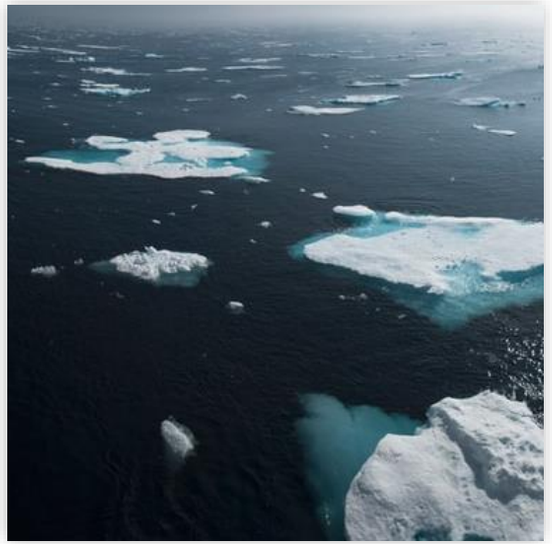
데이터 혁신으로 ESG 경영을 가속화하는 마이크로소프트

- Environmental, Social, and Governance

한국마이크로소프트 신용녀 NTO

The global impact of carbon in the atmosphere



World's temperature ri sing by 1.5 degrees

Extreme weather, wildf ires, reduced agricultu re yields and rise in in fectious diseases

Rising seas could displace 200 million people

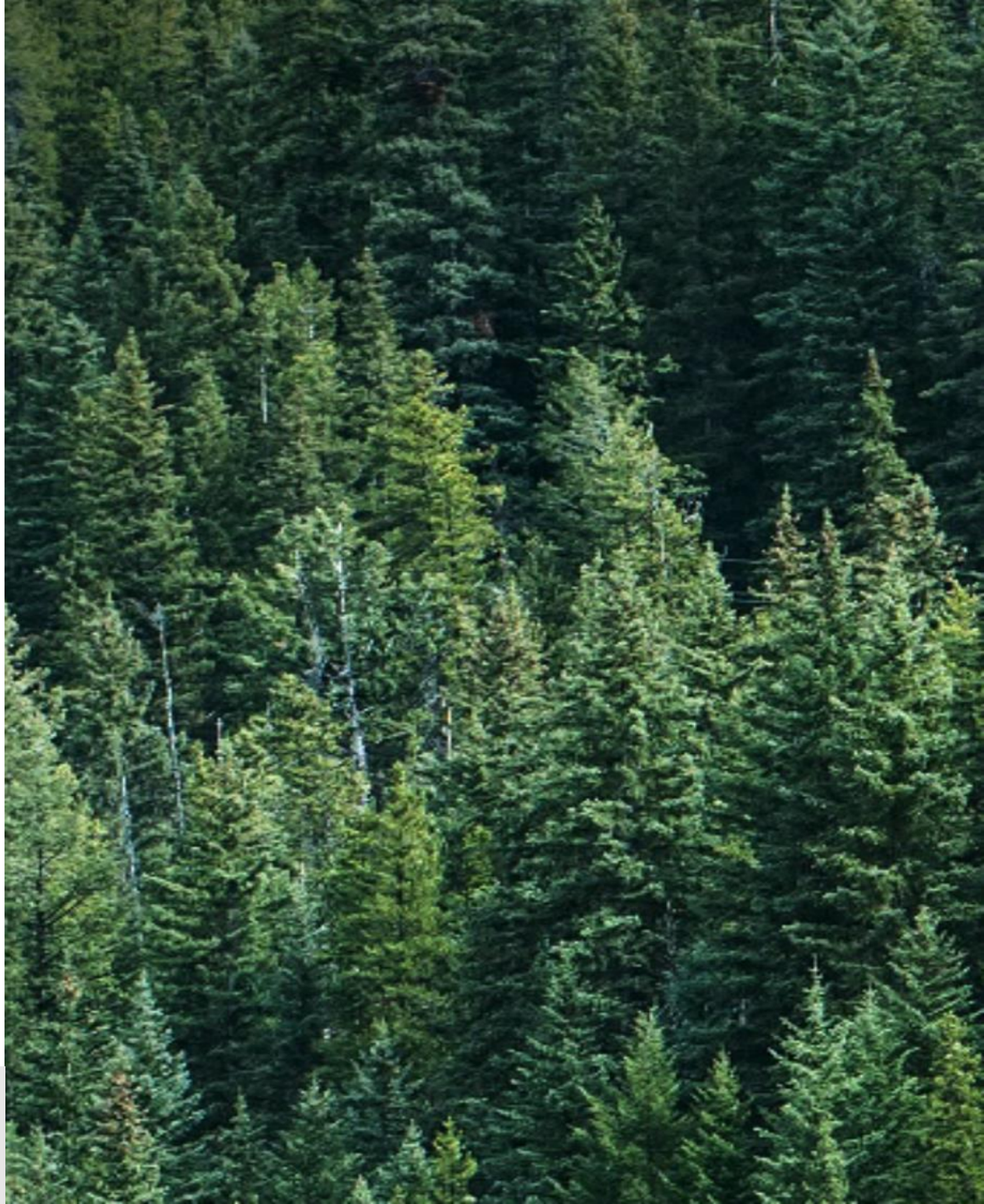
Drought and food sho rtages can impact more than 1 billion people

AI for Earth

Empowers people and organizations to use planetary scale geospatial analytic tools to develop conservation applications that improve the way we monitor, model, and ultimately manage Earth's natural systems

Aims to positions Microsoft Azure as the AI Platform for the Planet

Agriculture | Biodiversity | Water | Climate



Focus areas

AI for Earth is focused on four areas that are vital in building a sustainable future:

Feed the growing world population

Conserve and protect water sources

Monter and protect species from extinction

Reduce climate change impact on communities

AI for Earth

705
projects

107
countries

Increase access to cloud and AI technologies through grants

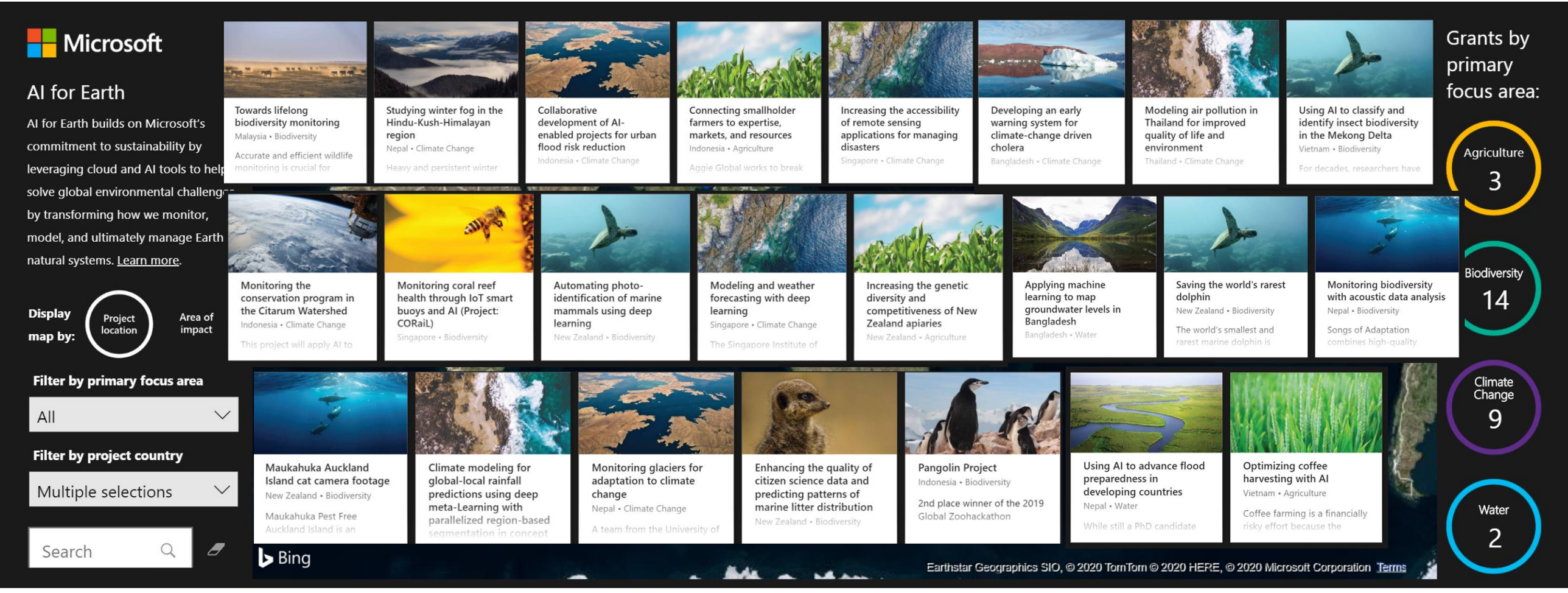
Provide education on cloud and AI and increase collaboration through our community

Fuel innovation through research and strategic partnerships

AI for Earth Grants, to date

705+ AI for Earth grantees in 107+ countries

To date, 28 Grants in APAC to 23 Organizations



Wild Me

8
thousand
citizen scientists

200
researchers &
volunteers

10x
species
identified

Wild Me

Wild Me combines citizen science and AI to combat extinction, using Microsoft Azure to enable rapid individual animal identification and population analysis while decreasing the cost of data collection.

4. Wildbook on Microsoft Azure

Crowdsourced images travel to the cloud, where computer vision models use pattern recognition to identify the species and individual animal.

5a. Tracking animals

People can follow the movements of their favorite animals on Wildbook.

3. Image upload

Images travel to the cloud, either by direct user upload or by automated crawlers that scrape social media for wildlife pictures and videos.

1. Animal

An individual animal with unique patterns is in the environment.

2. Image Capture

A person (scientist or citizen) photographs the animal.

5b. Data insights

Aggregated data helps scientists monitor population sizes, animal interactions, and individual movements.

Microsoft

WILDBOOK for Whale Sharks

Whale Shark Intelligent Agent

Researcher
Roger Harui

YouTube Video Source

https://www.youtube.com/watch?v=mn5a3XJhJd4

Process

Intelligent Agent Process

Modules	Input	Output	Status
Detect language and translate	-	-	-
Text analysis and prediction	-	-	-
Extract video keyframes	-	-	-
Object detection and prediction	-	-	-
Extract text from video	-	-	-
Determine where and when	-	-	-

Output Logs

Next

Buceo con Dominós

24 views

2 0 SHARE

Nuria Gonzalez
Published on Sep 26, 2017

SUBSCRIBE 12

Qué experiencia tan increíble nadar con los peces más grandes del mundo. El mes pasado fui honrado por este gigante suave con lunares. ¡La mejor inmersión! ¡Los tiburones ballena son mi nuevo favorito!

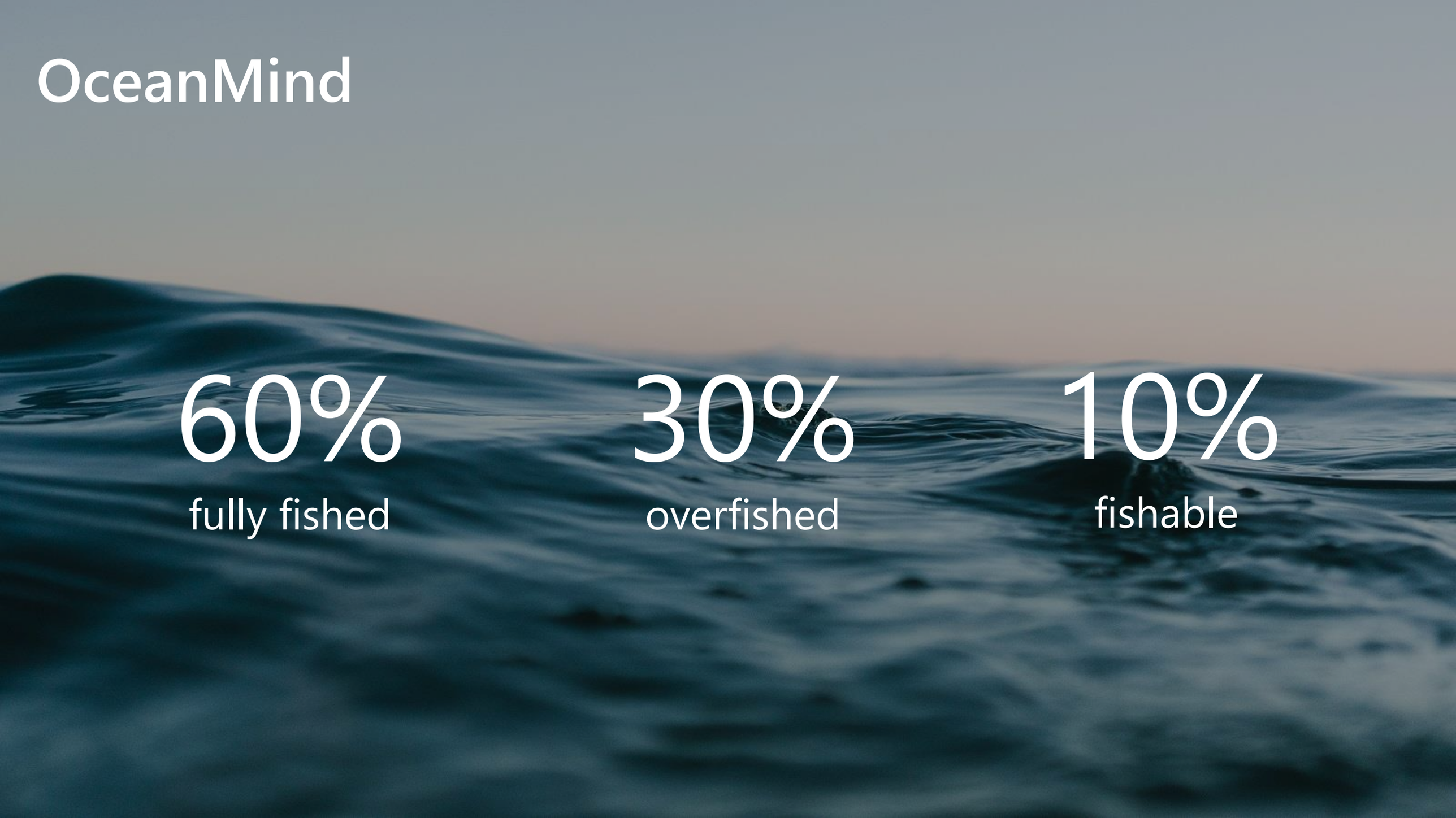
SHOW MORE

2 Comments SORT BY

Add a public comment...

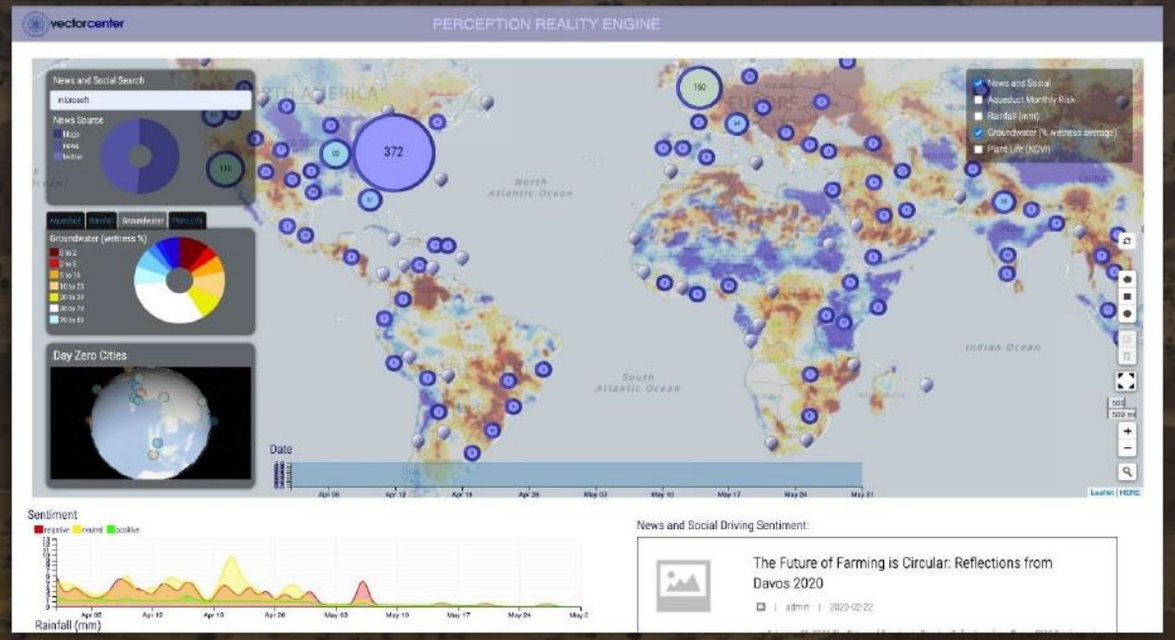
Arturo Lopez 1 year ago

OceanMind

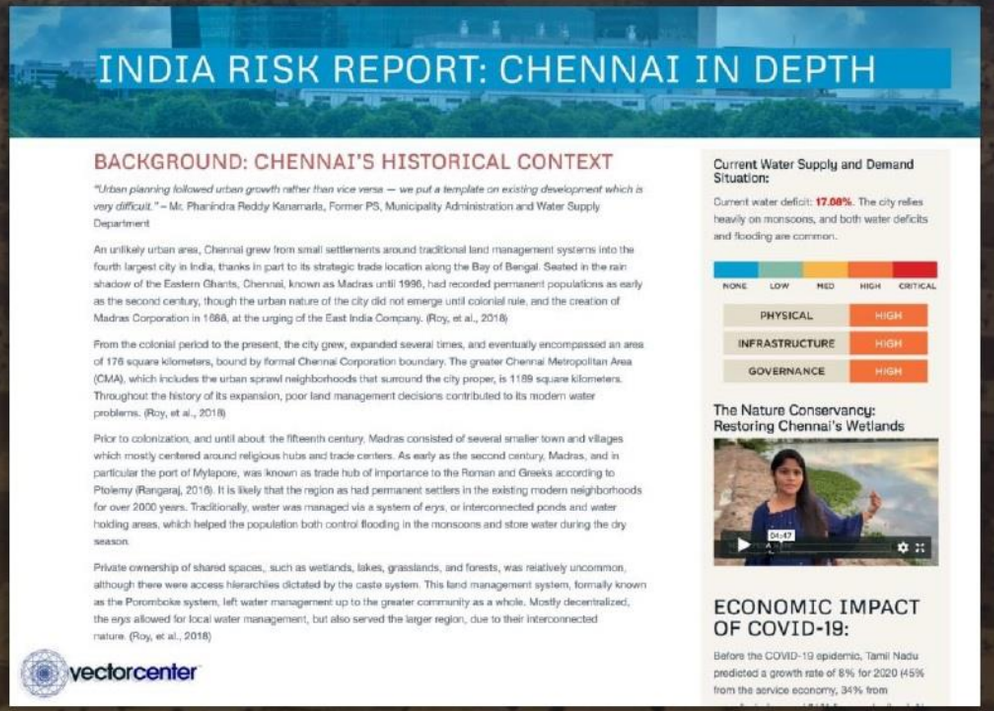


Vector Center

Helping the world avert water crises through AI



Predictive modeling for both perception and reality data to help predict future water crises



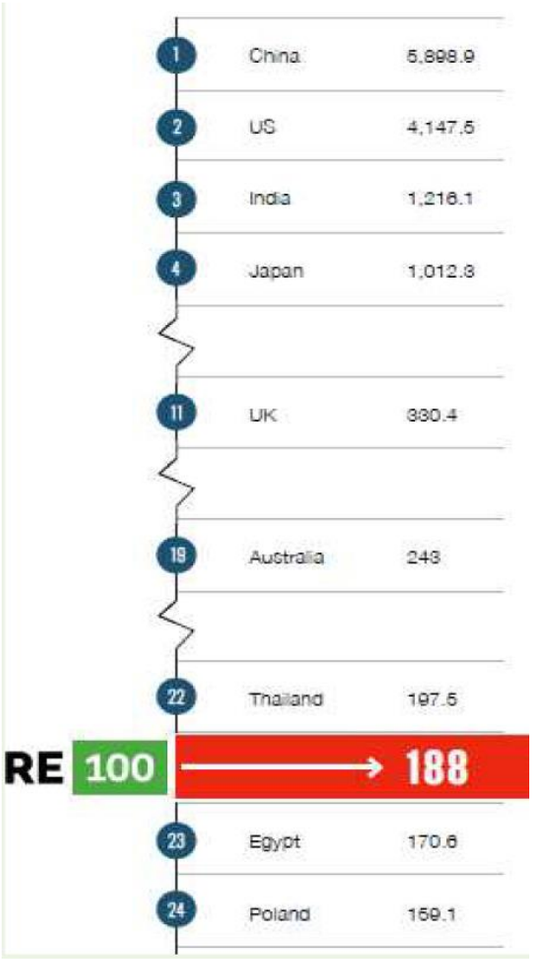
In depth reports help companies, NGOs and governments mitigate water risk

Microsoft

탄소배출량을 낮춰 비즈니스의 지속가능성을 실현

기후변화 대응, 저탄소 경제 전환에 대한 민간의 자발적 대응 RE(Renewable Energy) 100

- 저탄소 경제 전환은 일반적으로 국제협약(2015년 파리협약)을 계기로 국가 주도의 정책으로 시작
- 탄소배출량이 많아지면 국가의 불이익이 되고 기업의 불이익으로 이어져 기업의 리스크가 될 수 있음
- 탄소 발생이 많은 나라는 불이익을 받음
- **기업 활동에 필요한 에너지 전부를 재생에너지로 충당하겠다는 산업계의 자발적인 이니셔티브**
- 연간 사용하는 전력 규모를 국가와 비교하면 세계 23번째 국가 규모에 해당할 정도로 소비량이 많음



RE100 참여기업의 연간 전력 사용량 규모 (2018)

GREEN ELECTRONICS COUNCIL

227 SW Pine St., Suite 300
Portland, OR 97204
+1 503 279 9383
GreenElectronicsCouncil.org

Purchasers Guide for Sustainability and Cloud-Service Procurements

March 2019

Datacenter efficiency

93%

more energy efficient cloud

98%

more carbon efficient cloud

driving industry R&D

State of IOWA,

Direct Evaporate Cooling System (직접적인 증발 냉각) : 냉각기에 물을 뿌림

Microsoft / Story Labs

60.7%

The new Surface Pro X consumes 60.7% less energy than the original Surface Pro launched in 2013.

Packaging

Our device packaging is now made from >70% recycled materials.

Microsoft

Sustainability Calculator

Customer: Contoso

Months: Multiple selectio...

Region: All

Azure service type: All

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

Select the efficiency of your on-premises infrastructure: Low

Azure emissions and savings (MTCO2e)

478	MTCO2e from on-premises alternative
– 380	MTCO2e saved from Microsoft efficiencies
– 72	MTCO2e saved from Microsoft renewable energy purchases
26	MTCO2e emissions from Azure

95% Reduction in MTCO2e

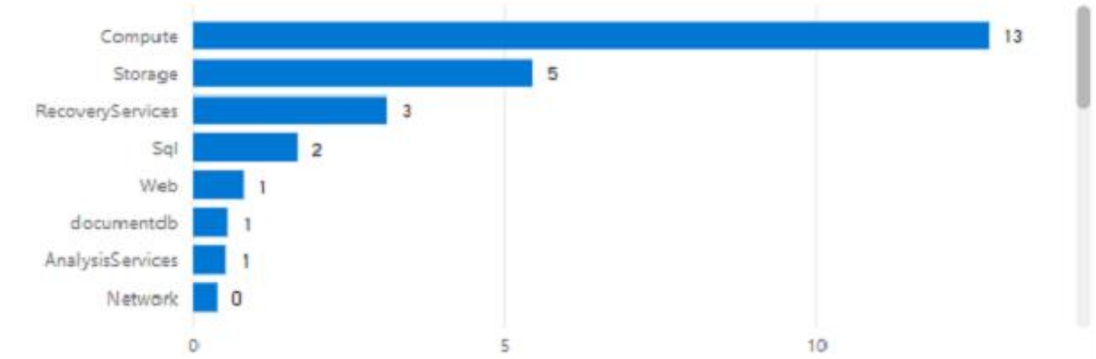
452 MTCO2e saved

1M Equivalent reduction in vehicle miles travelled

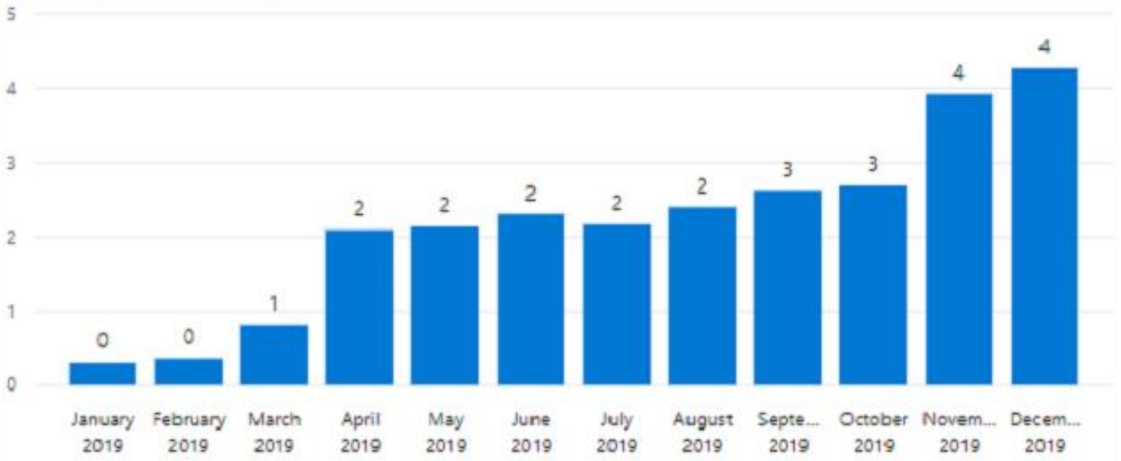
MTCO2e: metric tons carbon dioxide-equivalent; values may not sum due to rounding

Azure emissions by region

Emissions by Azure service (MTCO2e)



Azure emissions over time (MTCO2e)



The Challenge

Microsoft Strategy

Making it Real

Microsoft

기술의 지속가능성 모색

EXECUTIVE CHALLENGE

Hack for Sustainability

THE CHALLENGE

Use leading data to build innovative technological solutions for environmental challenges across our company and around the globe.

DESCRIPTION

"We will create more opportunities for our employees to become actively involved, both in

SPONSORS

Brad Smith
President & Chief Legal Officer

https://garagehackbox.azurewebsites.net/hackathons/oneweek/2020/main

Hack for Sustainability Challenge 2020

121	22	874
Total Hack Projects	Total Hack Ideas	Total Hackers

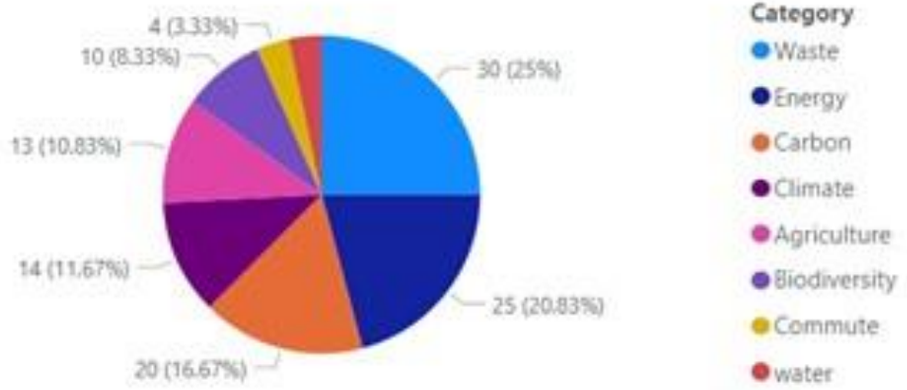
Hack Projects

Check out the awesome projects that are looking for more help!

Project title	Tagline
Smart Document Reader	You give the document and app will try to read it for you in the style and voice you wanted.
Keeping Pangolins Offline and In the Wild	WWF/Microsoft Hackathon
Microsoft Search Widget	Why a widget? It lets us present/access 'search' in its most elementary form – the search box.
Onboarding Buddy	Virtual buddy for internal onboarding process.
Carbon Intensity-based Kubernetes Scheduler	Utilize the scheduler in Kubernetes to bring up in and dynamically scale pods to data centers with the lowest carbon intensity
Segway PSI-ROBOT-V2	Using PSI framewor on Segway loomo1.5 as a Sensor Platform for Monitoring and cognitive scenarios.- Medical and Sustainable Farming Sce
Irish crop yield estimator	Use ML to provide farmers with a support system to decide what crop to grow depending on weather
Data & Energy Center	Use Data Centers as a Center of Data and Energy for our communities
Zero Waste in the workplace	Understand measure and reduce our environmental waste impact in the workplace
Research ways to reduce MS Cafe and Dining Environmental Footprint	Understand how making MS Cafe options more plant based can help Microsoft in it's goal to be carbon neutral by 2030
Empowering citizens to reduce their own carbon footprint	Track your Carbon footprint - Helps you track your activities & measure your carbon impact for your day-to-day life

Hack Projects by Category

Find a category that interest you!



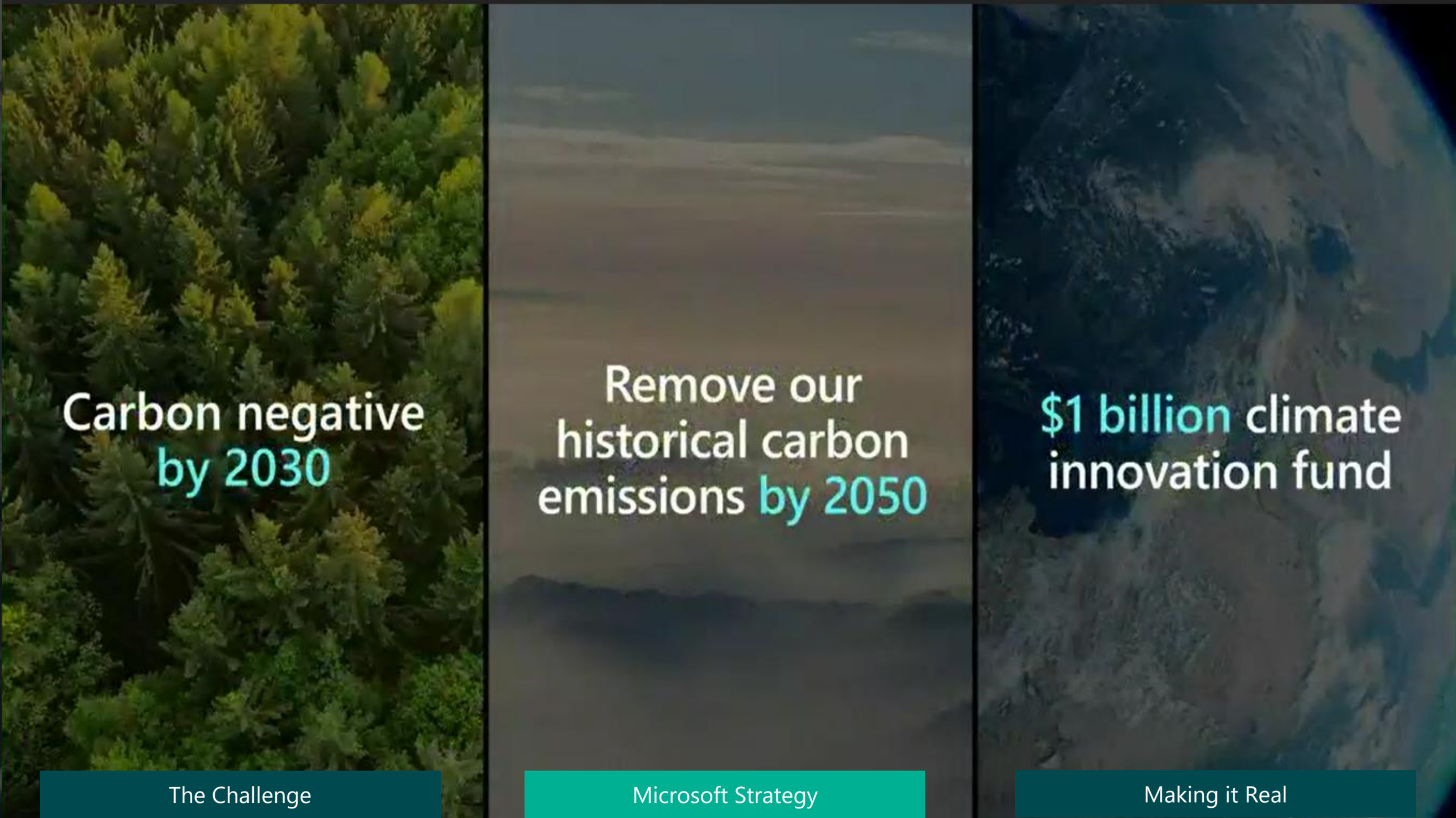
Hack Ideas

Not sure what to Hack on? Check out these Hack Ideas that are waiting to be turned into a project!

Project Title	Tags
Bot for Laws & Regulations	Policy, Bot, Machine Learning
Cloud Urban Infra Management	Analytics, Cloud, Data, IOT, Smart
Design a customer Sustainability engagement	Sustainability Calculator
Eco health Buddy	Ecological Conservation, Future,
Ecosystems and Biodiversity data labeling	Machine Learning, AI, AI4Earth, S
Empower People	Change Behavior, Co2, Household
Enhancing sustainability and scale for education through right partnerships	education, solar power
Make The Biodiversity Database Public	Data, Policy

Microsoft

Microsoft's New Carbon Commitments (의지와 노력)

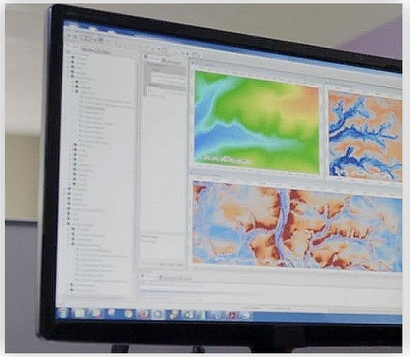

Carbon negative by 2030
Remove our historical carbon emissions by 2050
$1 billion climate innovation fund
The Challenge
Microsoft Strategy
Making it Real

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

Microsoft AI for Good

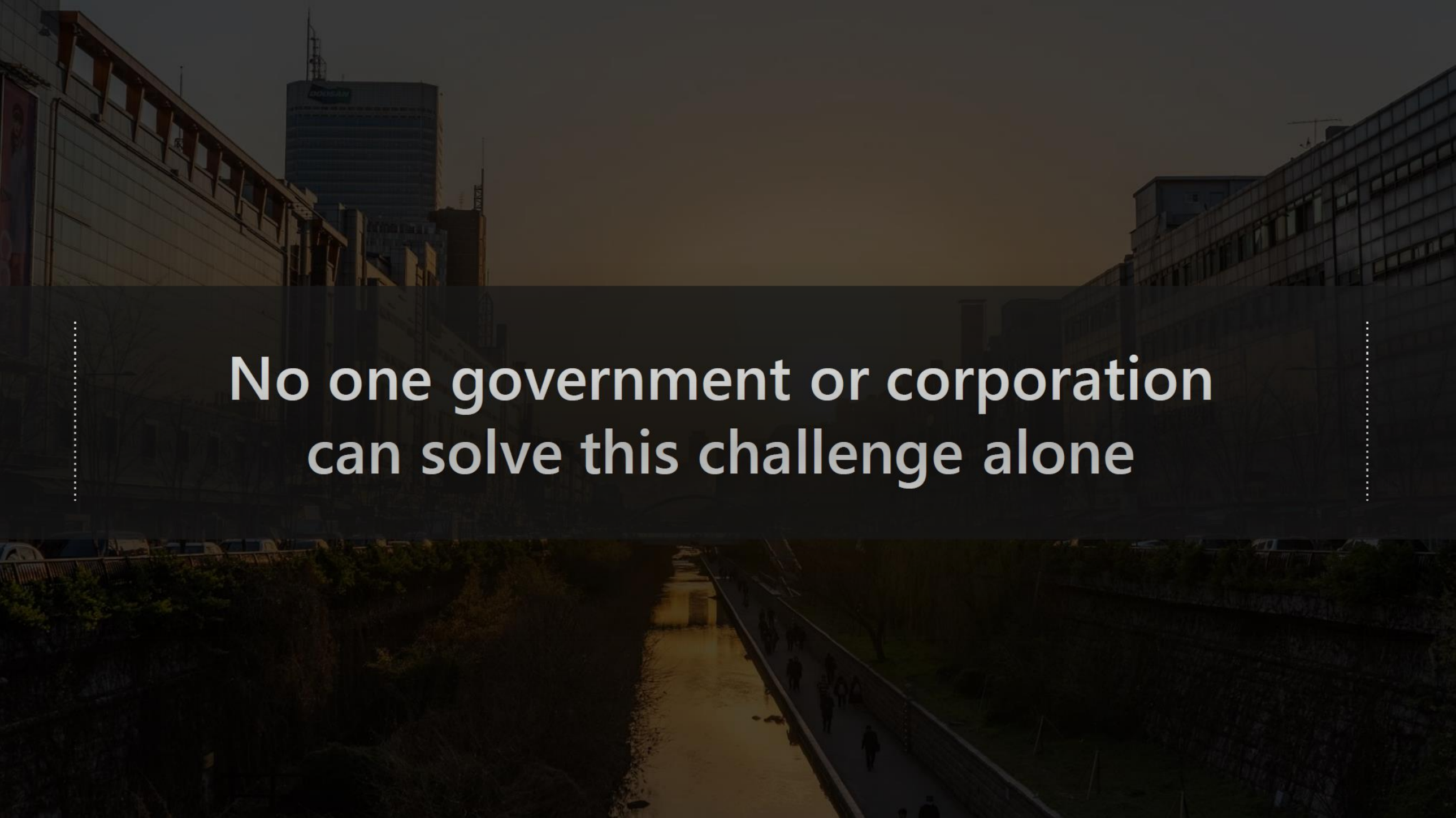
AI for Earth

AI for Accessibility

AI for Humanitarian Action

AI for Cultural Heritage

AI for Health



No one government or corporation can solve this challenge alone

Microsoft's commitment to sustainability

Carbon

- Carbon negative by 2030
- Remove historical emissions by 2050
- $1 billion climate innovation fund

Waste

- Water positive by 2030
- Digitize water data
- Partner with Water.org and WRC members
- Invest $10 million in water strategy fund

Water

- Zero waste by 2030
- Increase our reuse of servers and components up to 90% by 2025
- Invest $30 million in circular economy

Ecosystems

- Build and deploy a planetary computer
- Protect more land than we use by 2025
- Speak out on policy issues

CARBON PROGRESS

Sectoral: Transform to Net Zero Coalition

- Nike, Unilever, Danone, Wipro, Maersk, Starbucks, Nature & Co., Mercedes-Benz (EDF, BSR)

Customers: Sustainability Calculator

Reduction: Scope 1 and 3

- Diesel free datacenters
- Supplier Code of Conduct

Removal: 1m metric tons CO^2

Investment: Energy Impact Investors $50m

Environmental Justice: Sol Systems 500MW

For Microsoft to do well, we need the world to do well

Pursuing profit through solving problems of people and the planet

Thank you