



# Task Force on Climate-related Financial Disclosures

2021 Report

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## To our stakeholders:

Over the past two years Microsoft has set ambitious climate commitments—to operate as a [carbon negative](#), [water positive](#), [zero waste](#), company that protects ecosystems. These commitments come due in 2030 and are part of a broader awareness of the climate-related risks, opportunities, and associated sustainability and resilience measures any company must undertake. Aligning with best practices on these issues will be important for achieving operational excellence, and over the last two years we have ramped up our efforts to more closely align with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In this time, we have conducted a forward-looking climate scenario analysis, expanded our governance and strategy of climate-related risks and opportunities, set ambitious climate-related targets to become carbon negative, water positive, zero waste, and protect ecosystems, and measured and reported on our progress. We have also developed an internal Climate Risk and Resilience plan, informed by the TCFD recommendations. We have set goals to equitably minimize our climate-related risks, maximize our climate-related opportunities, and enhance the resilience of our enterprise, operations, supply chain, and partner communities over the next 10 years. These goals will not be achieved overnight. They will require focus, collaboration with our partner communities, and a commitment to drive change. It won't be easy, but it is possible to create equitable, sustainable, and resilient solutions, together.

A handwritten signature in black ink, appearing to read 'L. Joppa', with a stylized flourish underneath.

Lucas Joppa, *Chief Environmental Officer*



# Governance

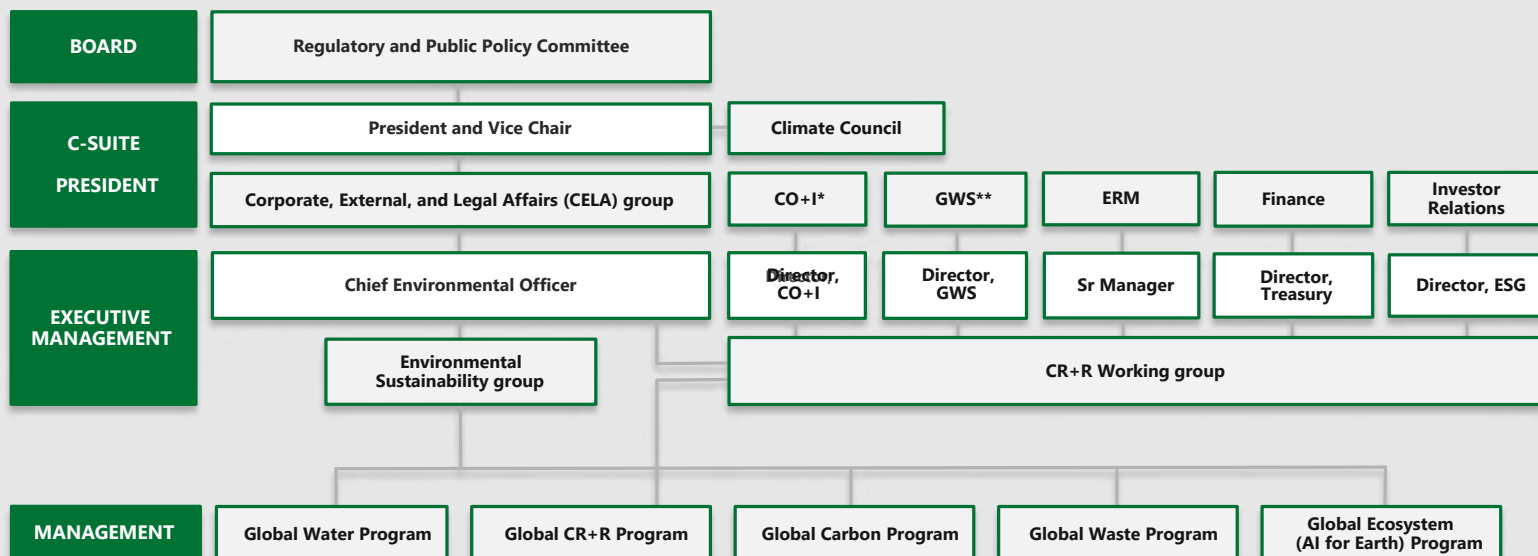
## Board oversight related to climate

Microsoft’s Board of Directors acts as a unitary board with four standing committees to assist it in discharging its oversight responsibilities (Figure 1):

1. **Regulatory and Public Policy**
2. **Compensation**
3. **Governance and Nominating**
4. **Audit**

The Regulatory and Public Policy Committee of Microsoft’s Board of Directors provides oversight and guidance on Microsoft’s environmental sustainability strategy and commitments. Environmental sustainability is among the topics specifically listed in its charter.

Climate change is included under the umbrella of “environmental sustainability,” and this committee is responsible for reviewing and providing guidance on our climate-related policies and programs. During at least one meeting each year and on an as-needed basis, our President and Vice Chair and our Chief Environmental Officer present to this committee on our overall sustainability agenda, including our climate-related work, and solicit high-level input on new and emerging initiatives, including our carbon reduction goals and strategies.



\* CO+I - Cloud Operations & Innovation  
 \*\* GWS - Global Workplace Services

Figure 1. Microsoft’s Climate-related Governance Structure.

## Management oversight

The President and Vice Chair as well as the Chief Environmental Officer hold senior executive accountability for environmental risk management. The President and Vice Chair is responsible for our Corporate, External, and Legal Affairs (CELA) group, which is focused on building and maintaining trust with Microsoft's customers, investors, and stakeholders, including in areas of environmental sustainability and climate change. The President and Vice Chair presents to the Regulatory and Public Policy Committee of the Board on the company's policies and programs that relate to corporate social responsibility, including environmental sustainability and climate change. Our Chief Environmental Officer is the head of our corporate Environmental Sustainability team, leading our overall environmental sustainability vision, strategy, and program execution. The Environmental Sustainability team participates in the Microsoft Enterprise Risk Management (ERM) program, which identifies, assesses, and prioritizes risks and, through regular reporting and discussion, assists senior management and the Board with governance of risk. The Environmental Sustainability team solicits input from subject matter experts across the company to support this reporting.

In FY20, Microsoft established a Climate Council, chaired by our President and Vice Chair and comprising a number of executives from across the company, including the Chief Environmental Officer. The Climate Council is charged with monitoring climate-related risks and opportunities and coordinating and providing oversight for sustainability initiatives across the organization.



To further our commitment to sustainability and carbon reduction, in February 2020 we established a cross-company CR+R program and Working Group (WG) to lead us in assessing, managing, and adapting to climate-related risks to enhance our overall climate resilience. The CR+R WG meets quarterly and includes representatives across critical business groups working together to identify physical and transition climate-related risks and opportunities and align on management measures, including climate vulnerability assessment, risk management, and enhancing our adaptive capacity and overall climate resilience.

## Strategy

Microsoft's climate strategy is focused on understanding, mitigating, and managing the financial and reputational risks from climate change that directly impact our own business and our ability to deliver service to our customers. Its importance is reflected in the company-wide decision to make climate change one of our company's strategic priorities with an aim to become carbon negative by 2030 and by 2050 remove from the environment all the carbon the company has emitted either directly or by electricity consumption since it was founded in 1975.

Microsoft identifies and assesses climate risks and opportunities that could have a financial or strategic impact on the organization across a range of time horizons: short-term (0-3 years), medium-term (out to 2030), and long-term (out to 2050). In our assessments, we consider both acute and chronic physical risks, such as temperature extremes, water stress, drought, wildfire, coastal flooding, tropical cyclones, and extreme weather damage. We also consider a multitude of risks associated with a transition to a low-carbon economy, also known as transition risks, including current and emerging regulation, legal risks, market risks, new technology, and reputational risk. In addition to risks, we also consider several climate-related opportunities associated with resource efficiency (including energy, water, and materials), use of lower-emission sources of energy, and opportunities to design and develop new products and services that support the transition to a low-carbon economy.

## Initial scenario analysis

A differentiator within the TCFD recommendations is the forward-looking scenario analysis, which is a well-established method for developing more flexible and robust strategic plans that are responsive to a range of plausible future states. To align with the TCFD-recommended scenario analysis approach, in 2020 we conducted an initial screening-level TCFD-aligned quantitative climate-related physical and transition risk and opportunity assessment of Microsoft’s physical assets across the next several decades under two different future climate scenarios. Approximately 400 Microsoft facilities were included in the analysis—facilities selected based on highest asset value and high-energy consuming sites—covering all geographies. The selection included datacenters, retail

stores, offices, and executive suites. Following the recommendations of TCFD, two scenarios were considered in this initial screening-level scenario analysis: (1) RCP8.5: A high emissions scenario wherein Earth warms over 4°C above preindustrial temperatures by 2100; and 2) RCP4.5: A low emissions scenario wherein Earth warms 2°C above preindustrial temperatures by 2100. The analysis quantified the climate-related risks and opportunities having the greatest financial impact. The software used in this scenario analysis has global coverage, spans decadal time periods from present day to 2100, and is aligned with the TCFD recommendations. We intend to revise this assessment every 2–3 years to ensure alignment with the best available climate science.

## Example climate-related risks

The following are examples of specific climate-related risks that we identify and analyze in our risk assessment process. The inclusion of these examples does not characterize the probability, materiality, or potential financial impact of these risks and opportunities. A comprehensive account of our climate-related risks is disclosed annually in our CDP Climate Change response.

Transition		
Risk category	Risk description	Our approach to minimize climate risks
<b>Current and Emerging Regulations</b>	<p>Risk of increased device energy efficiency regulations in the European Union (EU) and the United States.</p> <p>Emerging datacenter energy rules in various markets, and carbon tax proposals around the world.</p>	<ul style="list-style-type: none"> <li>Monitoring upcoming regulations and engaging directly with policymakers to understand the likelihood and impacts of new energy efficiency policies on our business.</li> <li>Investing in the infrastructure efficiency of our datacenters, applying our learning in deployed and new datacenter designs.</li> <li>Operating a carbon-neutral cloud since 2012 (e.g., matching our datacenter GHG emissions with the direct purchase of renewable energy or in-region energy attribute certificates).</li> <li>Making a commitment to procure renewable energy to cover 100% of our electricity usage by all our datacenters, buildings, and campuses, by 2025.</li> </ul>
<b>Technology</b>	<p>Environmental performance of Microsoft technologies and services, such as energy efficiency of devices and cloud infrastructure, in comparison with those of our main competitors</p>	<ul style="list-style-type: none"> <li>Introducing policies encompassing effective environmental governance and data security for every product in our cloud infrastructure across each lifecycle stage.</li> </ul>
<b>Legal</b>	<p>Risk of litigation or enforcement for misrepresenting the environmental attributes of our products or services</p>	<ul style="list-style-type: none"> <li>Collaborating across product groups, marketing teams, legal teams, and corporate Environmental Sustainability teams to rigorously assess legal risks and help ensure that our product information and communications are accurate and transparent.</li> </ul>

Risk category	Risk description	Our approach to minimize climate risks
<b>Market</b>	Shifting customer preferences in the transition to a low-carbon future	<ul style="list-style-type: none"> <li>Considering downstream impacts of our devices by designing for longevity to extend product lifespans and reducing their overall carbon footprint.</li> <li>Investing in IT efficiency, from chips to datacenter infrastructure, and renewable energy help make our cloud services up to 93% more energy efficient and 98% more carbon efficient than on-premises datacenters (as reported in our 2018 “The carbon benefits of cloud computing” paper).</li> </ul>
<b>Reputational</b>	Reputational risks related to both our environmental impact and the climate resilience of our service	<ul style="list-style-type: none"> <li>Prioritizing ongoing global business continuity, monitoring risks, implementing business continuity measures, and ensuring geographic redundancy to help ensure continued reliability.</li> <li>Performing annual testing of Microsoft’s critical services and business processes, based on scenarios involving loss of facilities, systems, workforce, or critical third-party suppliers of goods/services, cybersecurity events, or a combination of two or more of those scenarios.</li> </ul>

## Physical

Risk category	Risk description	Our approach to minimize climate risks
<b>Acute</b>	Examples include flooding, extreme weather, drought, sea level rise/storm surges	<ul style="list-style-type: none"> <li>Conducting a TCFD-aligned climate scenario analysis in 2020, working to integrate those results into our operational plans and processes, and committing to refreshing the analysis every 2-3 years.</li> </ul>
<b>Chronic</b>	Examples include water shortages, average temperature changes, increased demand for energy, and saltwater intrusion from sea level rise	<ul style="list-style-type: none"> <li>Assessing property risks annually to value the global property insurance program. This assessment includes supplier mapping to identify natural hazard risks for any locations of identified vendors that support Microsoft (to the extent possible given the fluid nature with which suppliers assign workloads to any of multiple available production locations) and then model their probabilities.</li> <li>Prioritizing ongoing global business continuity, monitoring, and assessing risks, implementing business continuity measures, and ensuring geographic redundancy to help ensure continued reliability.</li> </ul>

## Example climate-related opportunities

The following are examples of specific climate-related opportunities that Microsoft identified. The inclusion of these examples does not characterize the probability, materiality, or potential financial impact of these opportunities. A comprehensive account of our climate-related opportunities is disclosed annually in our CDP Climate Change response.

Opportunity category	Opportunity description	Our approach to realize climate opportunities
<b>Energy resilience: Use of lower-emission sources of energy</b>	<p>Increasing our use of clean energy over the next decade and, by 2025, to reach our 100 percent renewable energy goal by procuring enough renewable energy to cover 100 percent of our electricity usage at our facilities and datacenters.</p> <p>Eliminating our dependency on diesel fuel at our datacenters by 2030. We will shift to low-carbon standby power systems including battery storage, and low-carbon fuel such as hydrogen, building on a successful test in 2020 using hydrogen fuel cells as backup power for datacenters.</p> <p>Driving change beyond our operations by creating new models and investing in new energy technologies that can bring the benefit of renewable energy to companies and communities of all sizes.</p>	<ul style="list-style-type: none"> <li>Increasing the carbon fee that we charge each business division based on its carbon emissions to generate more funds to pay for sustainability improvements, including renewable energy procurement.</li> <li>Contracting new power purchase agreements, including 500-MW PPA with Sol Systems, tying the purchase of renewable energy to environmental justice and equity in under-resourced communities.</li> </ul>

Opportunity category	Opportunity description	Our approach to realize climate opportunities
<b>Energy efficiency:</b> Deliver low-emission cloud services	Offering a carbon neutral cloud, enabling enterprises to directly reduce their own carbon emissions and take advantage of the higher efficiencies that large cloud service providers like Microsoft can achieve.	<ul style="list-style-type: none"> <li>Working to increase the circularity of our cloud infrastructure materials and reduce the related GHG emissions, which will contribute to further cloud service emission reductions.</li> <li>By 2030, reducing our Scope 3 emissions by more than half. Our roadmap covers the product lifecycle, including manufacturing, designing with lower carbon materials and working with suppliers to help lower their footprint; in use, meeting/exceeding efficiency standards; in transportation, improving shipping efficiency; and in end-of-life, improving repairability/recyclability.</li> </ul>
<b>Resource efficiency:</b> More efficient buildings and fleet	Driving our Scope 1 and Scope 2 emissions to near zero by the middle of this decade.	<ul style="list-style-type: none"> <li>Investing into energy-smart buildings that will use Azure for building system monitoring and optimization of energy usage at Microsoft campuses.</li> <li>Partnering with industry leaders to pilot and fund a new tool, the Embodied Carbon in Construction Calculator (EC3).</li> <li>Providing mobility solutions and using lower emissions vehicles.</li> </ul>
<b>Market:</b> Access to new and emerging markets	<p>Providing technology/services that are resilient to the physical impacts of climate change, thanks to georedundant datacenters.</p> <p>Enabling organizations to develop artificial intelligence (AI) computing resources through AI for Earth that help people, organizations, and governments anticipate, predict and manage climate change impacts.</p>	<ul style="list-style-type: none"> <li>Providing grants through AI for Earth program to research and non-governmental organizations to leverage cloud and AI technology to access data, create high-resolution maps, and inform data-driven decision making.</li> </ul>

## Example impacts of climate change on our business strategy

We take a holistic approach to mitigating and managing potential impacts of climate-related risks and opportunities on our business strategy, and it includes investing in research and development to improve efficiencies across our operations, working with our suppliers to minimize the impacts of climate change on our business, and offering sustainable and resilient products to respond to climate-related opportunities. The following table provides examples of impacts of climate change to our business strategy.

Business and strategy area	Impact
<b>Products and services</b>	<p>Opportunities to develop new and invest in existing products/services to help customers reduce their carbon footprint and plan for climate resilience and business continuity are influencing our strategy through 2030. One of the most substantial strategic decisions we have made influenced by these opportunities is the shift to our cloud-based business strategy, including offering lower-carbon cloud services.</p> <ul style="list-style-type: none"> <li>In January 2020, we released the Microsoft Emissions Impact Dashboard, which shows customers the estimated carbon emissions from their cloud usage. At the time of the 2021 CDP Climate Change response deadline, we were the only cloud provider to give full transparency to customers across all three emission scopes.</li> <li>In FY20, we set a new target to reach 100% recyclable Surface devices by 2030. We set new packaging goals including 100% recyclability and using &gt;80% post-consumer recycled content across our packaging portfolio by 2030. By 2025 we will source 100% of packaging materials from recycled, renewable or responsibly-sourced content; eliminate all virgin, single-use petroleum-based plastics; and source all virgin paper materials from forests that have been certified/verified to be responsibly managed.</li> </ul>



## Business and strategy area

## Impact

### Supply chain and/or value chain

- Our supply chain and/or value chain strategy extends to at least 2030, which is the date by which we have committed to cut our Scope 3 emissions by more than half. We will partner throughout our supply chain to achieve this commitment.
- The impact of climate-related opportunities on our supply chain is primarily the prioritization of suppliers that provide more energy-efficient, lower-emission components, products, and services. We have opportunities to reduce energy consumption from our operations (e.g., moving to more efficient building design/operation) and material procurement and to deliver low-emission goods/services, which relies on our ability to source efficient components for our hardware and reduce the footprint of our datacenters.
- From July 2020, our top suppliers (by spend) are required to report their Scope 1, 2, and 3 GHG emissions and upon request develop a plan to reduce them. We plan to highlight suppliers with lower emissions output with special attention and action. We prioritize investment with suppliers that: (1) meet our requirements for lower-emission components, goods, and services and (2) demonstrate a commitment to climate change performance, such as through emissions reporting and target setting (e.g., engaging top suppliers through the CDP Supply Chain program and working with cloud infrastructure suppliers to help set carbon reduction targets).

### Investment in R&D

- We invest in R&D for new solutions and datacenter designs that help us contribute to climate resilience through technology innovation while helping increase our operating efficiency, meet growing demand for lower-emission products/services and establish a stronger competitive position. Our R&D investment strategy extends to at least 2030.
- One of our most substantial strategic decisions influenced by these opportunities is our investment in our AI for Earth program. Funded with \$50 million and a 5-year commitment from Microsoft President Brad Smith in December 2017, the program deploys our investments in AI research and technology to enable people and organizations to sustain and manage Earth's life support systems, including anticipating, predicting, and managing climate change impacts.
- We are investigating design changes and developing new specifications to facilitate embodied carbon reductions in our datacenter designs over the long term.
- Through Azure IoT solutions for energy and sustainability, we are developing solutions to help organizations reduce and manage emissions and energy consumption. For Surface products, through our Ecodesign program we focus on three areas: material efficiency, reducing hazardous materials and extending product life; we continue to explore ways to promote repair, refurbishment and reuse of devices and expand our use of recycled materials and are exploring the use of recycled ocean plastic.

### Operations

- Our operations are the area affected the most significantly by our climate-related opportunities. Our strategy looks out to at least 2050, as the most substantial strategic decision we have made to date influenced by these opportunities is our commitment by 2030 to be carbon negative and by 2050 to remove from the environment an equivalent amount of all the carbon dioxide the company has emitted either directly or by electrical consumption since it was founded in 1975.
- We have also created a \$1 billion Climate Innovation Fund to accelerate the global development of carbon reduction and removal technologies, as well as related climate solutions. These commitments are supported by our existing action in these areas, such as our latest renewable energy deals (e.g., a 500-MW first-of-its-kind PPA with Sol Systems that ties the purchase of renewable energy to environmental justice and equity in under-resourced communities).

## Example impacts of climate change on our financial planning

We also incorporate climate considerations in our financial planning. In July 2012, we introduced an internal carbon fee, charging business groups for emissions associated with their energy consumption and business air travel. In FY19, we announced that we will raise our carbon fee to \$15 per ton to more fully reflect our cost of carbon abatement. Starting in July 2020, in support of our new commitment to be carbon negative by 2030, we expanded the fee to start charging for not only our own operational emissions, but also our Scope 3 emissions. The carbon fee affects our long-term financial planning, providing an incentive, the financial justification, and in some cases the funds for renewable energy investments, climate-related energy and technology innovation, and the development of carbon reduction and removal projects. The time horizon for the financial planning associated with our carbon fee is through 2030 and beyond.

Our carbon fee is primarily influencing our indirect costs, capital expenditures, and liability, and our sustainability performance, carbon commitments, and strategy to realize climate-related opportunities has an impact on our access to capital and projections of our revenues. The following table provides examples of impacts of climate change to our financial planning.

Business and Strategy Area	Impact
Indirect Costs	<ul style="list-style-type: none"> <li>The funds collected through the carbon fee are used to cover (in part) the costs to meet our carbon commitments. This includes investments in renewable energy (in FY20, it was used to purchase 6,795,482 MWh of renewable energy globally) and other projects.</li> </ul>
Capital expenditures	<ul style="list-style-type: none"> <li>For capital expenditures, we use the carbon fee to fund some energy efficiency investments within our facilities; these have included investments in, for example, light-emitting diode (LED) lighting projects.</li> </ul>
Liabilities	<ul style="list-style-type: none"> <li>The carbon fee also influences our financial planning for liabilities. Carbon fee investments to reduce energy consumption, water consumption, and carbon emissions help reduce our possible future legal liabilities in resource-constrained or climate-affected jurisdictions.</li> </ul>
Revenues	<ul style="list-style-type: none"> <li>Our company's investments in the cloud, artificial intelligence (AI), and Azure IoT are key to helping us gain a better competitive position as interest in environmentally responsible suppliers and lower-emissions services increases. The associated revenue projections for these areas are central to Microsoft financial planning.</li> </ul>
Access to capital	<ul style="list-style-type: none"> <li>We view our sustainability performance, carbon commitments, and strategy to realize climate-related opportunities as an advantage when engaging with our investment community. These are important inputs to our financial planning related to access to capital, and we integrate information on our sustainability performance in meetings with our large institutional investors.</li> </ul>

## Risk management

### Identification, assessment, and management of climate-related risks and opportunities

The Environmental Sustainability team, led by our Chief Environmental Officer, identifies and assesses Microsoft's climate-related physical and transition risks and opportunities across the business portfolio using quantitative and qualitative analyses. The results from these analyses are assessed and validated through consultation with subject matter experts (SMEs) across the company (including datacenter, facility, device, and supplier teams) and used to inform Microsoft's enterprise risk assessment process led by the enterprise risk management (ERM) program. With information from the SMEs, the ERM program looks across the risk portfolio and information received to further identify, assess, and prioritize the criticality of any potential risks to Microsoft's core business functions and operations. This process determines whether any identified risks have the potential for substantive financial, strategic, operational or legal impact on the company.

To make decisions on risk, we use our ERM risk prioritization criteria in the context of business continuity and service resilience, which include the scope of impact (e.g., reputational, regulatory, and cost), potential return on investment, and time and resources required to implement changes. The process involves categorizing risks according to their inherent impact on a scale of 1 (minimal) to 5 (critical) in four categories: trust or reputational; operational scope; legal, compliance or environmental; and enterprise value. Risks are then rated according to their inherent likelihood on a scale of 1 (remote) to 5 (expected). These two ratings are used to produce an inherent risk score and are then aggregated with a management action/control effectiveness rating for a residual risk calculation.

We also have an Enterprise Resilience Management program that works with the ERM program to ensure consistent alignment among risks and risk prioritization criteria and, ultimately, the final risk ratings. Our Enterprise Resilience Management program's Continuity & Resilience and Service Resilience Standards identify the baseline requirements for implementing business continuity, disaster recovery and overall



resilience at Microsoft to help ensure our capability to prepare, recover and perform in the event of a major or catastrophic business disruption that affects our ability to meet customer expectations. For example, to mitigate physical climate-related risks, the Enterprise Resilience Management program uses its relevant standards to help ensure the existence of effective, reliable, well-tested plans, systems, and processes during such a disruptive event to support the continuity and resilience of business operations and services and minimize adverse impacts. In the case of datacenters, central to Microsoft cloud services design is geographic redundancy, which reduces our vulnerability to climate change and offers customers a climate-resilient alternative to on-premises datacenters. To help prepare employees in the event of an emergency, Microsoft maintains an Employee Preparedness portal with resources including a global crisis management response team, local office/site updates, regional advisories, and educational awareness resources.

At an asset level, business groups within our operating segments have their own processes. For example, our Cloud Operations & Innovation (CO+I) segment, which is responsible for Microsoft datacenters, has a defined process for identifying and assessing risk in the design and siting of new datacenters and during ongoing operations, including availability of water and renewable energy. Azure Hardware Systems and Infrastructure, responsible for our cloud infrastructure supply chain, identifies and manages risk related to the emissions impact of the design, sourcing, manufacturing, transportation, use, and end-of-life choices for cloud infrastructure materials and chemicals by monitoring supplier metrics against compliance standards and reduction targets through its Cloud Supply Chain Sustainability (CSCS) team. Within our More Personal Computing segment, the Windows & Devices (W&D) group has an Environmental, Compliance, and Sustainability team that evaluates risks and opportunities pursuant to the ISO 14001 framework in the context of energy efficiency and other

regulatory and voluntary environmental requirements at the global, regional, national, and local level for existing and planned Microsoft-branded hardware and related devices and packaging supply chain operations. Subsidiaries manage their processes based on regional and geographical factors that affect them individually (such as local regulations).

## Enhancing organizational resilience

The results of our most recent climate scenario analysis revealed that we may experience impacts from climate change in the future if we do not act now to mitigate the risks, build adaptive capacity, maximize our opportunities, and enhance the resilience and equity of our enterprise and the communities where we live and work. In FY20, we developed an approach to qualitatively assess adaptive capacity at 20 of our most exposed facilities. This analysis helped us understand the initial level of adaptive capacity and climate resilience of our assets, as well as our employees and host communities. We assess several dimensions of resilience, including:

- 1. The structural and operational integrity of our owned or operated facilities**
- 2. The resilience of our employees, their health and safety, and ability to work and get to work**
- 3. The resilience and adaptive capacity of the surrounding communities that host our facilities.**

The resilience of host communities is not directly in our sphere of influence; however, an understanding of how they are adapting to climate change is important to understanding our overall enterprise resilience. Any gaps in adaptation and resilience at our sites are opportunities for us to take steps to close those gaps, and any gaps in adaptation and resilience within the communities in which we operate are opportunities for us to partner with the community to protect operations, capital, and critical services and resources upon which we depend.

# Metrics and targets

## Commitments and targets to manage climate-related risks and opportunities

We measure a variety of climate-related metrics that inform our environmental sustainability and overall business strategies. We set commitments for our four core sustainability pillars – carbon, water, waste, and ecosystems – to monitor our efficiencies in our operations and value chain. A comprehensive account of our environmental metrics and progress on achieving these targets is disclosed annually in our CDP Climate Change response and the Environmental Sustainability Report.



Topic	Commitments	Targets
Carbon	<b><u>Carbon negative by 2030</u></b>	<ul style="list-style-type: none"> <li>By 2025, reduce our Scope 1 and 2 emissions to near zero.</li> <li>By 2030, reduce Scope 3 GHG emissions intensity per unit of revenue 30% from a 2017 base year and avoid growth in absolute scope 3 emission (approved by SBTi).</li> <li>In 2021, contract for the removal of 1 million metric tons of carbon dioxide from the environment (goal achieved).</li> <li>By 2030, Microsoft will have 100 percent of its electricity consumption, 100 percent of the time, matched by zero carbon energy purchases.</li> <li>By 2030, electrify our entire global operations vehicles fleet.</li> <li>By 2030, we will reduce our Scope 3 emissions by more than half from a 2020 baseline.</li> <li>By 2030, Microsoft will remove more carbon than it emits. By 2050, we'll remove an equivalent amount of carbon to all our historical emissions.</li> </ul>
Water	<b><u>Water positive by 2030</u></b>	<ul style="list-style-type: none"> <li>By 2030, reduce the water intensity of our direct operations, replenish in water-stressed regions where we work, and enable access to 1.5 million people.</li> <li>We will reduce water waste in our datacenter operations by 95 percent by 2024.</li> </ul>
Waste	<b><u>Zero waste by 2030</u></b>	<ul style="list-style-type: none"> <li>By 2030, reduce as much waste as we create across our direct operations, products, and packaging.</li> <li>Divert 90 percent of our solid waste from landfills and incineration.</li> <li>By 2025, all cloud packaging will be reusable, recyclable, or compostable.</li> <li>By 2030, all owned datacenters will achieve zero waste certification.</li> <li>By 2025, 90 percent of servers and components within our regional datacenter networks will be reused.</li> <li>By 2025, we will eliminate single-use plastics in all Microsoft primary product packaging and all IT asset packaging in our datacenters.</li> <li>We will design Surface devices, Xbox products and accessories, and all Microsoft product packaging to be 100 percent recyclable in OECD countries by 2030.</li> <li>We will achieve 90 percent diversion of operational waste at datacenters and campuses and 75 percent diversion for all construction and deconstruction projects by 2030</li> </ul>
Ecosystems	<b><u>Building a Planetary Computer</u></b>	<ul style="list-style-type: none"> <li>Aggregate environmental data from around the world and put it to work through data, AI, and technology with the Planetary Computer.</li> <li>By 2025, permanently protect and restore more land than we use company-wide, using approaches like land acquisition, conservation easement, national park creation, and community or indigenous-led conservation.</li> <li>We will take responsibility for the ecosystem impacts of our direct operations by protecting more land than we use by 2025.</li> </ul>

### Sustainability investments

Through the **Climate Innovation Fund**, Microsoft is investing \$1 billion over four years to accelerate the development of carbon reduction and removal technologies that will help us and the world become carbon negative.

We established our internal carbon fee in 2012 to fund our carbon neutrality commitment. [In 2019](#), we raised the fee to \$15 per ton, which we charged to each business group across Microsoft based on their Scope 1 and 2 carbon emissions and business air travel. [In 2020](#), we expanded the fee to cover each business group's Scope 3 emissions. While we've initially set the fee at a lower rate for Scope 3, it will ramp up over time until there is one single fee across our entire emissions portfolio.



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