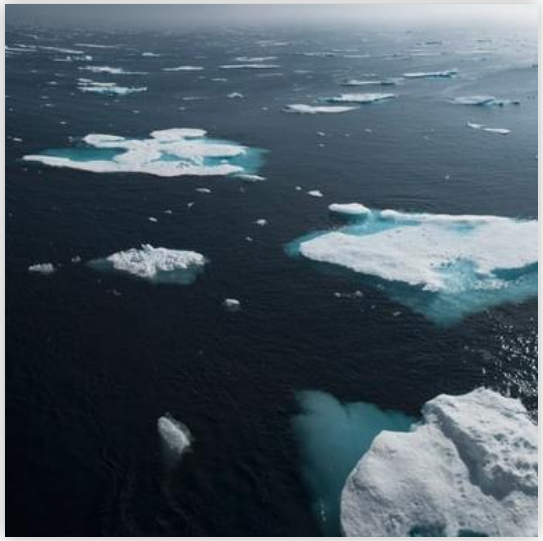
Microsoft

Microsoft's Moon Shot

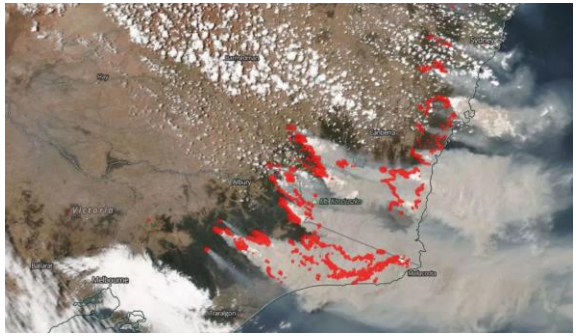
Ellen Wilson, Feb 2020

The global impact of carbon in the atmosphere



World’s temperature rising by 1.5 degrees

Droughts may replace more than 200m people



Extreme temperatures

Flooding

Some carbon math background

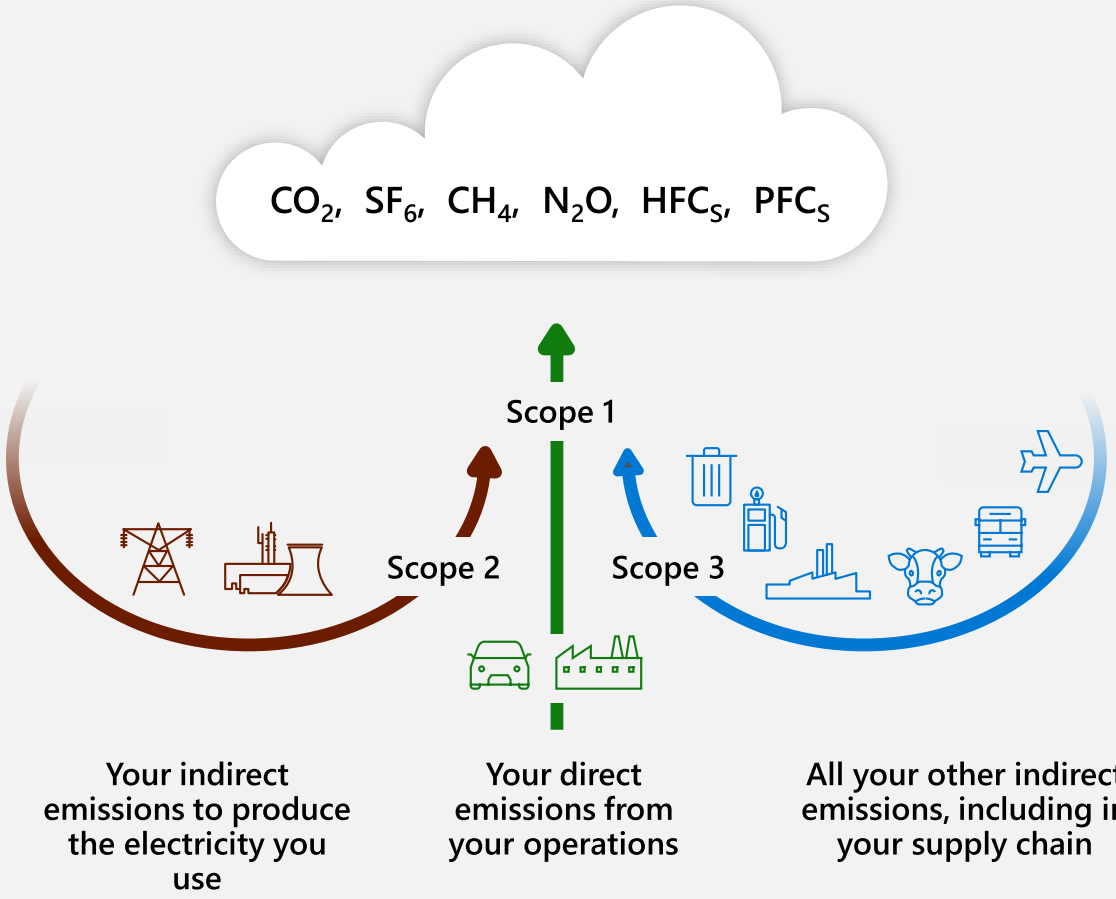
50 Billion

Tons of carbon dioxide is currently being emitted annually

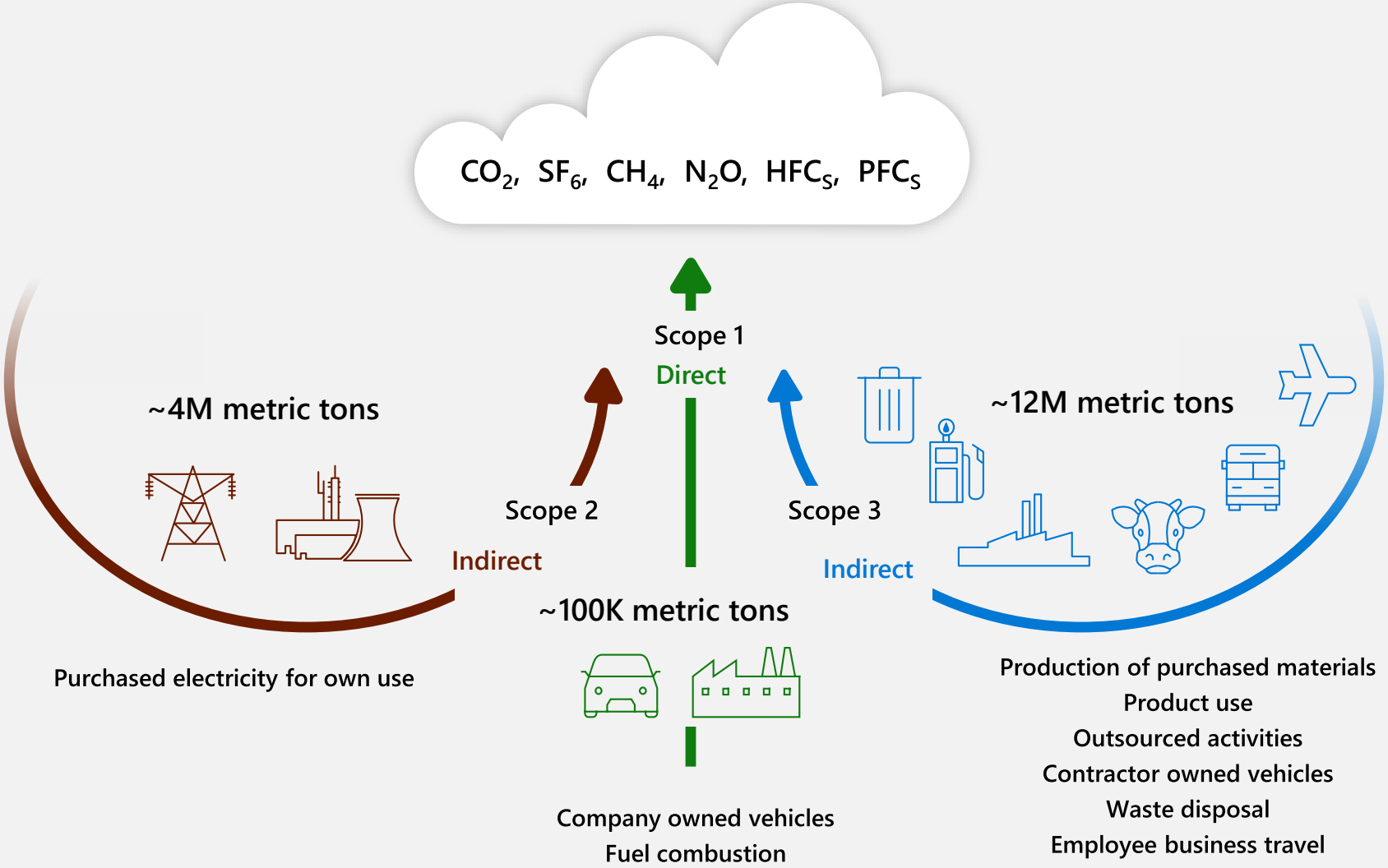
Carbon dioxide equivalents include:
CO_2 (1x), CH_4 (25x), N_2O (298x), SF_6 (22,800x), CFC_S, PFC_S

Once emitted, carbon dioxide persists in the atmosphere for roughly **2,000 years**.

Three categories of carbon emissions



Microsoft's carbon emissions



Microsoft's sustainability strategy

AI for Earth

AI for Accessibility

AI for Humanitarian Action

AI for Cultural Heritage

Land Cover Mapping

esri

Giving organizations a faster, more effective land cover mapping tool to better analyze, monitor, and manage natural resources.

FarmBeats

Giving farmers real-time data and actionable insights to increase production, maximize efficiency, and lower costs.

Project Premonition

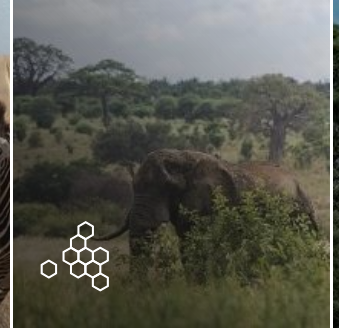
Using insects as field biologists to give conservationists faster biodiversity data and insights to protect vulnerable species.

iNaturalist

Identifying species from crowdsourced images to give conservationists real-time insights on how distributions are responding to environmental changes.

Wild Me

Combining citizen science and AI to combat extinction by enabling rapid individual animal identification and population analysis while decreasing the cost of data collection.

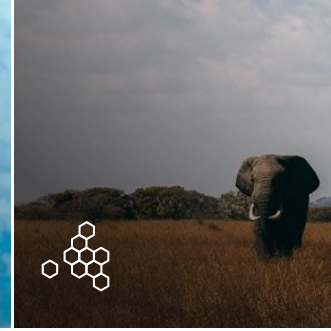


Conservation Metrics

Allowing conservationists to identify animals quickly and cost effectively by applying machine learning to acoustic recordings of wildlife

SilviaTerra

Transforming how conservationists and landowners measure and monitor forests using high-resolution satellite imagery and US Forest Service inventory and analysis field data to train machine-learning models



Vulcan EarthRanger

Enabling park rangers to better monitor, patrol, and protect vulnerable wildlife in Africa

Featured Projects

BOLD INNOVATION

Project Natick

Natick Northern Isles has now been up and running for almost one year. Here are some highlights:

Reliability

Natick Northern Isles has to-date demonstrated dramatically better reliability than our land-based counterpart!

Community Service

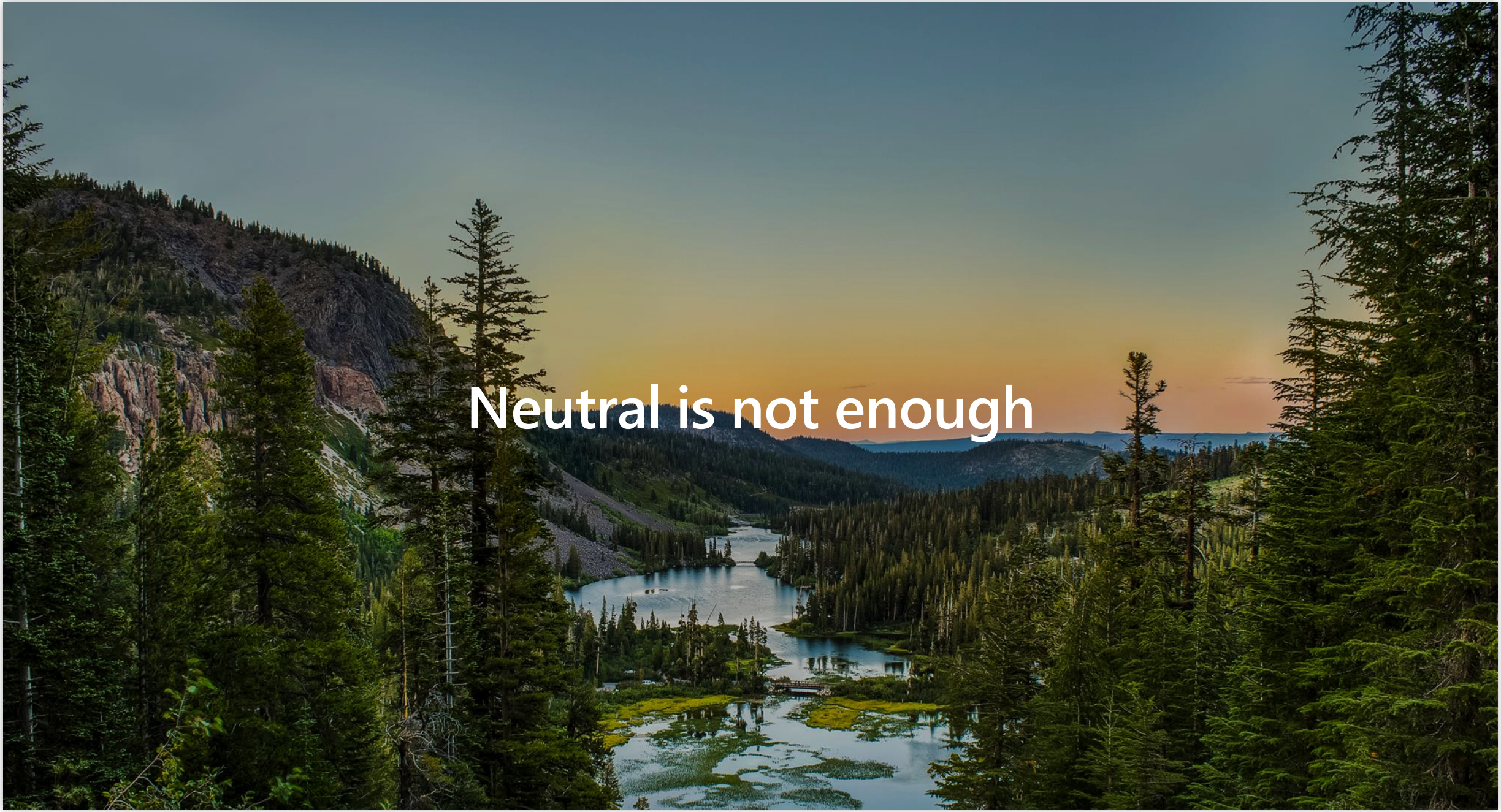
During commissioning, Natick reached as high as second in the world for daily run time on World Community Grid.

Workload

Since commissioning, Natick Northern Isles is being used by more than 18 groups at Microsoft.

Wildlife

The data center structure has created a shelter for local wildlife. Here's a photos of one of our favorite visitors:

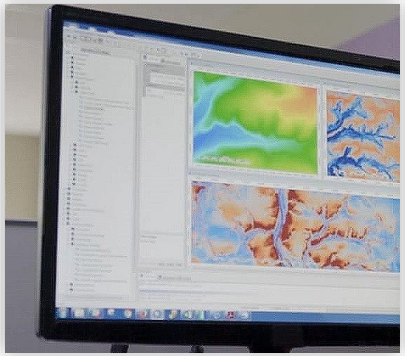

Neutral is not enough

Microsoft's principled approach

Take Responsibility for Microsoft's own carbon footprint including in our supply chain

Fund investment for better carbon reduction and removal

Support and empower suppliers and customers around the world



Work to **advance transparency** for reporting on emissions and removals

Use our voice on carbon-related public policy issues

Enlisting our employees to enable them to contribute to our efforts

We're taking action ourselves

We're empowering our customers

We're investing in broader innovation

We're supporting government action

Carbon Calculator
Customer: Contoso

Months: All | Region: All | Azure service type: All

Calculations in this tool are estimated. For more information on methodology, see the FAQs.

Select the efficiency of your on-premises infrastructure: Low

Azure emissions and savings (MTCO2e)

700	MTCO2e from on-premises alternative
– 601	MTCO2e saved from Microsoft efficiencies
– 72	MTCO2e saved from Microsoft renewable energy purchases
26	**MTCO2e emissions from Azure**

MTCO2e: metric tonnes carbon dioxide-equivalent

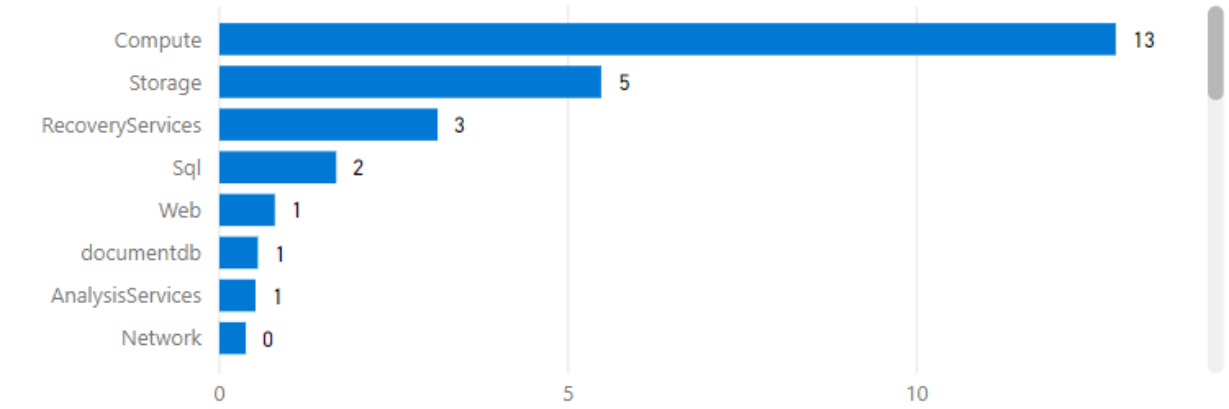
96% Reduction in MTCO2e

673 MTCO2e saved

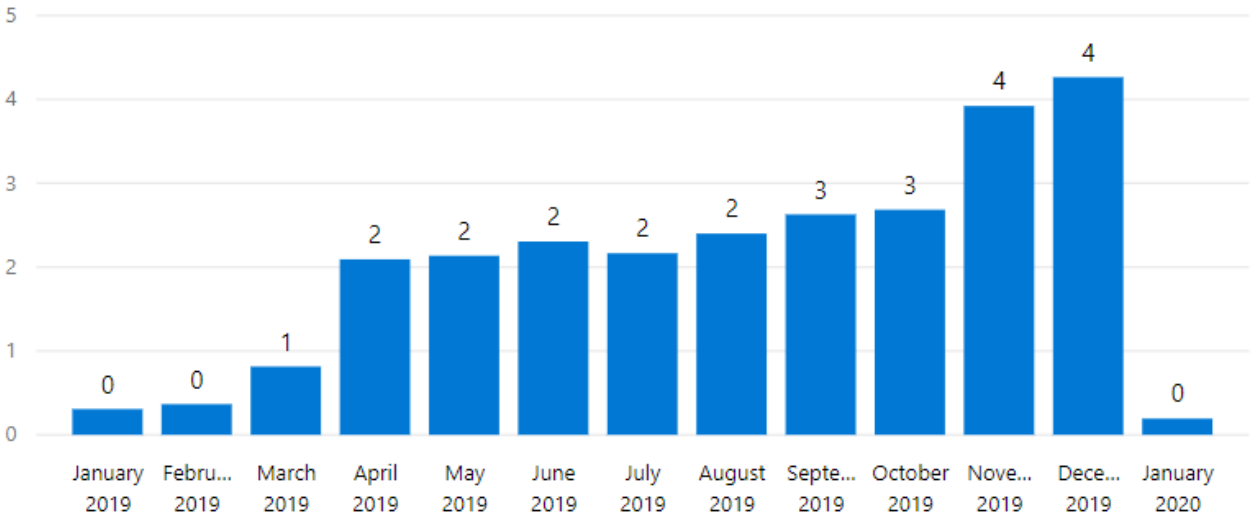
2M Equivalent reduction in vehicle miles travelled

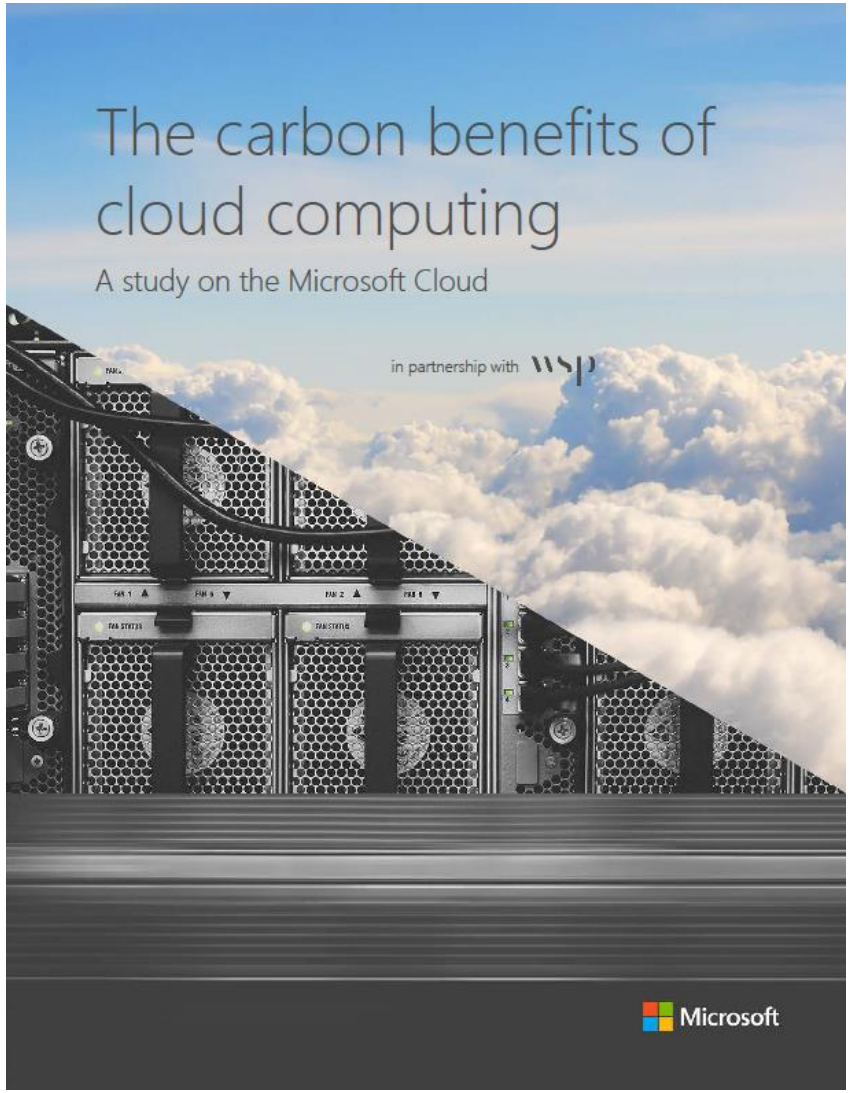
Azure emissions by region

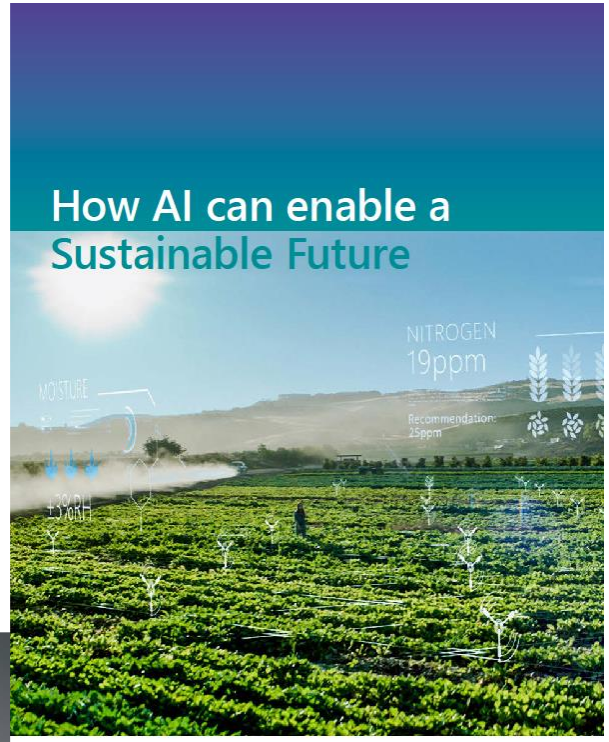
Emissions by Azure service (MTCO2e)

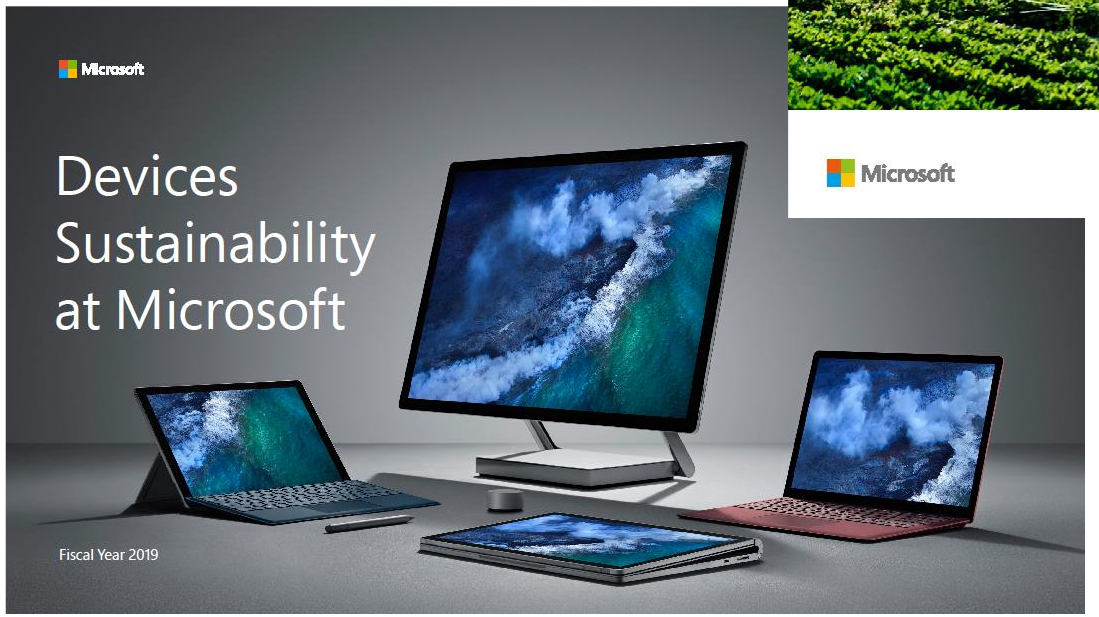


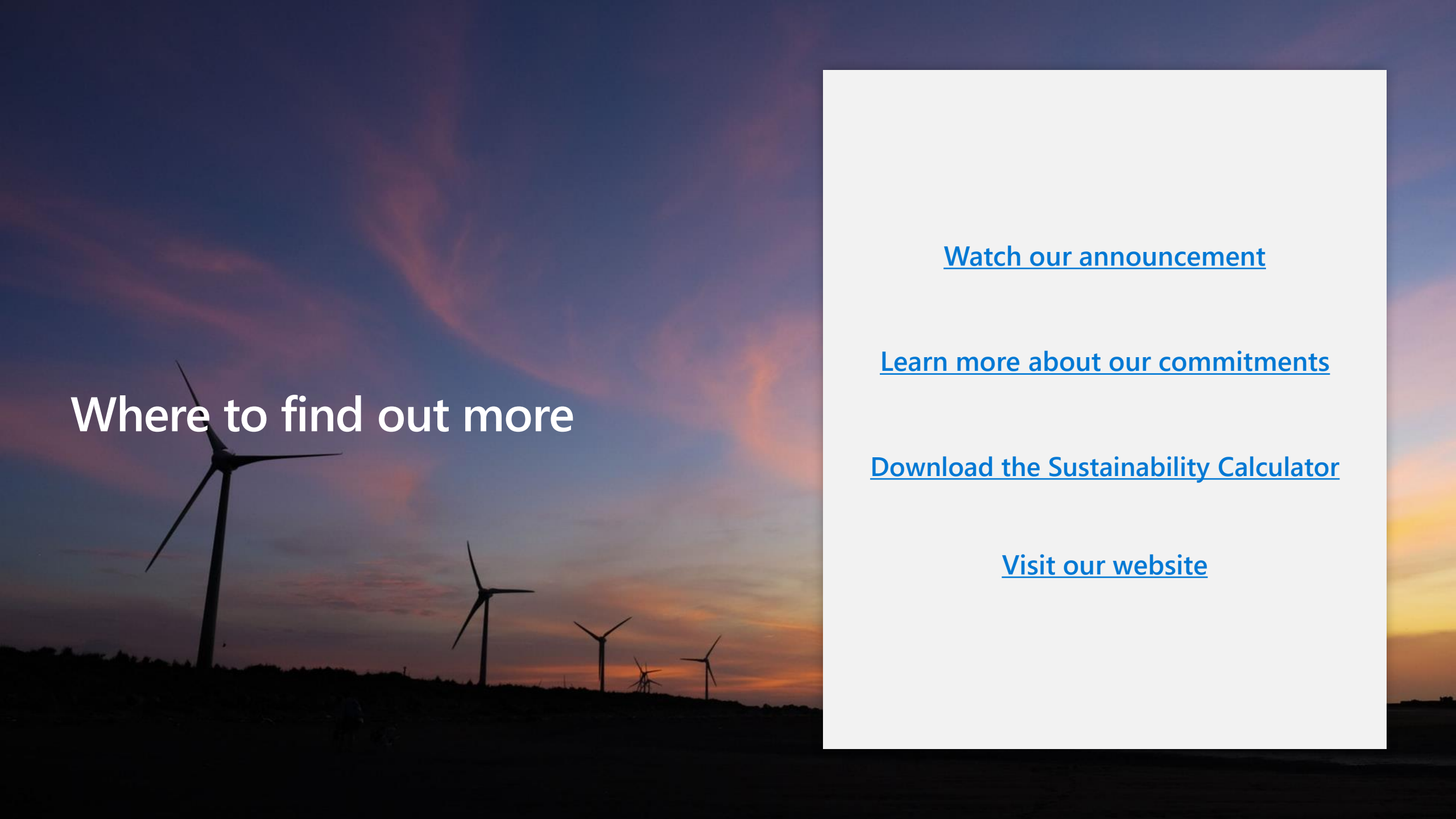
Azure emissions over time (MTCO2e)




The carbon benefits of cloud computing
A study on the Microsoft Cloud
in partnership with WSP
Microsoft


How AI can enable a Sustainable Future
NITROGEN
19ppm
MOISTURE
Recommendation:
25ppm
Microsoft
in association with pwc


Microsoft
Devices Sustainability at Microsoft
Fiscal Year 2019



Where to find out more

Watch our announcement

Learn more about our commitments

Download the Sustainability Calculator

Visit our website

Microsoft

Thank you.

Ellen Wilson, Feb 2020