




# 『永續雲』助攻台灣2050淨零目標

施立成 微軟全球助理法務長・台灣微軟公共暨法律事務部總經理

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“氣候變遷對人類造成的死傷會隨時間增加，死亡率將能足以和 Covid-19 相比，到 2100 年，氣候變遷會比新冠病毒致命 5 倍。未來一、二十年內，氣候變遷造成的經濟損失將不亞於病毒。”

Bill Gates from “How to Avoid A Climate Disaster”

“科學證據明確的指出: 氣候變化對人類福祉和地球健康都構成了威脅。我們再不快達成一致性全球行動的共識，即將錯過一個短暫且迅速流失的機會-- 失去一個宜居的未來。”

Hans-Otto Pörtner, IPCC Working Group II Co-Chair



# 地球所面臨全面性的挑戰 需要全球的創新發想與實踐

## 微軟永續發展的核心承諾



2030  
負碳排



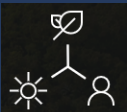
2030  
水正循環



2030  
零廢棄物



2050  
消除成立  
以來的所  
有碳排



建立全球運算能力及永續生態系



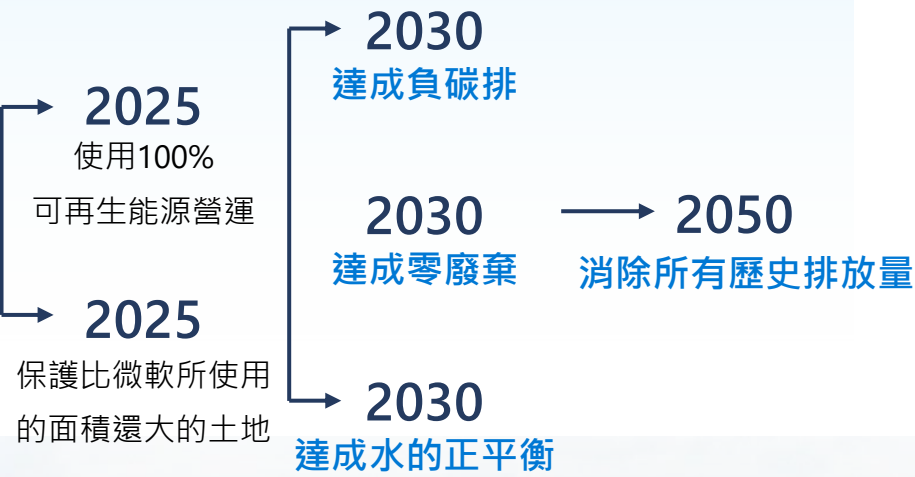


# 超過十年的行動

## 2009-2019的歷史



## 我們2020-2050的承諾



作這樣夠嗎？如何作的更多更好？如果可以，該怎麼作？



微軟的排放量僅佔全球排放量的小部分。  
除了履行我們自己的淨零承諾之外，我們  
承諾可以再協助供應鏈、客戶及合作夥伴  
生態系減少剩餘 99.97% 的排放量



微軟僅佔  
全球排放量的  
0.03%



An aerial photograph of a modern urban landscape. In the foreground, a large, rectangular green rooftop park is visible, surrounded by a low wall and some trees. Above the park, a large building with a flat roof is covered in solar panels. The background is a dense cityscape with various high-rise buildings, some with colorful facades. The sky is clear and blue.

微軟要做的更好，  
就是需要助力世界一起作的更好

企業要永續追求利潤，  
就要解決人類與地球根本的問題



# 微軟的期許及採取的行動

領先的科技平台及解決方案供應商，透過科技協助解決環境挑戰





# 微軟的原則與方法



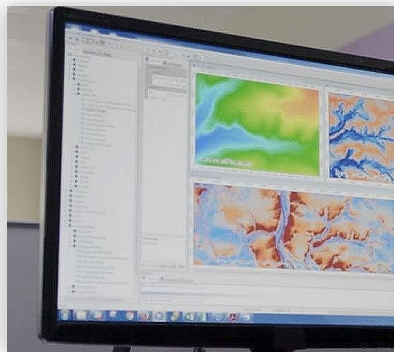
微軟自身與供應鏈  
的碳足跡



基金投資,加速減少  
和去除碳排放



支援全球供應商和  
客戶,並增強其能力



提高報告排放量和  
清除量的透明度



支持並倡議碳相關  
的公共政策



激勵微軟員工,共同  
做出貢獻

自身採取立即  
而有效的行動



賦能客戶  
與夥伴



投資創新



支持政府  
政策與行動



# 2021 progress

## \$571M

Allocated \$471 million to date via our Climate Innovation Fund to accelerate our carbon goals, as well as water and waste. We also donated \$100 million to Breakthrough Energy's Catalyst initiative.

### Carbon

## 2.5M tons

In FY21 and FY22, Microsoft successfully contracted to remove 2.5 million mtCO<sub>2</sub>, meeting our cumulative two-year goal.

## 5.8 GW

In FY21, we signed new power purchase agreements (PPAs) for approximately 5.8 gigawatts (GW) of renewable energy across 10 countries around the globe.

## 87% supplier reporting

In July 2021, 87 percent of our in-scope suppliers reported their emissions to CDP, up 12 percent from 2020.

### Microsoft Cloud for Sustainability

In July 2021, we launched the Microsoft Cloud for Sustainability to provide comprehensive, integrated, and automated sustainability management.

### Water

## 1.3M m<sup>3</sup>

In FY21, Microsoft invested in replenishment projects that are expected to generate over 1.3 million cubic meters of volumetric benefits.

## 670M

Our programs with Water.org account for over 670 million liters<sup>3</sup> of water benefit per year.

## >95K people

Through our partnership with Water.org, we provided more than 95,000<sup>10</sup> people with access to safe water or sanitation.

### U.S. Water Prize

In 2021, Microsoft was awarded the U.S. Water Prize for Outstanding Private Sector Organization for adopting our water positive program and committing to being water positive by 2030.

### Waste

## Circular Centers

We have planned five Circular Centers, with Amsterdam open, construction underway in Boydton, Virginia, and three more to be added in 2022.

## >15,200 tons

In FY21, we diverted more than 15,200 metric tons of solid waste otherwise headed to landfills and incinerators.

## Zero Waste

Four datacenters are Zero Waste certified, with new certifications for the San Antonio, Texas and Quincy.

## 18% reduction

We reduced single-use plastics in our Microsoft product packaging by 18 percent.

### Ecosystems

## >17,000 acres

In FY21, we contracted to protect more than 17,000 acres of land.

## >500 users

The Planetary Computer private preview released as planned in April 2021, with more than 500 users signed up and using the API and scalable compute.

## 24 petabytes

We have made available 24 petabytes of data with more than 30 key environmental and Earth observation datasets to Azure in consistent, analysis-ready format that is freely available for use by anyone.

## 850+ grants

Since its inception in 2017, our AI for Earth program has provided more than 850 grants to organizations working in 110 countries around the world, granting more than \$20 million in Azure credits.





# 微軟永續之旅

## 學習要點



### 基礎資訊架構及服務遷移到雲

減少碳排放可達 98%

### 優化的數據中心

減少能源使用、排放、用水和浪費



### 碳稅

為創新提供資金並推動正確的行為



### 智慧建築解決方案

幫助減少的碳、能源和水的使用

### 混合工作和虛擬活動

加速碳減排



### 智慧型的水循環及使用系統

大量提升再生水的使用



### 專注於

消除一次性塑膠使用習慣及行為



### 減少供應鏈對環境永續的影響

需要協作和透明度





We're applying our experience to develop new **data-driven sustainability solutions** for our own use, and to help everyone go further

運用我們的經驗，建立以數據為中心的永續解決方案



# 建立具韌性的綠色供應鏈

現今供應鏈



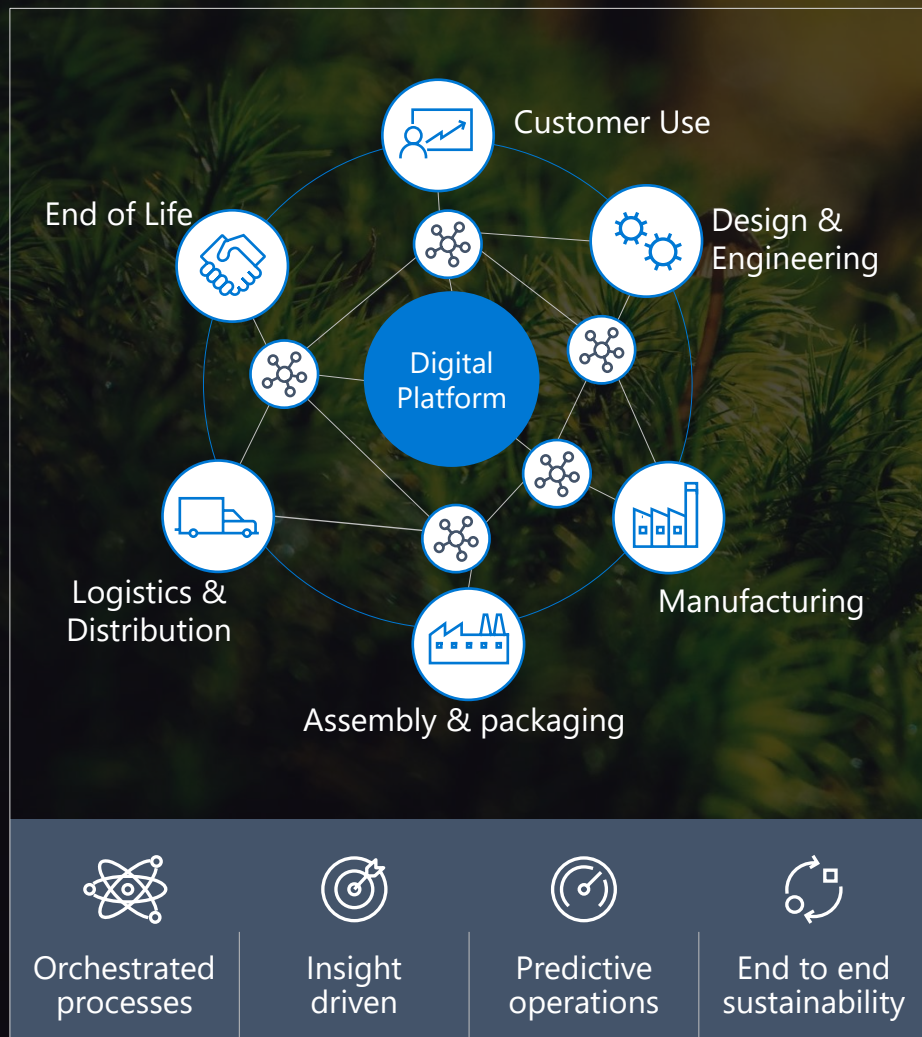
韌性供應鏈





# 建立具韌性的綠色供應鏈

韌性供應鏈

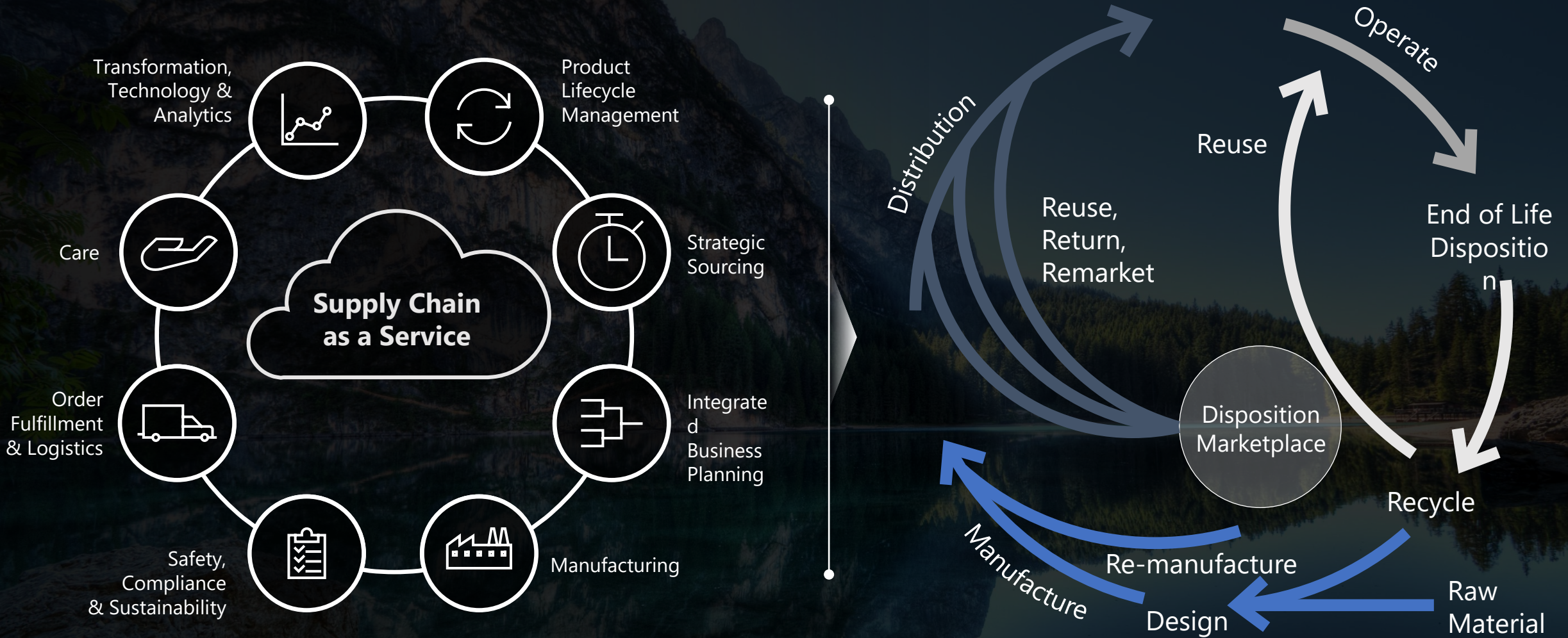


打造 Supply Chain as a Service





# 循環供應鏈 = 韌性 & 永續







微軟為「台灣氣候聯盟」8家創始會員之一，共同宣誓以大攜小，領導台灣4000家企業一起邁向淨碳台灣。



2022/3/23

台灣氣候聯盟攜手  
台灣ICT供應鏈，邁  
向淨零未來





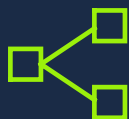
An aerial photograph of a dense green forest with a complex network of winding rivers and streams. The water is a vibrant blue-green color, contrasting sharply with the deep green of the trees. The rivers meander through the forest, creating a pattern that resembles a map or a circuit board.

# 如何實現**使命與願景** 微軟**永續雲與綠戰隊**



# 全球企業在永續發展領域面臨的挑戰

缺少標準



複雜的外部組織申報



手動的流程及分散的系統



不透明的供應鏈



材料和產品的浪費



社會責任與消費者期待





# 持續演進的合規性和申報體系標準

企業需要許多不同的工具、框架和標準，來滿足各種自願和強制性報告和合規要求。



全球或國家設定的目標



78% GHG cut by 2035



HM Government



Taiwan net zero in 2050

新立法草案與規定



Cap and trade



CO<sub>2</sub> emission performance standards

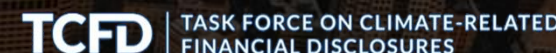


Industrial Emissions Directive



Gasoline and diesel car sale ban – 2040

申報與登錄框架



計算及查驗方法



標準與規範

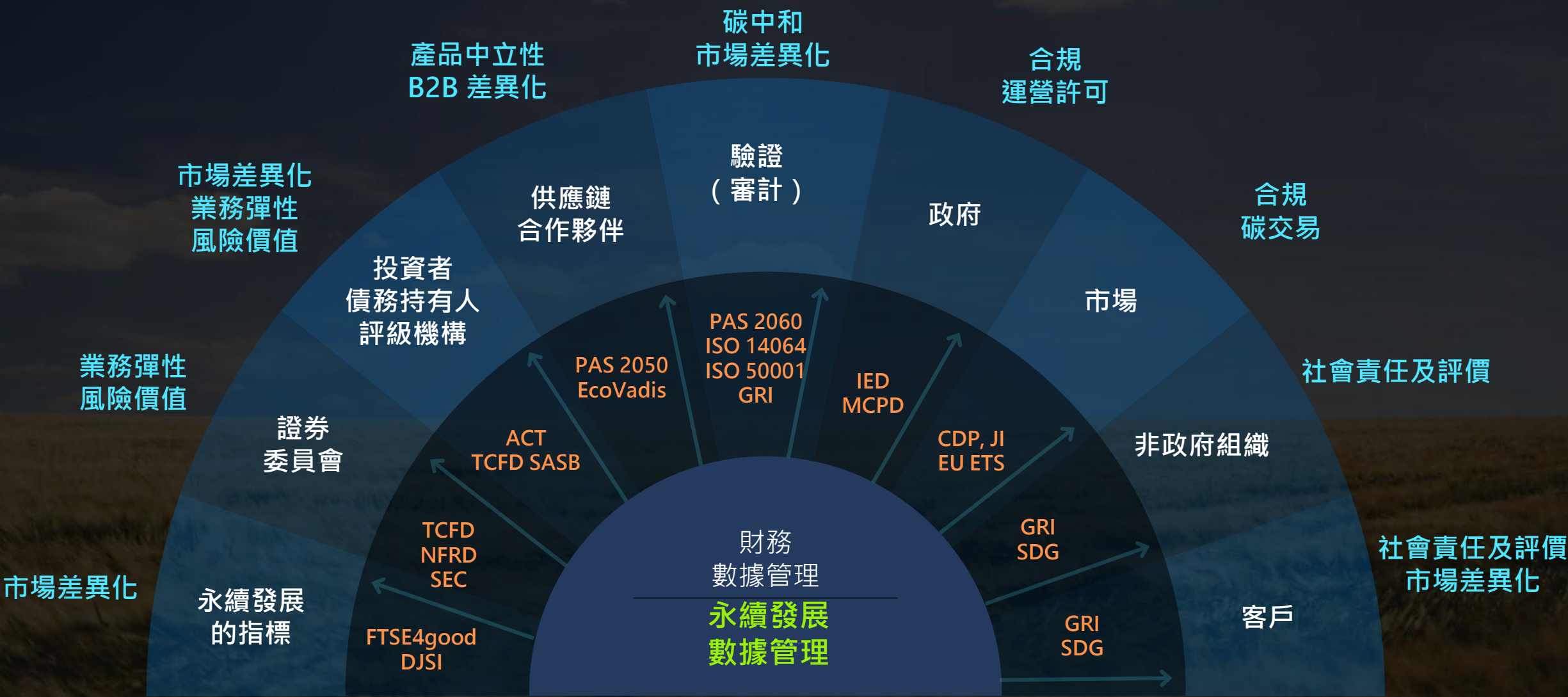


PAS 2050  
PAS 2060



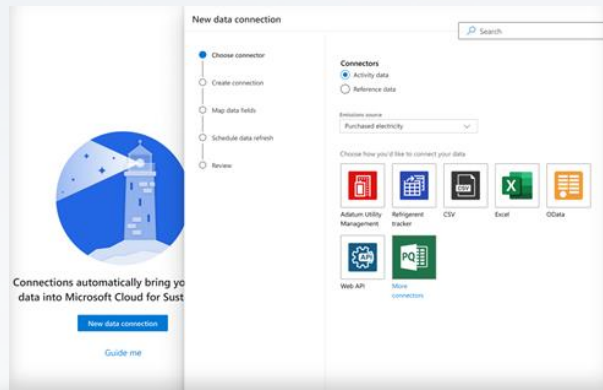


# 企業需要扎實的 永續發展數據管理 來應付不同外部組織的要求



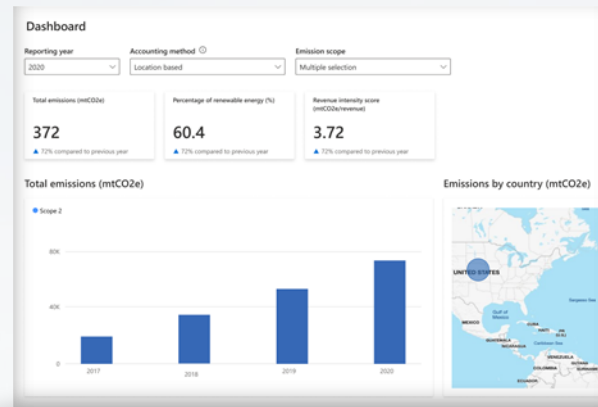


# 協助企業整合與加速永續發展的平台



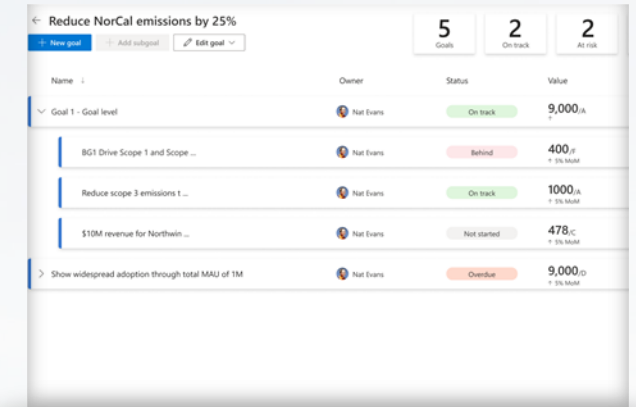
串連您的數據並計算影響

RECORD



查看數據分析與洞察

REPORT



為加速永續發展而展開行動

REDUCE



# 微軟永續管理平台

根據企業數據量身定製  
構建靈活的計算模型

加速數據  
整合和報告

完整的連接器  
進行實時數據收集

通過ISV解決方案  
來滿足減排策略和  
行業特別需求

促進碳抵消的  
採購和管理



分配透明度

利用變數分析  
減少碳排和規劃未來

在資產級報告中  
找出問題區域

依組織承諾和法規遵從  
逐步實現目標



# 微軟永續雲 | 一個企業實踐永續承諾的契機

## 加速永續發展並探尋全新的業務機會



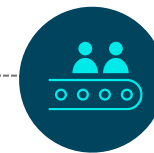
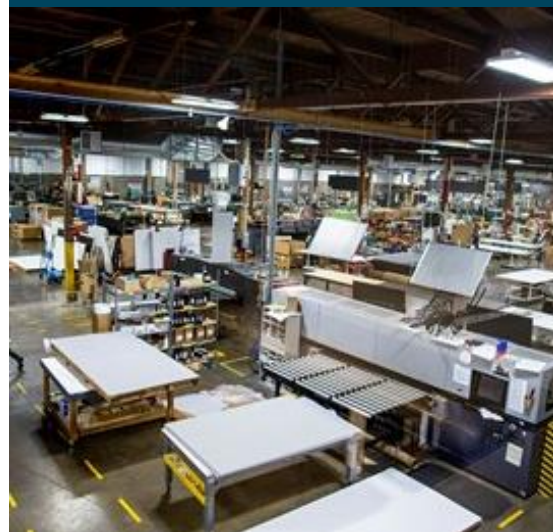
整合數據智慧



建構更永續的IT 基礎架構



減少運營對環境的影響



建立更永續的價值鏈



Microsoft Cloud for Sustainability



# 台灣 ICT 永續綠戰隊成立，帶領在地產業邁向淨零時代





現在開始



1

免費試用微軟永續雲 Sustainability Manager :  
[aka.ms/MSMTrial](https://aka.ms/MSMTrial)

2

加入我們的會員社區  
[aka.ms/SustainabilityInsider](https://aka.ms/SustainabilityInsider)

3

更多介紹：  
[Microsoft.com/sustainability](https://Microsoft.com/sustainability)

4

獲取有關微軟永續雲的最新資訊  
[aka.ms/sus-stay-informed](https://aka.ms/sus-stay-informed)





全面助攻  
智慧雲端

即刻行動  
永續台灣



Thank you!