TEKenable

Cloud for Sustainability Webinar

09 November 2022

Webinar

Sustainability

It is inevitable that demand for cloud migration services will rise, and TEKenable, Microsoft as well as Blue Planet Consulting strive to responsibly support this expansion.

In this webinar, we will discuss cloud migration and demo the Microsoft Cloud for Sustainability.

Host

Ronan McCarthy

Account Manager

TEKenable

With over 30 years' experience in IT and business, Ronan has developed strong and trusted relationships with clients while exploring opportunities which deliver innovative and transformational solutions.

Speakers

John Curran

Managing Director

Blue Planet Consulting

Peter Rose

Technical Director

TEKenable

Aisling Curtis

Strategy and Sustainability Director

Microsoft

Ritika Adlakha

Technical Specialist – Business Applications

Microsoft

Agenda

- **Practical Steps to Embed Sustainability & ESG in your Business**

  Speaker: John Curran

- **Demo of Microsoft's Cloud for Sustainability**

  Speaker: Ritika Adlakhai

- **Data centre migration**

  Speaker: Peter Rose

- **Q&A Session**

- **Accelerate your sustainability journey**

  Speaker: Aisling Curtis

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Blue Planet Consulting
Sustainability & ESG Strategy and Advisory

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John Curran,
Managing Director & Principal Consultant

20+ years as a senior leader and non-executive director in the Sustainability & ESG space

Strategic sustainability projects	Cross-sector experience	Policy, plans and targets	Embedding best practice	Measurement and reporting performance	Guidance on risk, regulatory and technical matters

Blue Planet Consulting
Sustainability & ESG Strategy and Advisory

ENTERPRISE IRELAND
IDA Ireland
Cork Chamber
Member 2022

What we do:

- Assist senior leaders to navigate complexity
- Supporting Multi-sector Clients
- Providing tailored solutions
- Improvements in line with stakeholder expectations

How we deliver:

- Focus on simplification
- Identify clear priorities
- Robust foundations
- Accelerate progress

The Broader Sustainability Landscape

Climate Crisis

Efforts to reduce the harmful effects of global warming remain insufficient

Ecosystems Under Threat

Plastics pollution has become a catalyst for action on a range of biodiversity threats

Societal Change

People are demanding a new approach from governments and businesses to build a fairer, more sustainable world

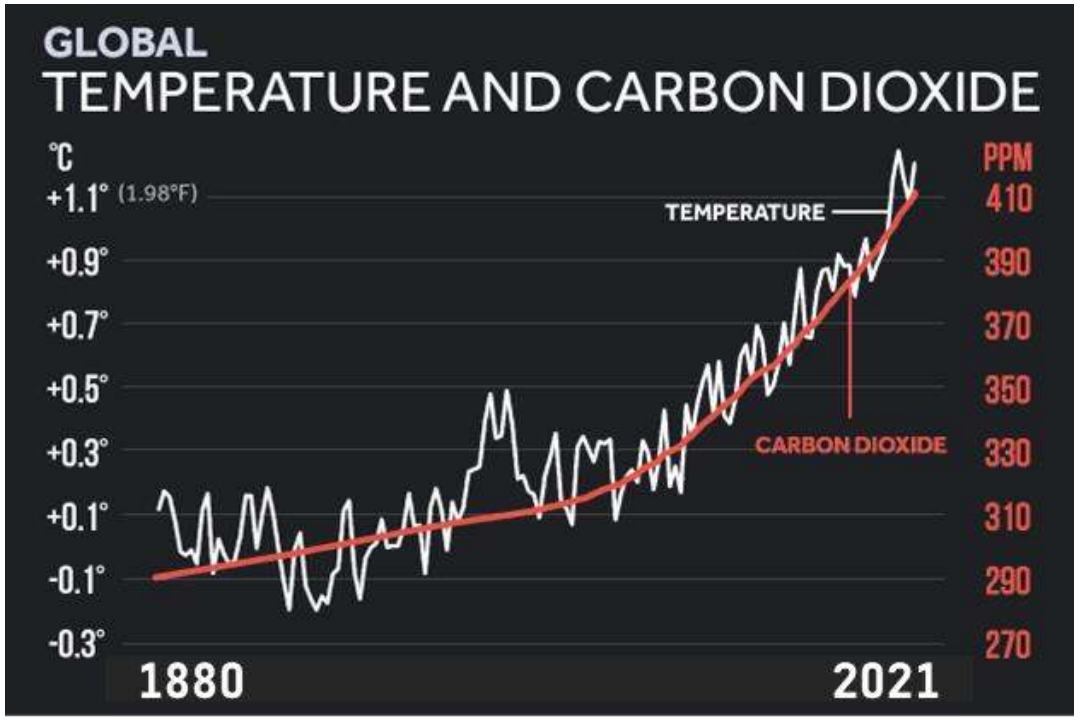
Leadership Gap

The lack of ambition by some governments has seen businesses take a leadership role

Greening of Government

As a response to climate change, voters opting for greener government

The Stark Facts



+1°C since 1906

2020 tied with 2016 as the hottest year on record	Arctic sea ice declining at ± 13% per decade, vs 1981 to 2010 average	Many species on the move, while others, unable to adapt becoming extinct
18 of the last 19 warmest years have occurred since 2000	Melting land ice contributes to sea-level rise, currently 3.2 mm p/a annually	150-200 plant, insect, bird and mammal species become extinct every 24 hours
1983–2012 was likely the warmest 30-year period of the last 1,400 years	Extreme weather events increasing in frequency: hurricanes, floods and droughts	Some species including mosquitoes, ticks, jellyfish and crop pests are thriving

Precipitation has increased across the globe, on average. Yet some regions are experiencing more severe droughts, increasing the risk of wildfires, lost crops, and drinking water shortages. This is leading to famine and disease and the displacement of human populations, especially in developing countries. This is leading to mass migration and increasing conflict as people compete for scarcer resources

Global forecast for 2050

50%

Increase in demand for food production

50%

Increase in demand for energy

40%

Increase in demand for water

40%

Increase in demand for transport

World Population is projected to increase from 7.8 billion in 2020 to 9.9 billion by 2050. (>25% from 2020)

Sustainability & ESG: an issue for every organisation

The impacts and actions of organisations are increasingly being scrutinised by their stakeholders

Investors

Customers

Lenders

Insurers

Regulators

NGOs

Employees

Society

Key global Sustainability & ESG trends (B2B & B2C)

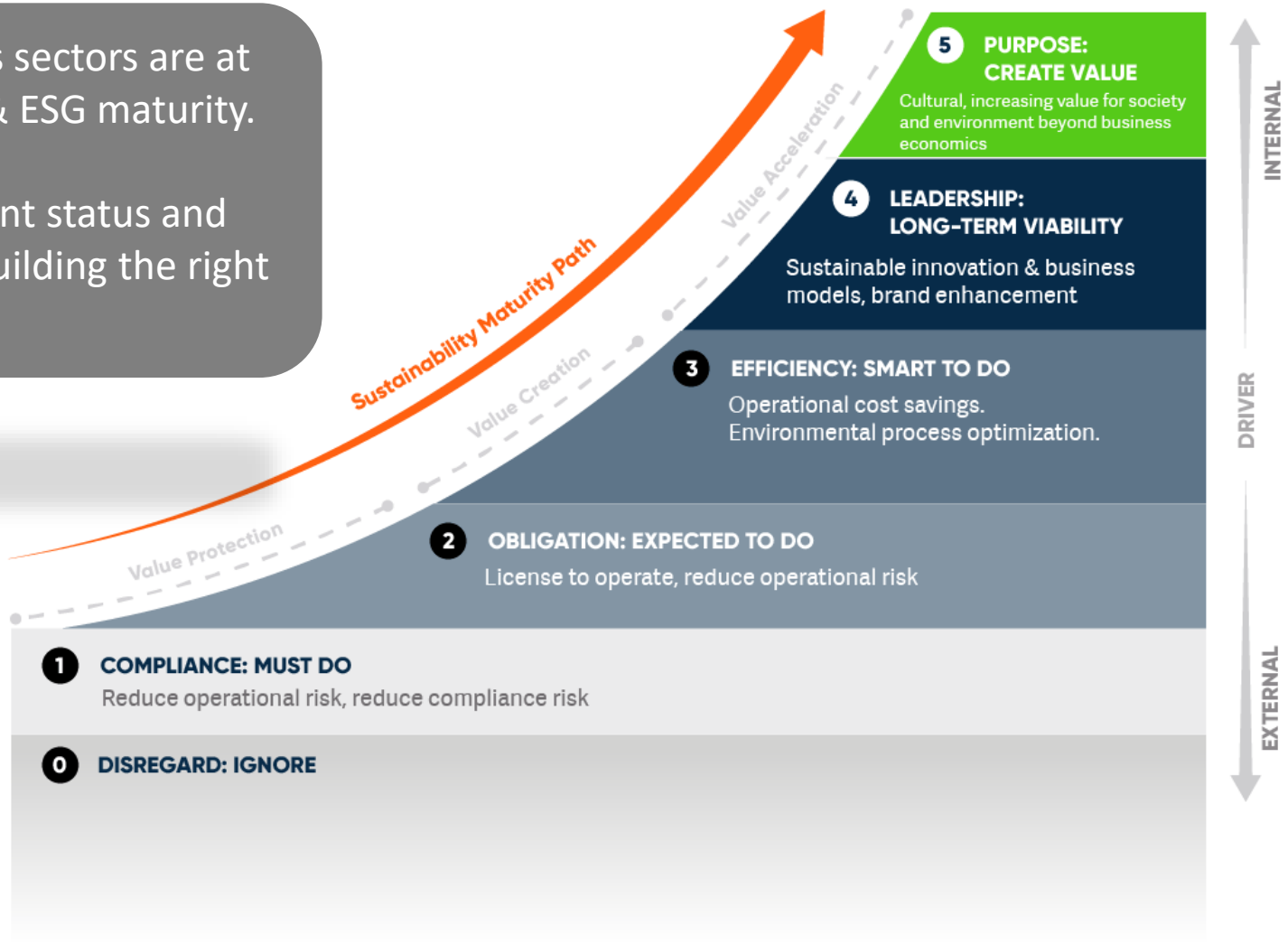
Scrutiny	Transparency	Authenticity	Dependency
Business are under the microscope as customers critically evaluate every business activity	Businesses need to be honest and transparent to overcome customer skepticism	Customers want to see real authentic purpose and action not empty words	Customers want help, but are more informed and will call-out any flaws

Businesses must be able to demonstrate clear evidence of meaningful action or risk being accused of ‘greenwashing’

Sustainability & ESG Maturity Model

Organisations across all business sectors are at varying stages of Sustainability & ESG maturity.

Understanding our clients' current status and their future ambition is key to building the right strategy and roadmap.



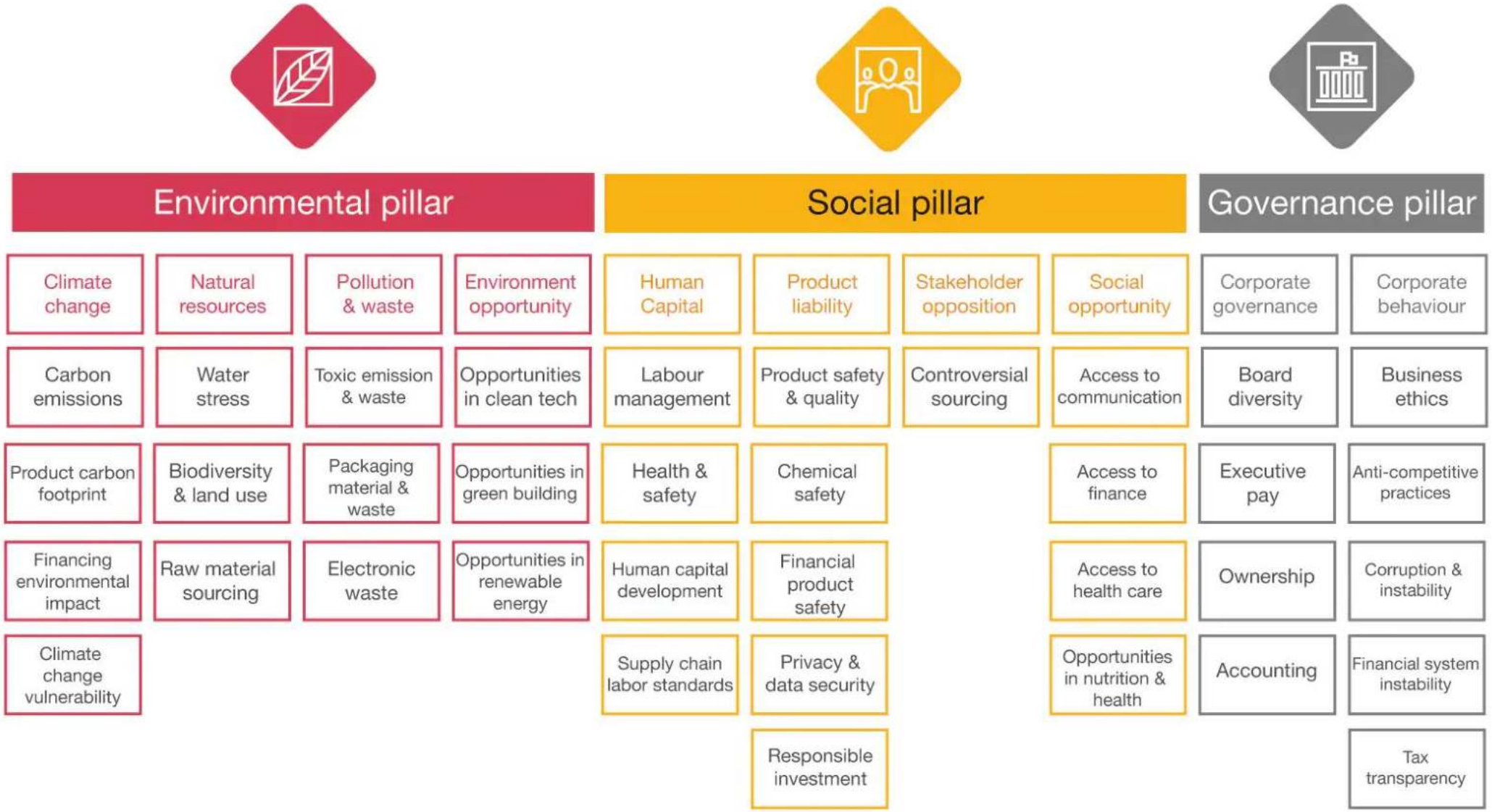
Source PwC

The fundamental elements of sustainability

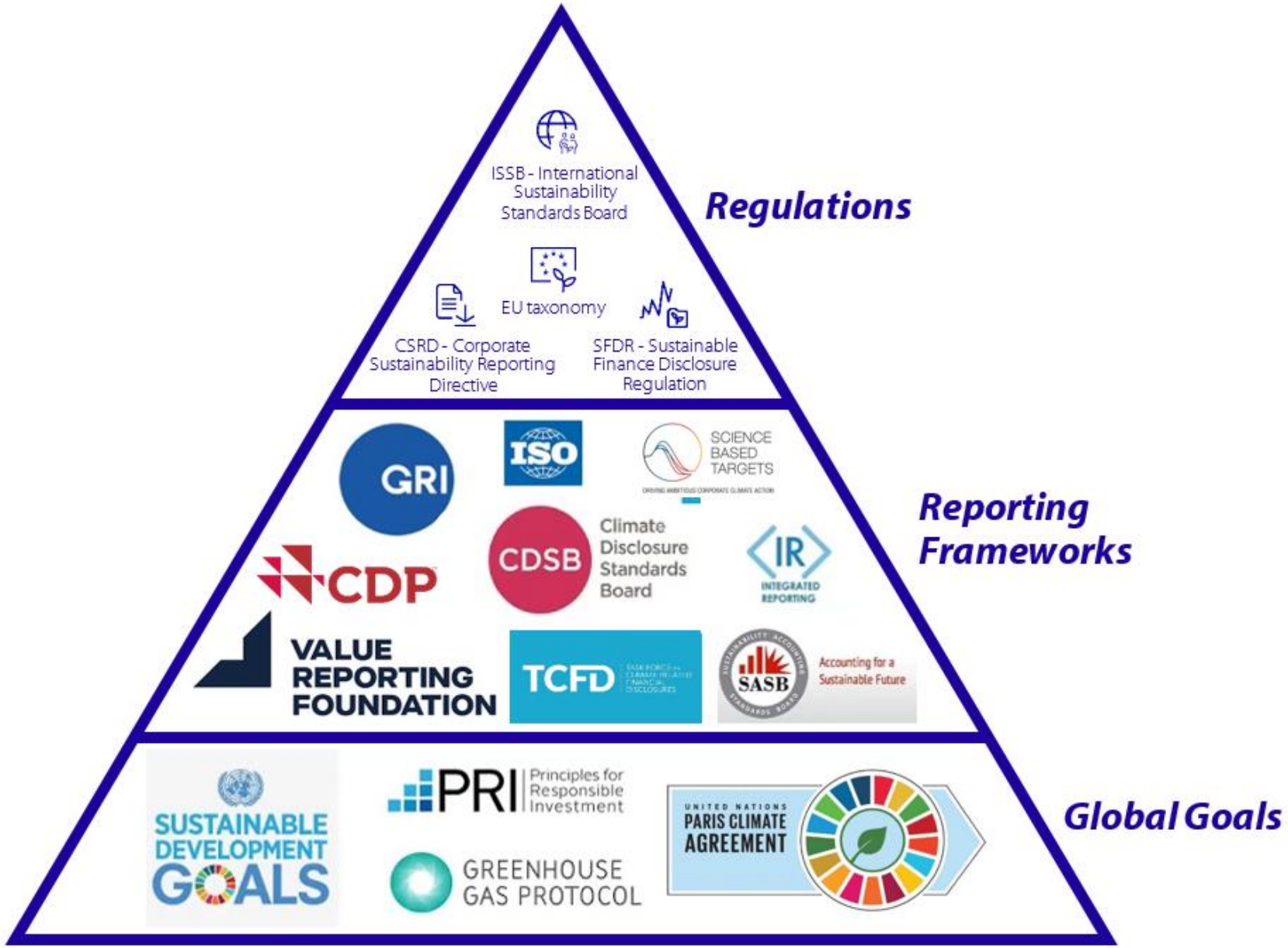
Regardless of the business sector, the fundamental principles of sustainability are universal and unchanging and are underpinned by the UN Sustainable Development Goals (UNSGDs).

Pillar	Key Outcomes	High-level Actions		
Social	Supporting people and communities	Growing sustainable communities	Harnessing the power of employees	
Environment	Reducing impacts on the environment	Moving to Net-Zero Carbon operations	Putting the Circular Economy at the core	Helping customers to be more sustainable
Economic	Sourcing locally, sustainably and ethically	Sourcing with Care	Supporting Local producers	

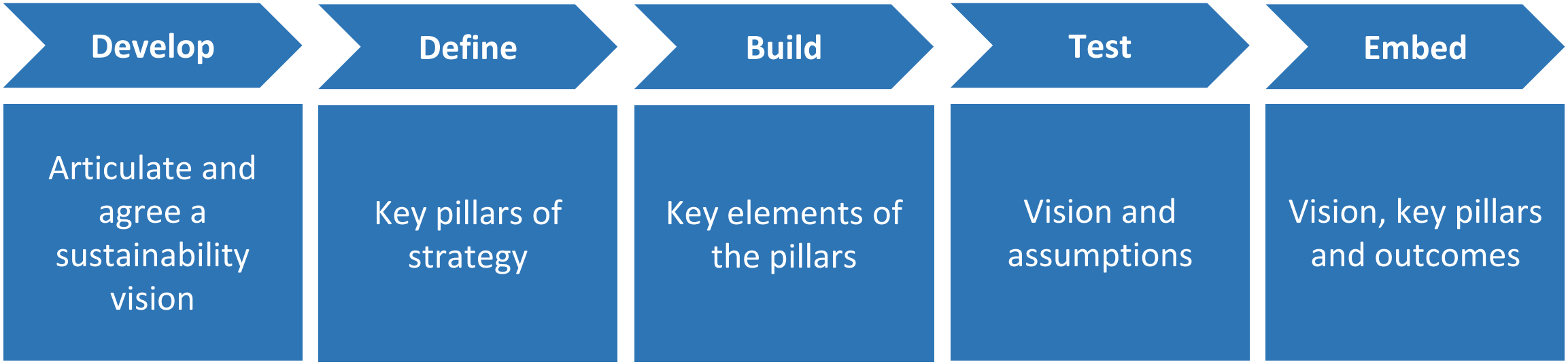
Sample Sustainability & ESG Materiality Framework



The ‘Alphabet Soup’ of Standards and Regulations



High-level Vision & Strategic Framework



Sustainability & ESG strategy: Business Outcomes

differentiate	leadership	compliance	reputation	stakeholders
innovation	employees	talent	cost	profitability

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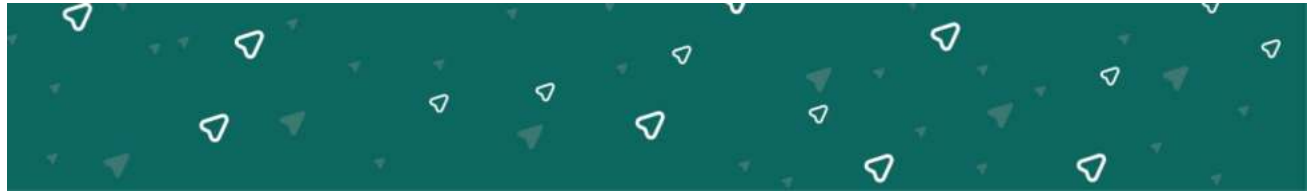

Peter Rose

Common Drivers for Server/Datacenter Cloud Migration

Increased Business Agility

Time to infrastructure deployment

Access to Advanced Cloud Services

AI, Advanced Security etc

Supply Chain Issues

Supply Chain Delays = years

Electricity Outages/Remote Access

Battery and Generator + Diesel supply

Cost and Capacity Optimisation

Scale when needed up and down,

Cost based on usage, not static

Sustainability

Reduce Energy & Carbon +

Capture & Report on Carbon

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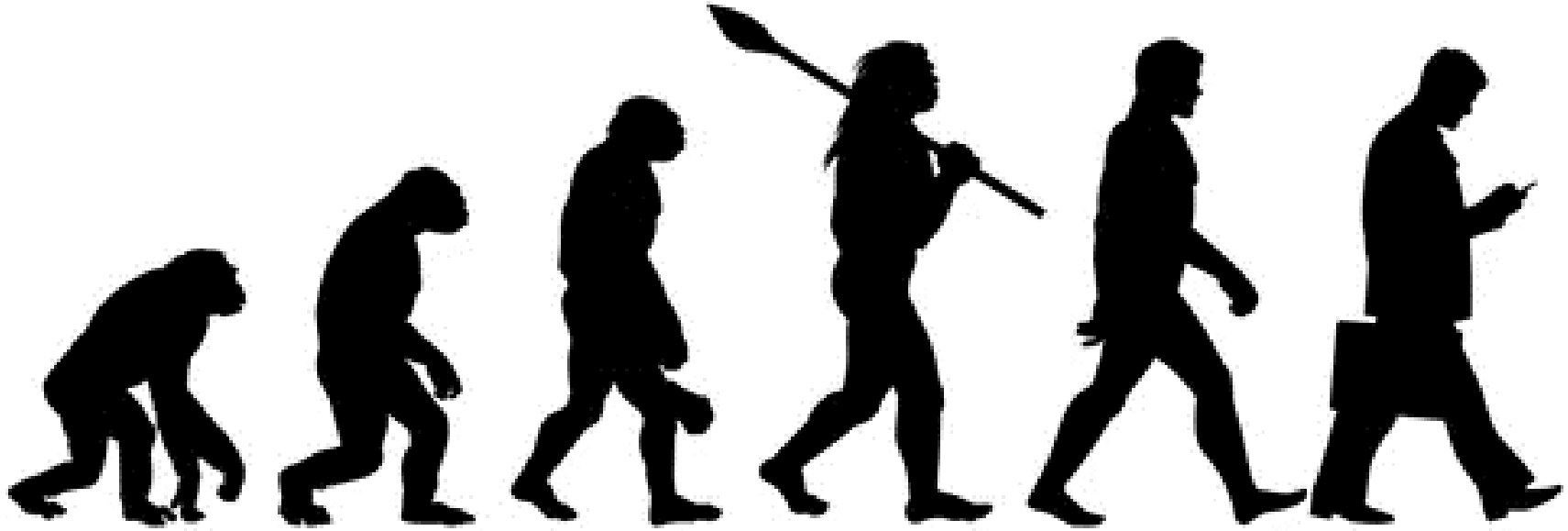
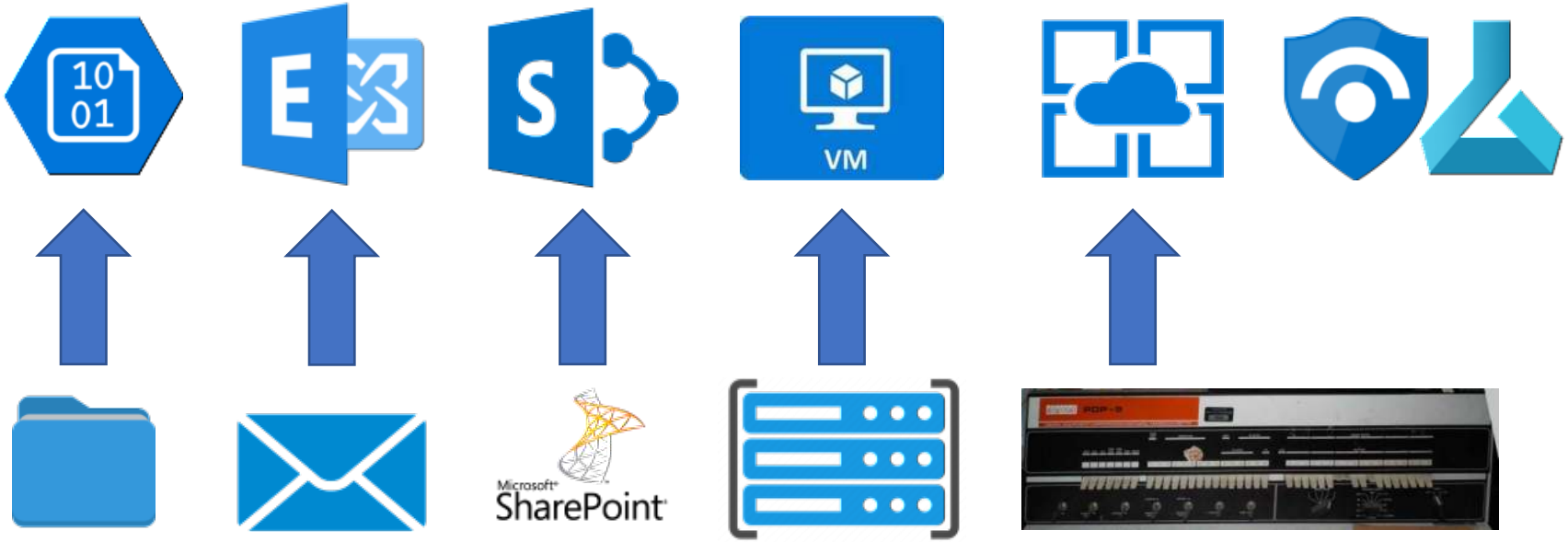
Cloud Journey Maturity





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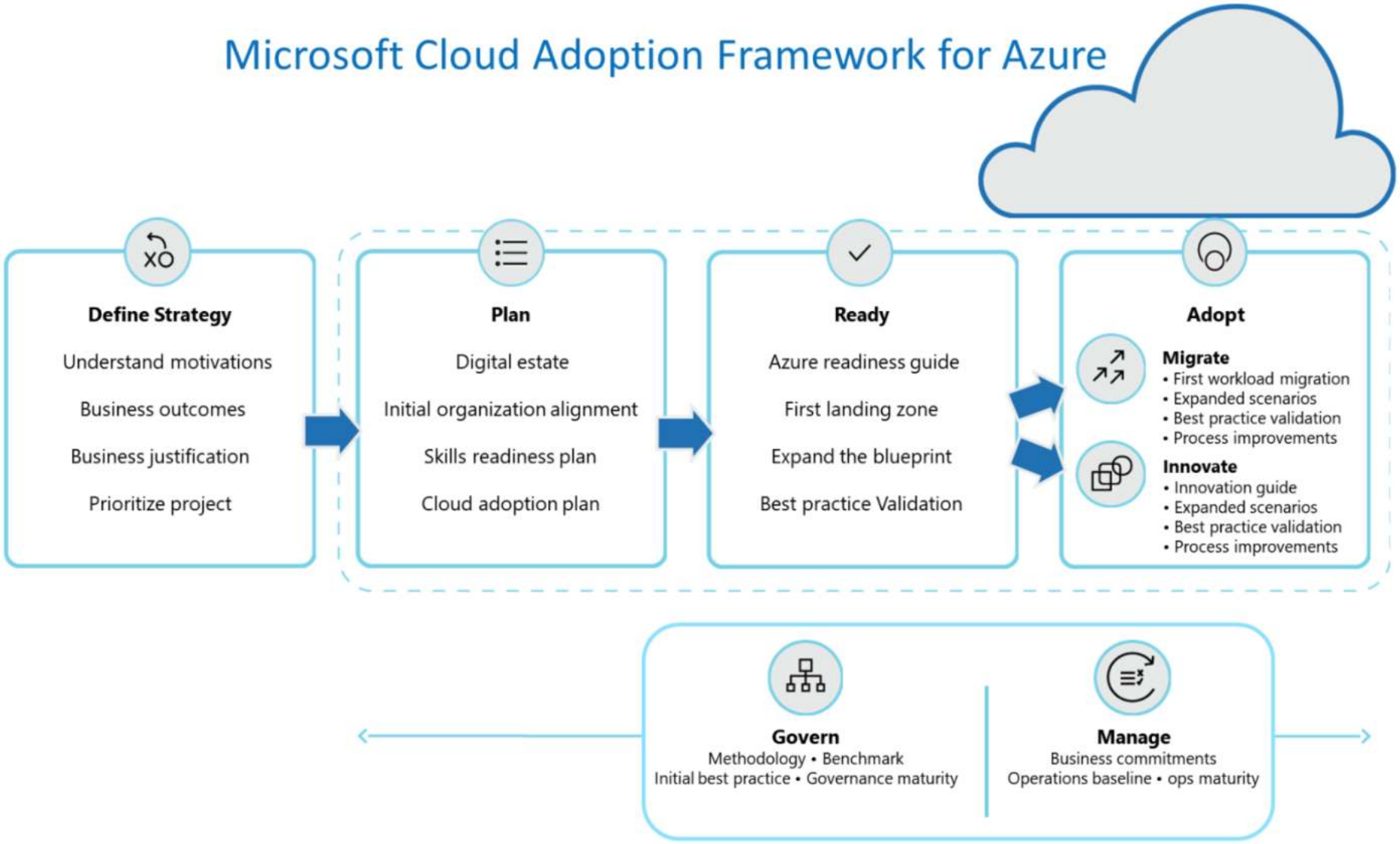
Defined Methodology



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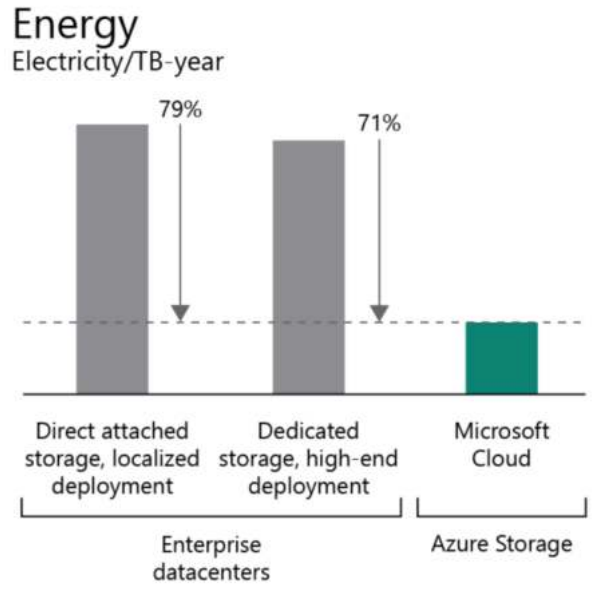
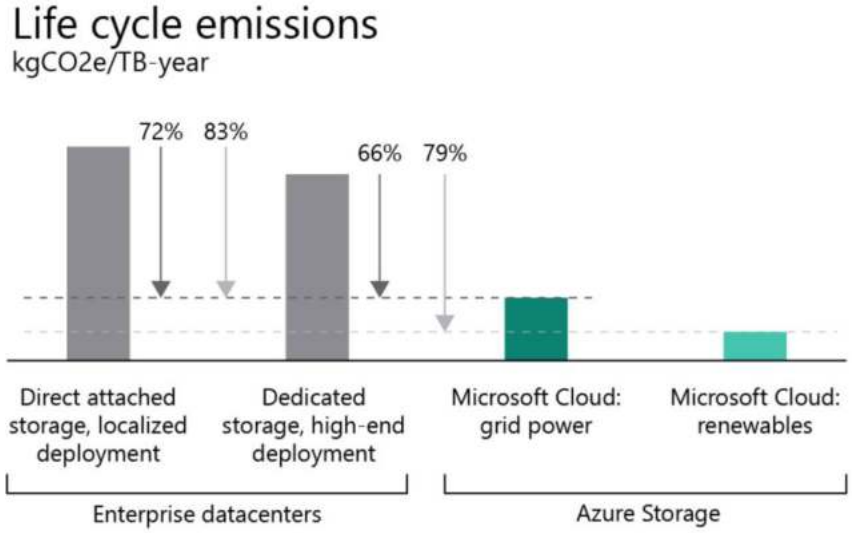
Storage Savings

Azure Storage is **71–79 percent more energy efficient** than storage equivalents deployed in traditional enterprise datacentres, depending on the type of enterprise deployment.



When renewable energy is taken into account, carbon emissions from Azure Storage are **79–83 percent lower** than traditional enterprise datacentre deployments of storage equivalents



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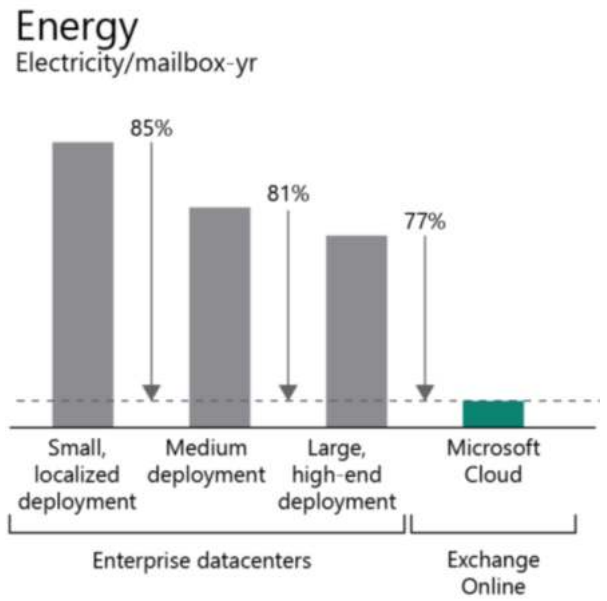
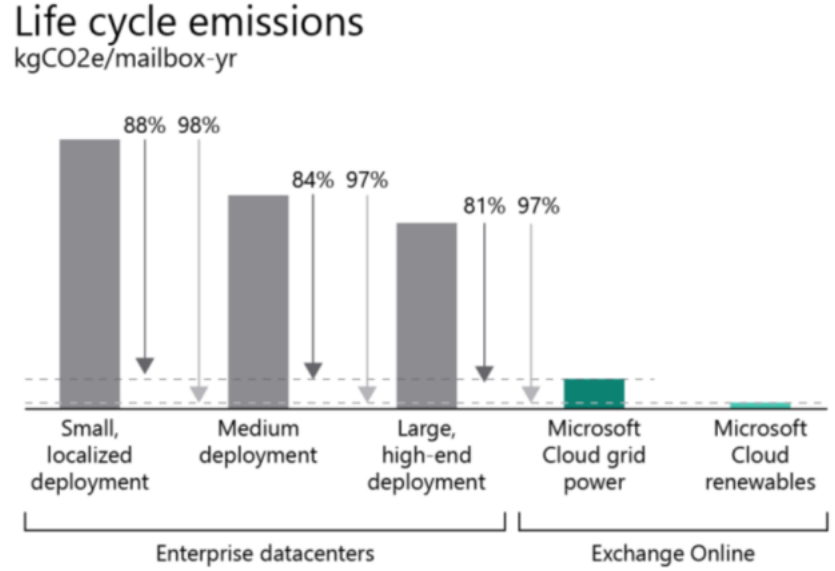
Exchange Online Savings

Exchange Online is **77–85 percent more energy efficient** than Microsoft Exchange deployed in traditional enterprise datacentres depending on the size of the enterprise deployment



When renewable energy is taken into account, carbon emissions from Exchange Online are **97-98 percent lower** than traditional enterprise datacentre deployments of Exchange



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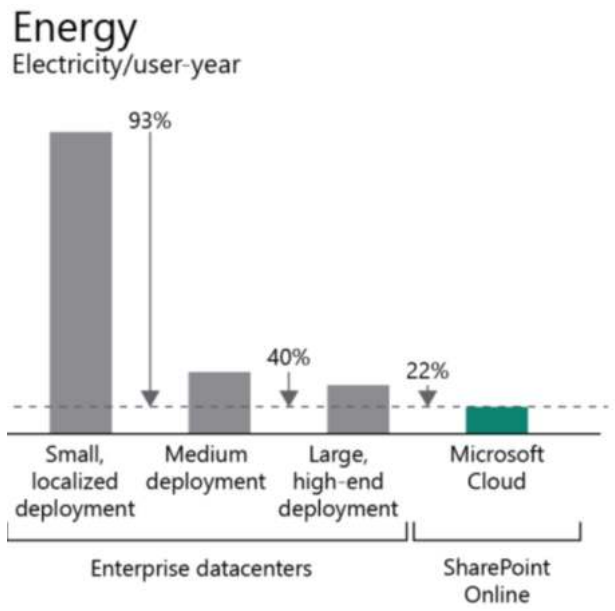
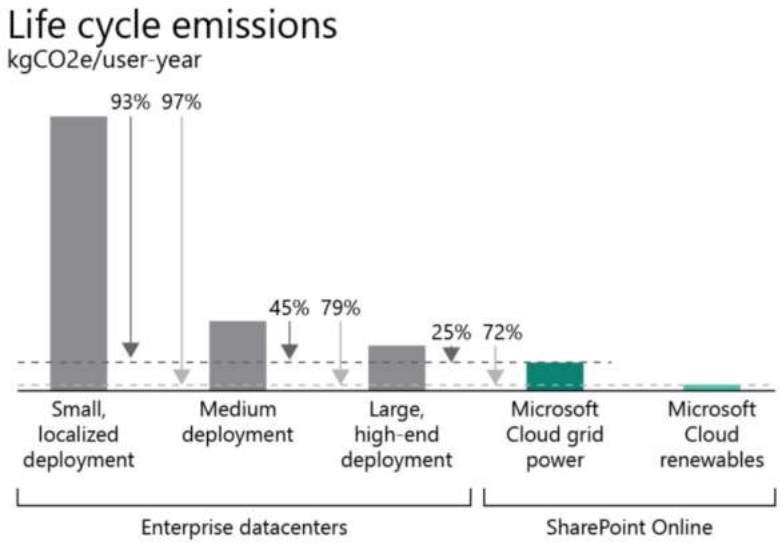
SharePoint Online Savings

SharePoint Online is **22–93 percent more energy efficient** than SharePoint deployed in traditional enterprise datacentres depending on the size of the deployment in the enterprise datacentre (small, medium, or large)



When renewable energy is taken into account, carbon emissions from SharePoint Online are **72–97 percent lower** than traditional enterprise datacentre deployments of SharePoint



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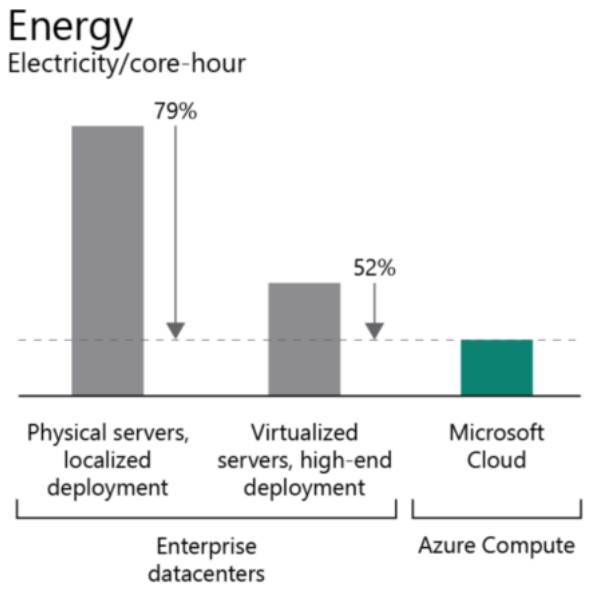
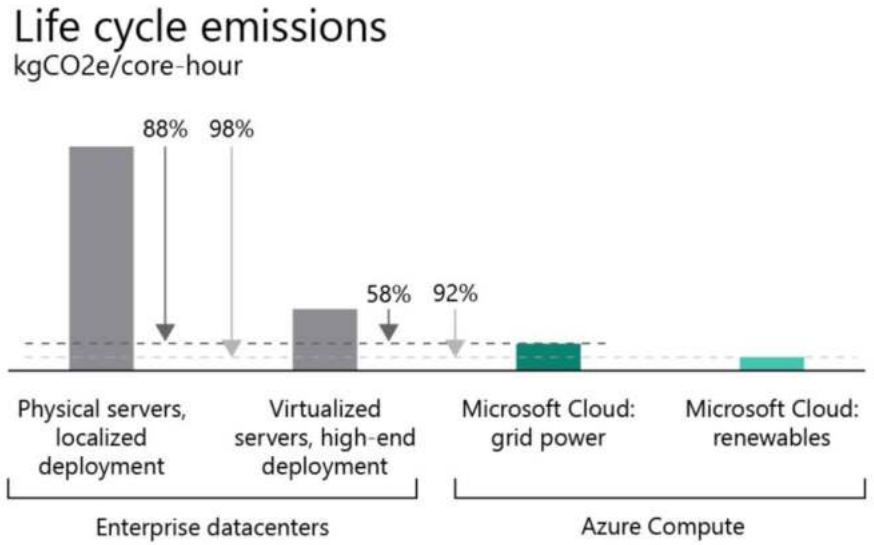
Compute (VM) Savings

Azure Compute is **52–79 percent more energy efficient** than compute equivalents deployed in traditional enterprise datacentres, depending on the type of enterprise deployment.



When renewable energy is taken into account, carbon emissions from Azure Compute are **92–98 percent lower** than traditional enterprise datacentre deployments of compute equivalents

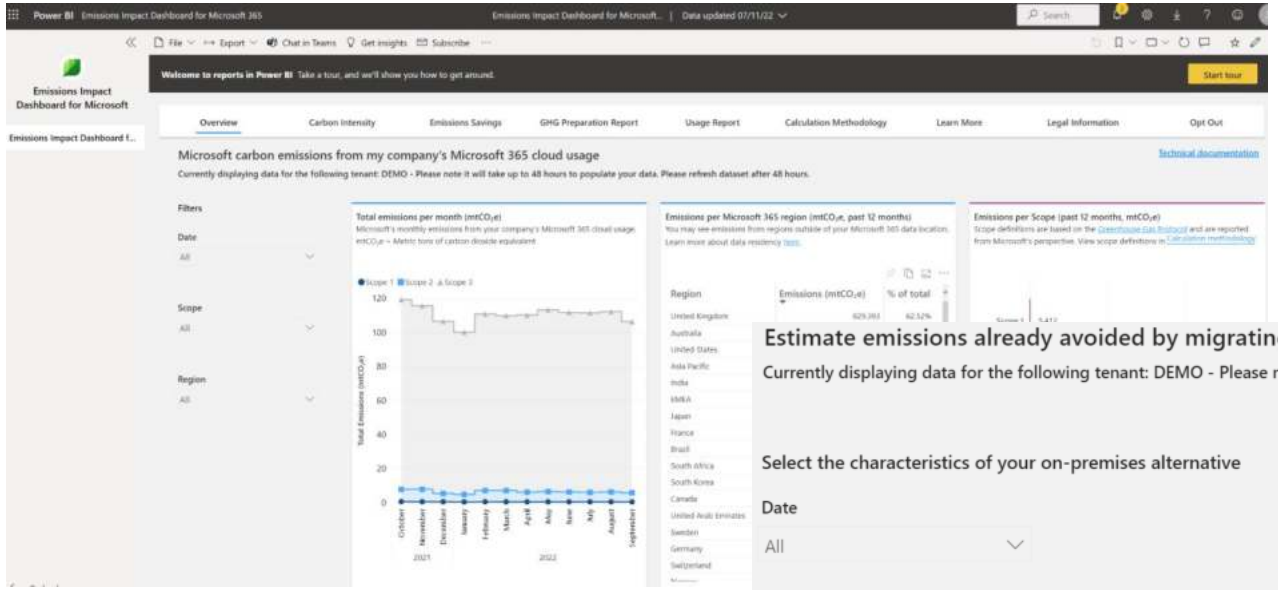


Summary kgCO2e Savings

Workload	Min Projected Savings	Max Projected Savings	Notes
Storage	79%	83%	Largest gain Server Local Storage -> Cloud. Lower gain from high density storage like NAS
Exchange	97%	98%	Small Localised deployments save the most in migration and larger high end deployments the least but still a massive saving
SharePoint	72%	97%	Small Localised deployments save the most in migration and larger high end deployments the least but still a massive saving. It is about density, smaller deployments have less server utilisation typically.
Compute	92%	98%	Physical Servers gain the most savings through cloud migration and virtualised servers a bit less due to the achievable utilisation percentages of the hardware but both have a major saving.

What other initiatives can deliver this impact as quickly with all the associated advantages of cloud migration!

Useful Tools – Office 365 and Azure Emissions Tools (Power BI)



Estimate emissions already avoided by migrating to the Microsoft cloud

Currently displaying data for the following tenant: DEMO - Please note it will take up to 48 hours to populate your data. Please refresh dataset after 48 hours.

Select the characteristics of your on-premises alternative

Date: All

Efficiency Scale: **Low** | Medium | High

Renewable energy purchases: 0%

7608.148	$mtCO_2e$ from on-premises alternative
-6945.315	$mtCO_2e$ saved from Microsoft efficiencies
-590.942	$mtCO_2e$ saved from Microsoft renewable energy purchases
71.892	$mtCO_2e$ from switch to Exchange Online and SharePoint Online*

99.06%
Carbon emissions saved ($mtCO_2e$)

7,536.257
Carbon emissions saved ($mtCO_2e$)

18,426,147.614
Carbon emissions saved in driven distance — ML | KM

*This figure is based on Scope 1 and 2 emissions from your organization's usage of Exchange Online and SharePoint Online (inclusive of OneDrive).

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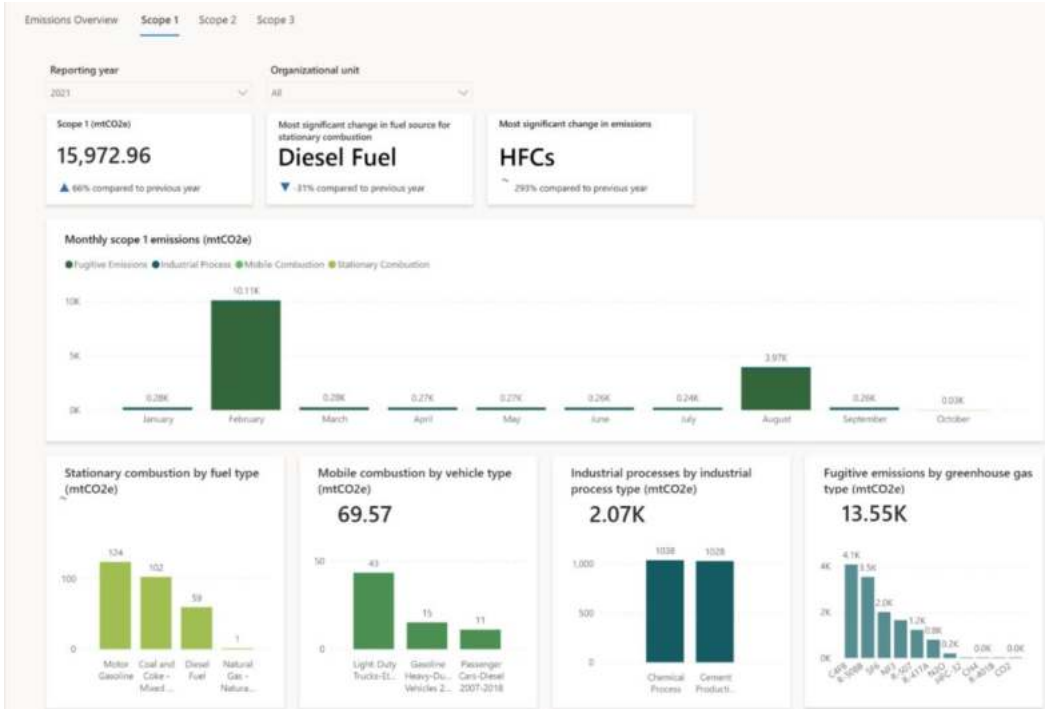
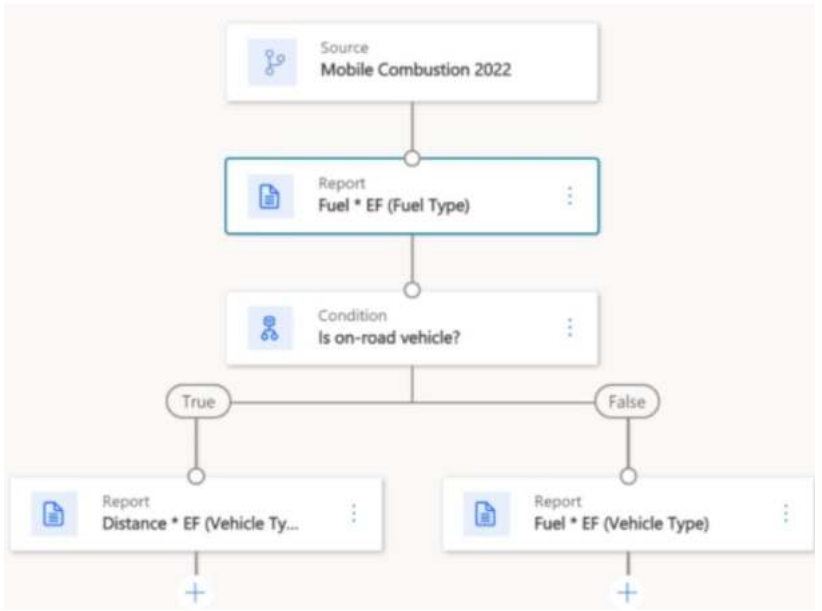
Useful Tools – Microsoft Sustainability Manager





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Unify data intelligence

Gain the visibility you need to improve sustainability reporting and help transform your business.

Build a sustainable IT infrastructure

Identify opportunities to replace your tools, systems and activities with more efficient options.

Reduce the environmental impact of operations

Track and minimise the environmental footprint of your operational systems and processes.

Create sustainable value chains

Enhance accountability across your value chain, from sourcing materials through product distribution.

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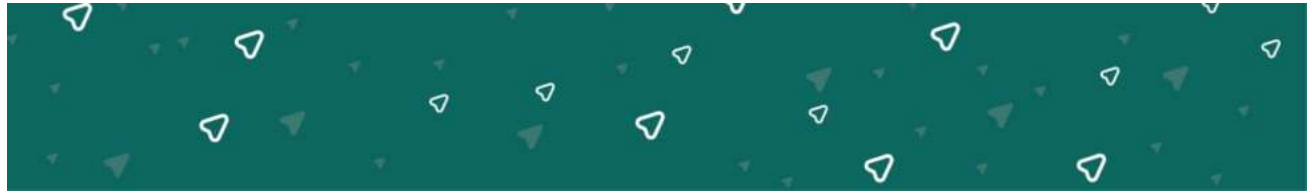


Aisling Curtis

Microsoft

Microsoft
Cloud for Sustainability

Accelerate your sustainability journey

Aisling Curtis
Director of Strategy and Sustainability

Agenda

1. Climate and business challenges
2. Our sustainability journey

Sustainability drivers

Increasing regulatory requirements

~50k

Companies in the European Union may have to adhere to detailed sustainability reporting standards in 2024[1]

Growing expectations from investors

73%

Investors state that efforts to improve the environment and society contribute to their investment decisions[2]

Rising consumer demand

62%

Global consumers willing to change their purchasing habits to reduce environmental impact[3]

Emerging economic opportunities

$43T

Strong climate action could deliver trillions to the global economy by 2070[4]

Navigating obstacles

- Lack of global standards
- Slow manual processes
- Value chain transparency
- Siloed data
- Capital investment tradeoffs

Microsoft will be carbon negative by 2030 and will remove all historic emissions emitted either directly or via electricity consumption by 2050

Sustainability Goals by 2030

Carbon negative	Zero Waste	Water positive	Restore more land than we use

Our direct emissions and for our entire supply and value chain

Our Approach

Investing to build the leading platform for technology solutions to environmental challenges

$1 billion over 4 years

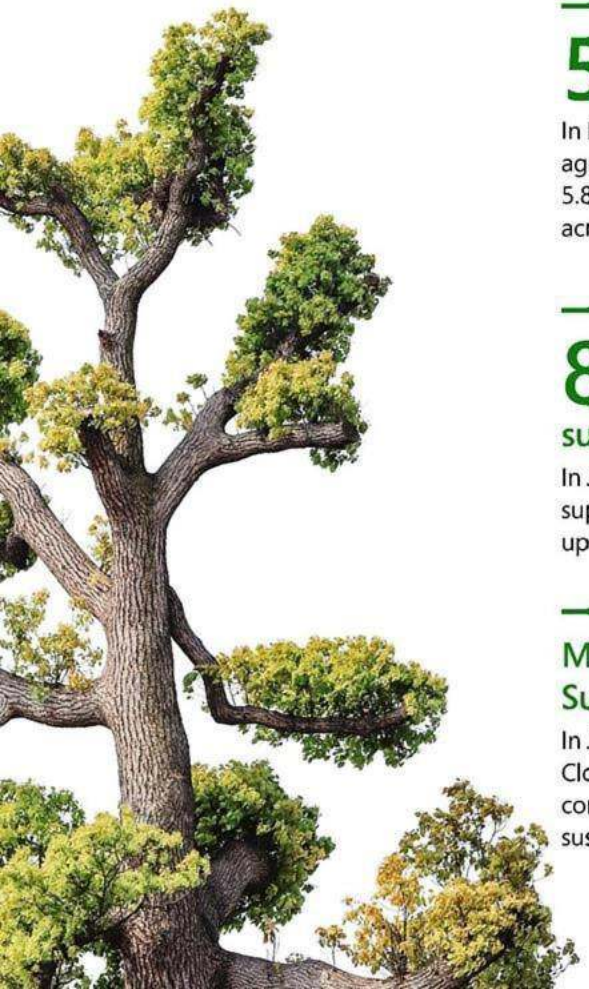
Speeding development of sustainability technologies and solutions through targeted investments and grant-funding

Climate Innovation Fund

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 $mtCO_2$, 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^3

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 of water benefit per year.

>95K people

Through our partnership with Water.org, we provided more than 95,000 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 APIs 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.

How we report

Reporting standards, policies, and practices

Environmental indicators

Material issues

Governance structure

aka.ms/msftsustainabilityreport

Progress depends on a common foundation for accurate, consistent, reliable measurement

… and continuous visibility and data intelligence **to inform and guide your journey**

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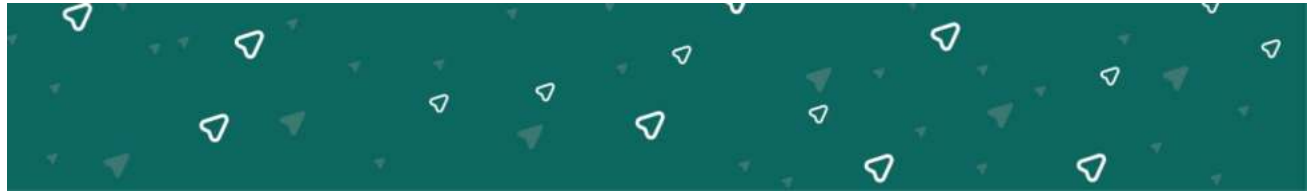


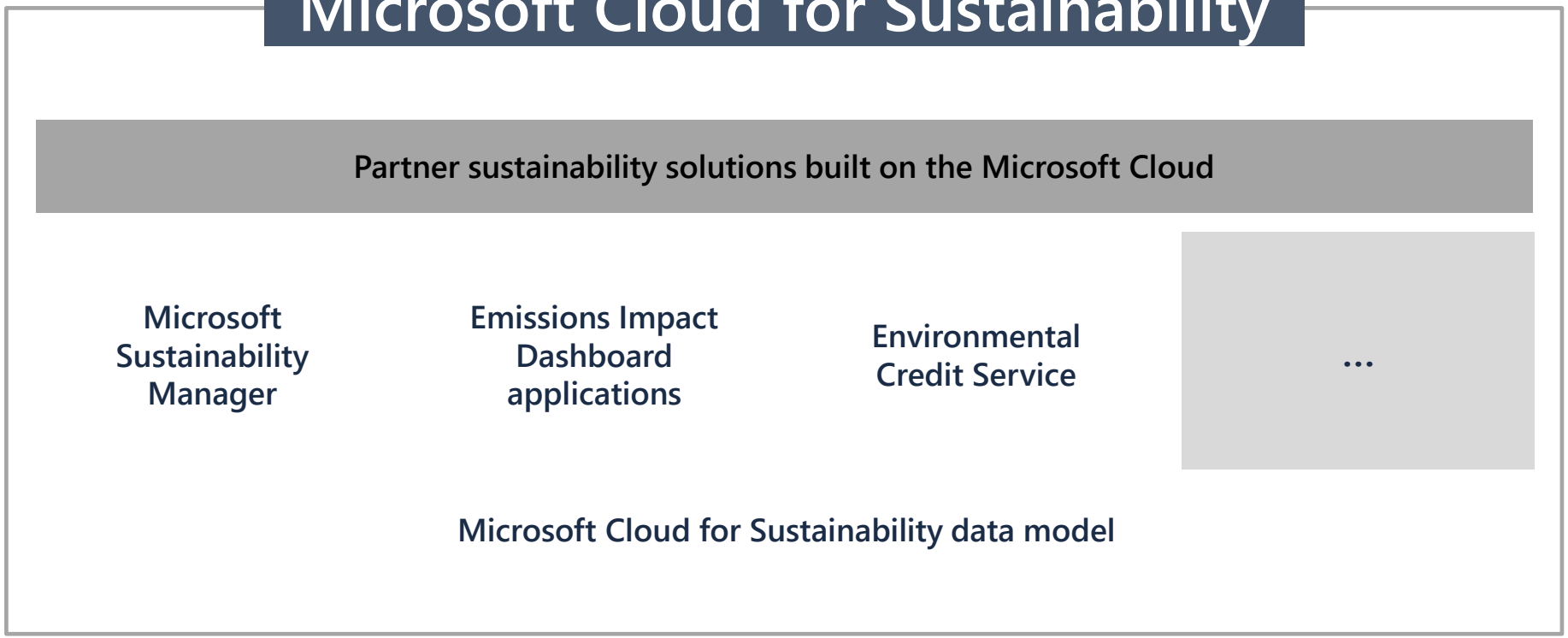
Ritika Adlakha

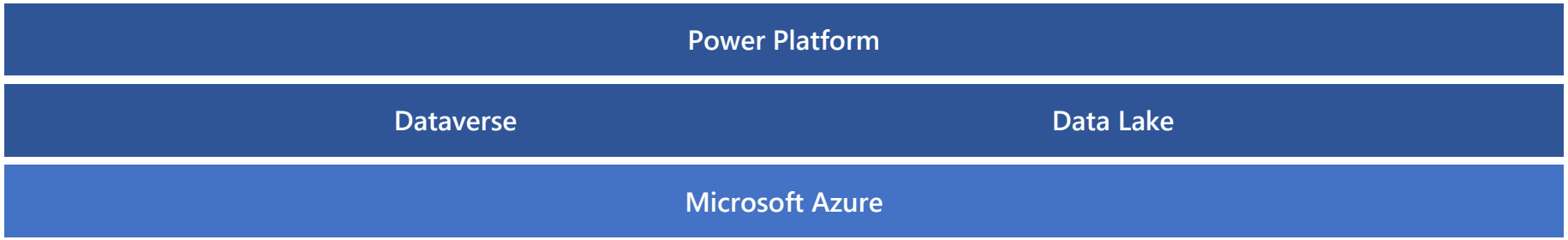
Microsoft

Microsoft Cloud
for Sustainability

Ritika Adlakha
Technology Specialist

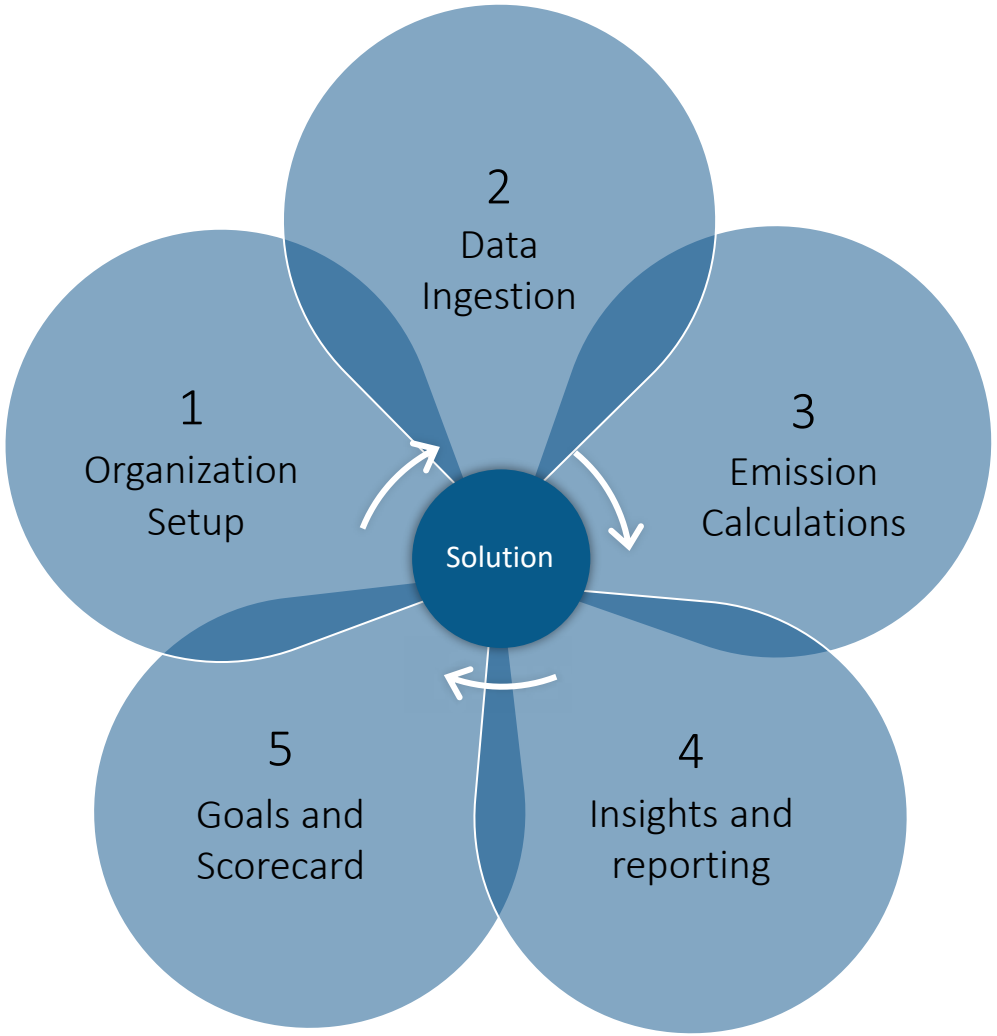
Microsoft Cloud for Sustainability





Microsoft Sustainability Manager

Solution focus areas



End-to-end demo
Microsoft Sustainability Manager

- Company profile
- Scorecards and goal-setting
- Adding data with the help of connections
- Setting up calculation model
- Using calculation profiles
- Emission scopes & analysis
- Data exploration

Webinar Summary

Climate Crisis

Efforts to reduce the harmful effects of global warming remain insufficient

Microsoft Cloud

Carbon emissions are already being reduced through migrating to the Microsoft Cloud

Microsoft Sustainability Goal by 2030

Microsoft will be carbon negative by 2030 and will remove all historic emissions emitted either directly or via electricity consumption by 2050

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Thank You

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