The Supreme Court of Buenos Aires serves the most populated province in Argentina. The court wanted to speed up legal proceedings for its citizens and streamline processes for lawyers and judges. The IT team developed a customized media portal built on Microsoft.NET where residents can access the cases that have been registered electronically and view video recordings through integration with Azure Media Services. Now the court is processing cases more quickly.

- Microsoft is a member of the Global Business Coalition Against Trafficking and is also working with the White House Office of Science and Technology Policy, as well as the United Nations, local police agencies, and other organizations on a variety of initiatives that address human trafficking in all its forms. Among the initiatives we support that address human trafficking:
  - 6degree.org: a cloud-based portal that uses crowdfunding to help victims of trafficking successfully and voluntarily reenters society, created in partnership with the International Organization for Migration (IoM) & Microsoft.
  - Microsoft PhotoDNA: disruptive technology in use to combat the sexual exploitation of children; helps law enforcement agencies around the world more quickly and accurately identify child victims and rescue them.
  - Child Exploitation Tracking System (CETS): a Microsoft software-based solution developed in collaboration with Canadian law enforcement. CETS enables the management and linking of child protection cases worldwide across jurisdictional boundaries.

For additional information and the latest examples, please see

Microsoft Integrity and Governance External Website

Microsoft Philanthropies Website