



The bridge to possible

Sustainability as a Business Driver

Proposal of Total Sustainability Cost of Ownership

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Cisco Webex App

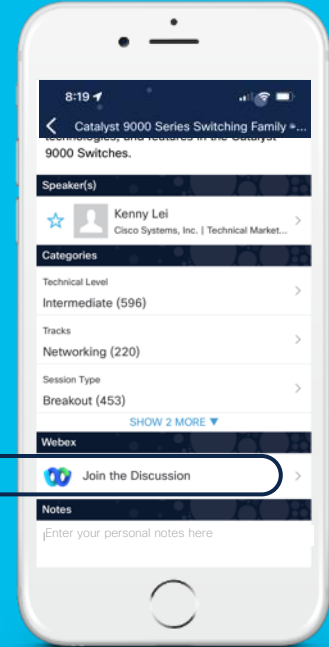
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated until February 24, 2023.



Sustainability as a business driver

Why?

What are the
benefits?

How to make
it real?

“Drive sustainability as a business opportunity!”



Esther Roure Vila
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“Actionable Insights!!”



Tiziano Canovai
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“Less is more”

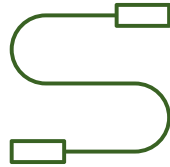
Agenda

- Introduction
- Towards Total Sustainability Cost of Ownership of a Data Center Solution
- What is the Carbon Pricing?
- How to transform Sustainability Goals into Operational KPIs
- Conclusion

Sustainability as a business driver

“To embrace sustainability in business is to acknowledge that all business decisions have significant impact on the planet and people, in both negative and positive ways.”

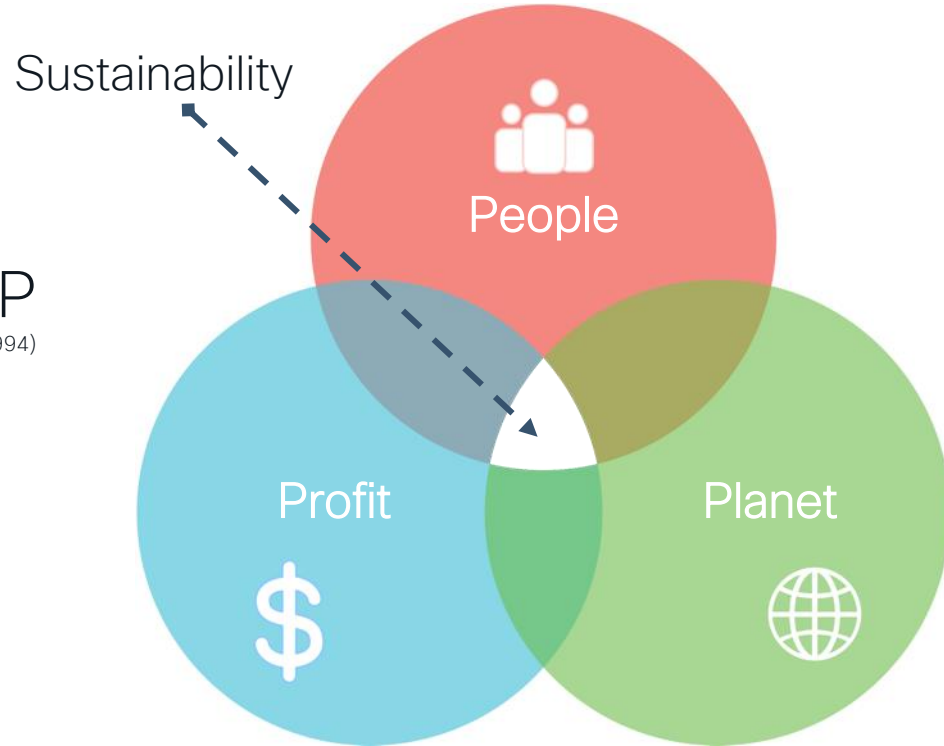
Swivel to Sustainability, Dr. Leyla Acaroglu



Sustainability must provide key inputs that drive the **business's operations** and financial results.

Sustainability as a business driver

Triple bottom line, 3P
(John Elkington 1994)

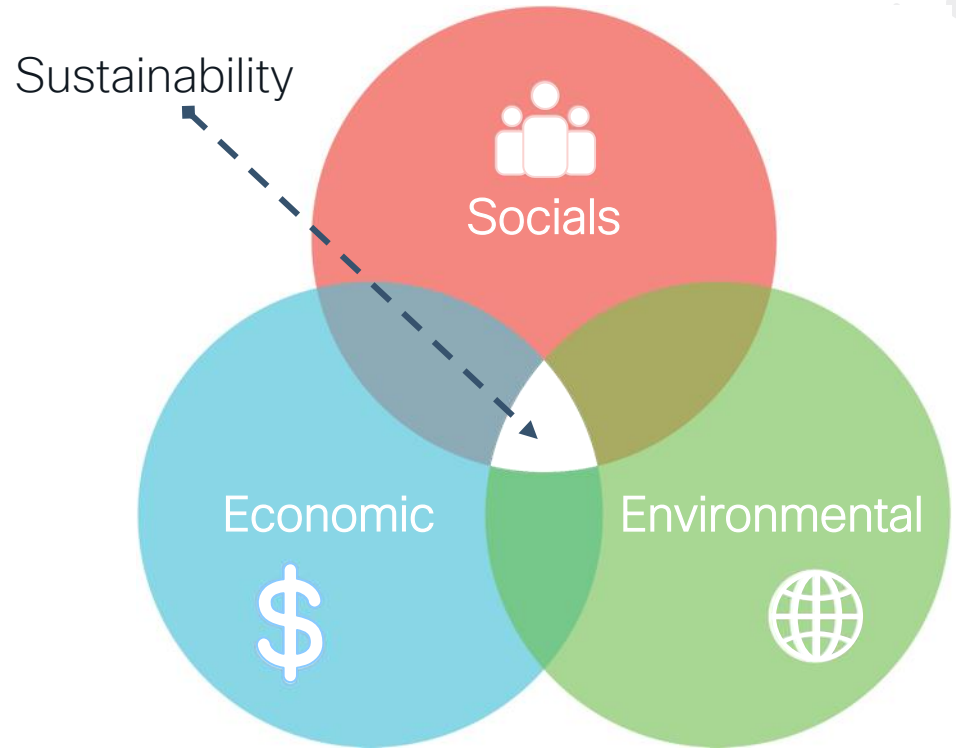


Sustainability as a business driver

Sustainability must take Economic, Environmental, Socials, and Governmental factors into account for strategic and operational decisions.

ESG*:

- Environmental
- Social
- **Governance**



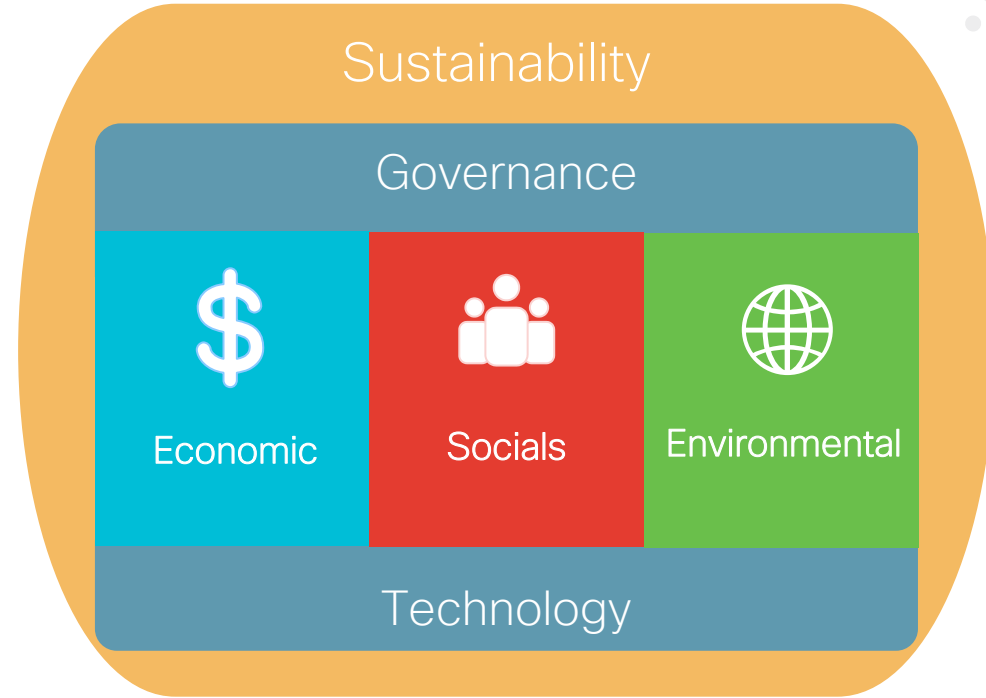
*ESG was popularly used first in a 2004 report titled "[Who Cares Wins](#)"

Sustainability as a business driver

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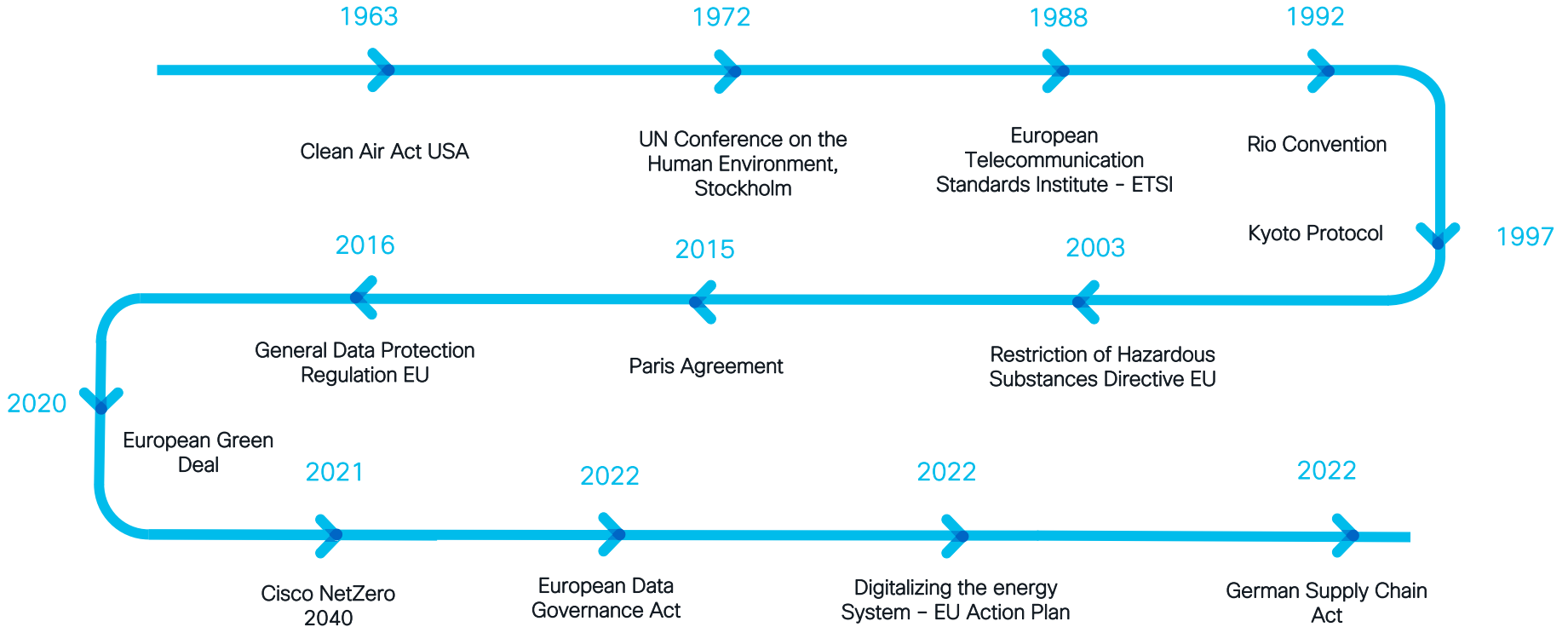
The purpose of Sustainability is to support long-term stakeholder value.

Stakeholders are wider than the “traditional” shareholders and investors, including customers, partners, employees, etc.



Global regulations




Driving Sustainability Transformation



NextGenerationEU: €800 billion for Europe's recovery

Recovery and Resilience Facility €723.8 billion

- €338.0 billion in grants
- €385.8 billion in loans

-  Clean technologies and renewables
-  Energy efficiency of buildings
-  Sustainable transport and charging stations
-  Digitalisation of public administration
-  Data cloud and sustainable processors
-  Education and training to support digital skills
-  Roll-out of rapid broadband services

NextGenerationEU
€806,9
billion

NextGenerationEU contribution to other programmes

€83.1 billion

React-eu	€50.6 billion
Just transition fund	€10.9 billion
Rural development	€8.1 billion
Investeu	€6.1 billion
Horizon Europe	€5.4 billion
Resceu	€2.0 billion

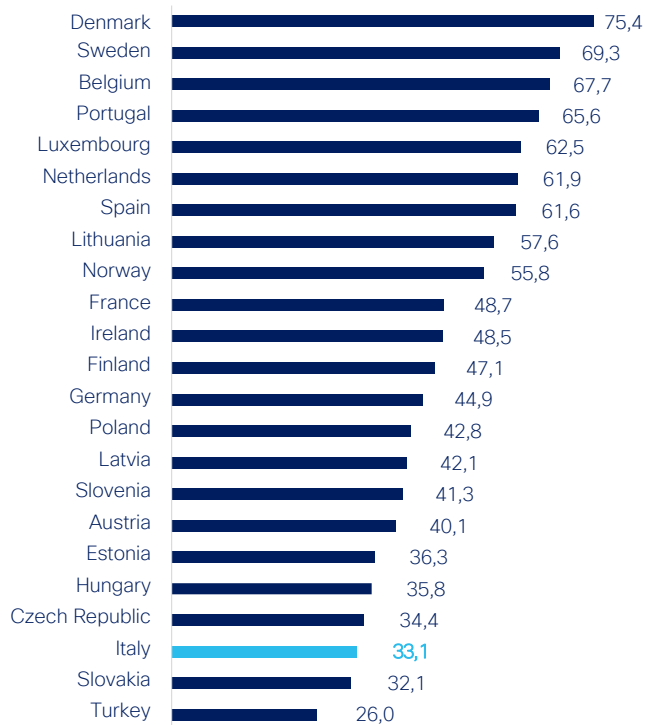
Source: [Recovery and Resilience Scoreboard](#)

The impact of telecommunications investments on the productivity of Italian companies

If, in the period **2021-2025 broadband penetration** reaches the European average value (49.2%), companies with access to broadband would benefit from an increase in productivity capable of generating, cumulatively, **110 billion euros**.

Source: The European House – Ambrosetti, European commission's data 2020-21

Ultra-wideband penetration (% of enterprises), 2020.



Global trends in digital and energy indicators

2015-2021

	2015	2021	Change
Internet users	3 billion	4.9 billion	+60%
Internet traffic	0.6 ZB	3.4 ZB	+440%
Data centre workloads	180 million	650 million	+260%
Data centre energy use (excluding crypto)	200 TWh	220-320 TWh	+10-60%
Crypto mining energy use	4 TWh	100-140 TWh	+2.300-3.300%
Data transmission network energy use	220 TWh	260-340 TWh	+20-60%

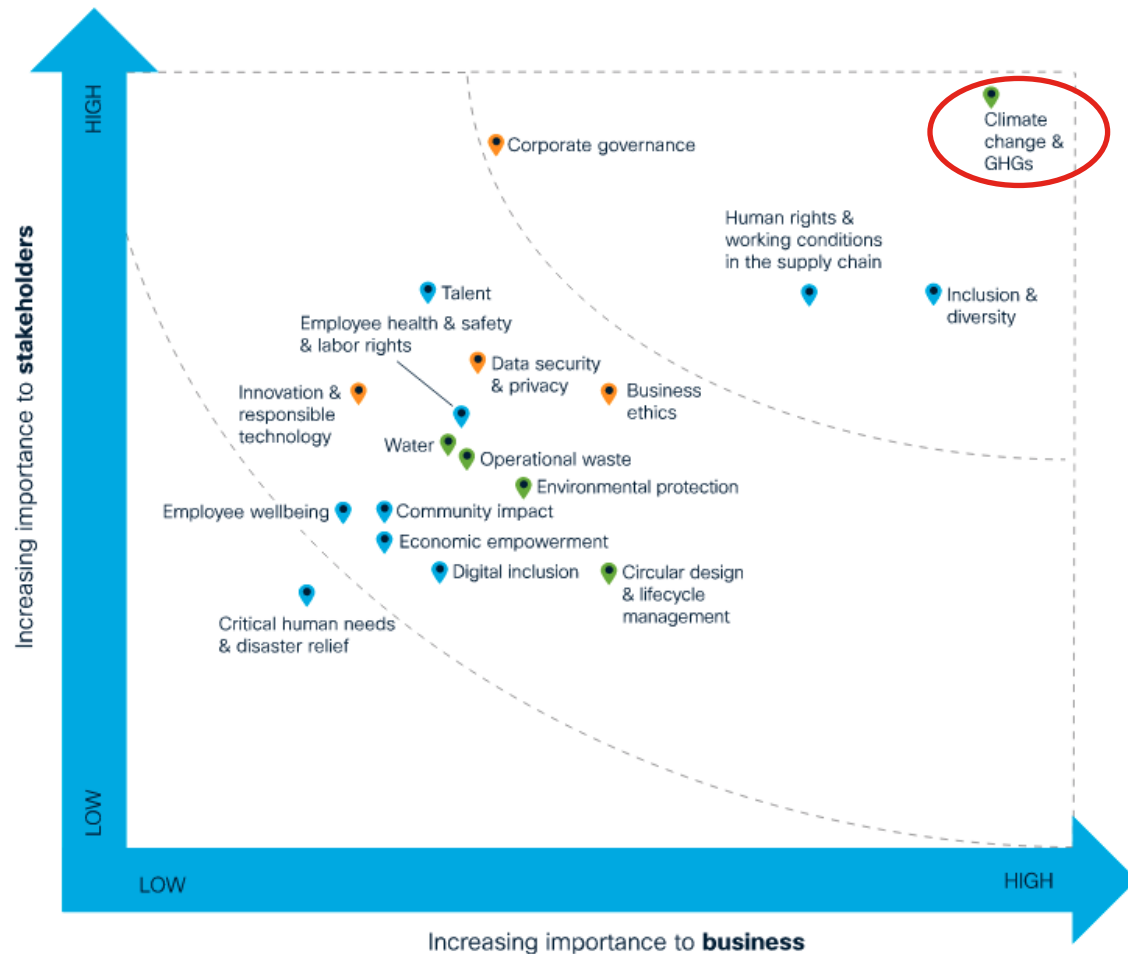
Source: [Data Centres and Data Transmission Networks IEA](#)

Sources: Internet users [[ITU \(2022\)](#)]; internet traffic [IEA analysis based on [Cisco \(2015\)](#); [TeleGeography \(2022\)](#); Cisco (2019), Cisco Visual Networking Index]; data centre workloads [Cisco (2018), Cisco Global Cloud Index]; data centre energy use [IEA analysis based on [Malmudin & Lundén \(2018\)](#); [ITU \(2020\)](#); [Masanet et al. \(2020\)](#); [Malmudin \(2020\)](#); [Hintemann & Hinterholzer \(2022\)](#)]; cryptocurrency mining energy use [IEA analysis based on [Cambridge Centre for Alternative Finance \(2022\)](#); [Gallersdörfer, Klaßen and Stoll \(2020\)](#); [McDonald \(2022\)](#)]; data transmission network energy use [[Malmudin & Lundén \(2018\)](#); [Malmudin \(2020\)](#); [ITU \(2020\)](#); [Coroama \(2021\)](#); [GSMA \(2022\)](#)].

FY21 ESG Cisco's Materiality Matrix

For more detail, see the ESG Hub: cisco.com/go/esg-hub

"Greenhouse gas (GHG) are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wave-lengths within the spectrum of thermal infrared radiation emitted by the Earth's surface, the atmosphere itself, and by clouds." [IPCC AR4 SYR Appendix Glossary](#) (PDF).

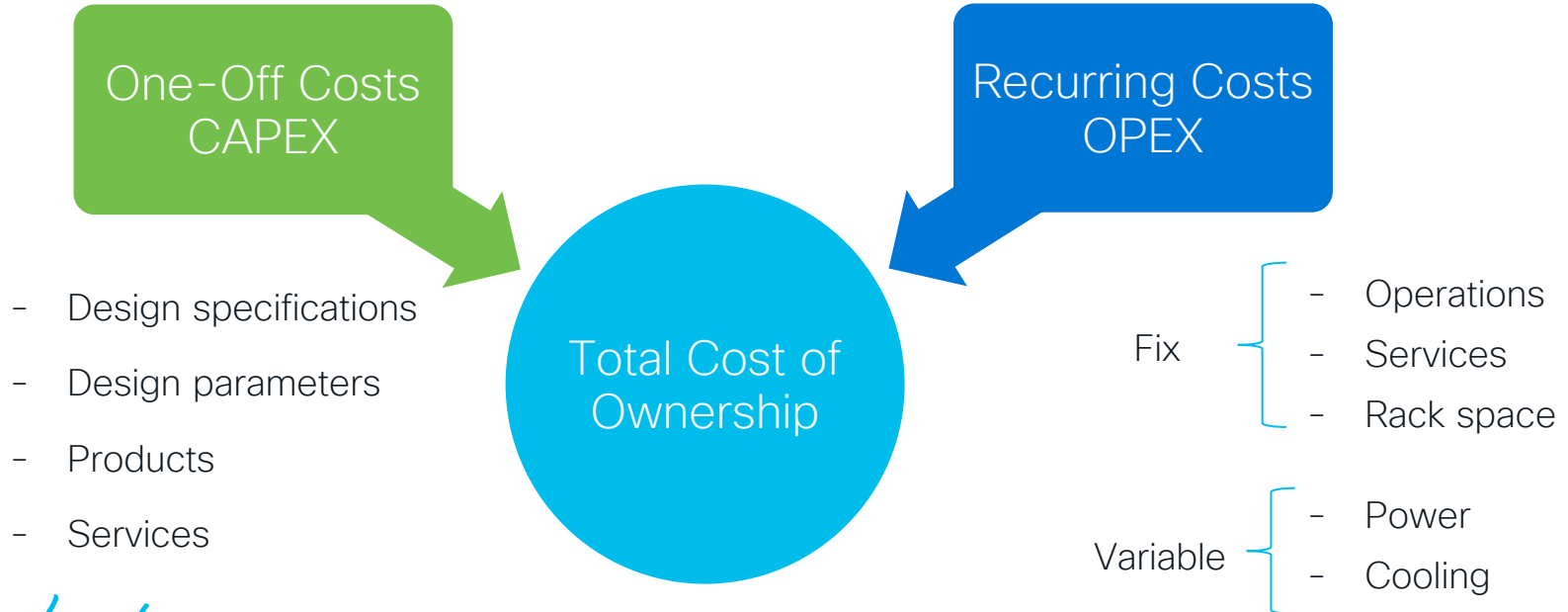


Towards Total Sustainability Cost of Ownership of a Data Center Solution



Total Cost of Ownership

TCO includes the **purchase price of an asset plus the costs of operation**. These are the long-term costs and expenses incurred during the product's useful life and ultimate disposal.



Model building: Growth prediction

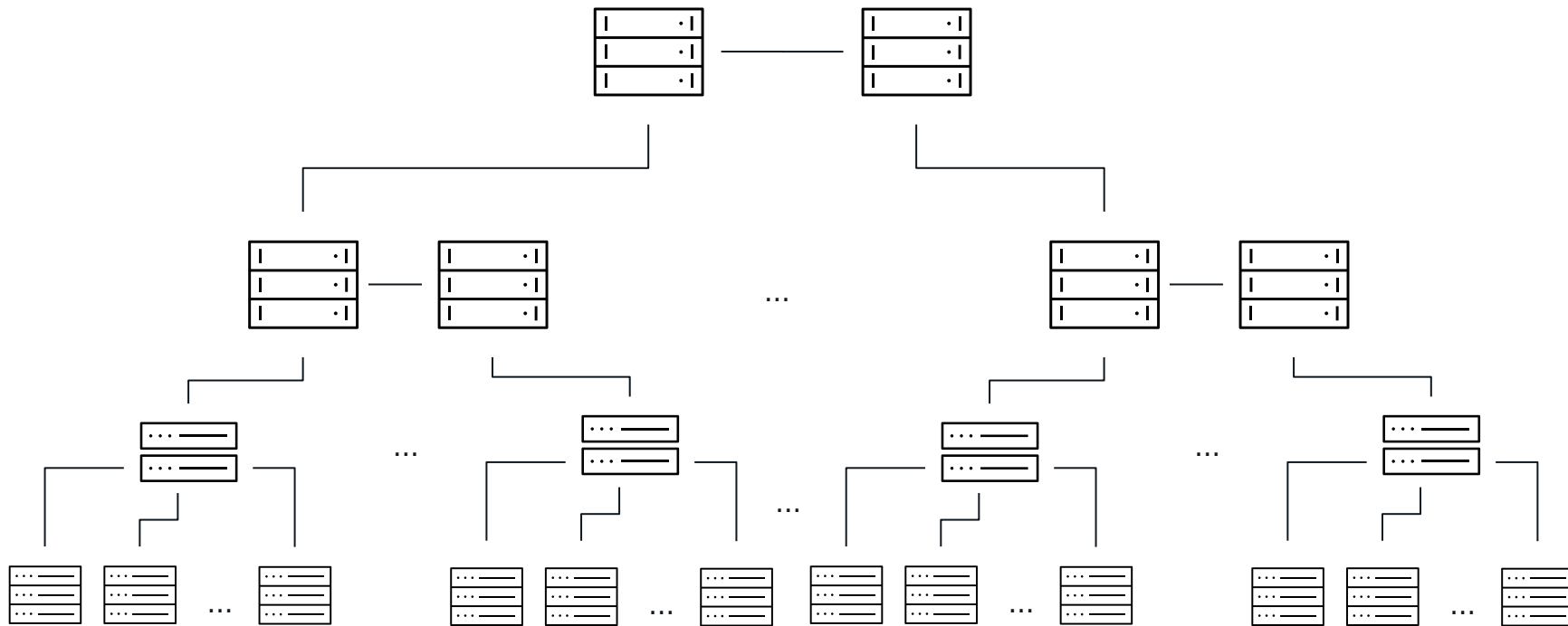
	Now	Year 1	Year 2	Year 3	Year 4	Year 5
Number of Virtual Machine (VM)	0	6,811	10,964	18,036	29,561	50,015
VM Increment	0	6,811	4,153	7,072	11,525	20,454
Estimated Cost for VM (€)	0	2,180	1,050	1,170	1,080	1,150

For Demo Purposes Only. Based on Hypothetical, Not Actual Customer Data.
Sample data, not exhaustive.

Model building: Growth prediction

Data Center Solution

Year 4



Note: Sample data, not exhaustive
Redundancy not represented for simplicity

Model building

One-Off Costs
CAPEX

- Design specifications
- Design parameters
- Products
- Services

VM requirements	
RAM per VM GB	3.5
Number of ports for VM	2.4
BW per VM MB/s	262.5
Storage x VM GB	159
VM oversubscription	0.4
Routed BW per VM MB/s	2
Security BW per VM MB/s	2
LB BW per VM MB/s	2
...	...

General Limits		
Feature	Limitation	Explanation
UCS 6296 FI	20	Maximum Chassis
UCS 6296 FI	96	Ports on the FI
UCS 6296 FI	1	Gig Bandwidth x port
N7k F2 module	48	Gig ports
N7k M1 module	48	10 Gig ports
FC ports x module	48	
FC ports x BW	8	
...

AKA	Item Name	Description	HA	Price	Service Price
UCS Server	UCS-EZ-VDI-B200PK	UCS Blade 8 x 16 GB 2,7 GHZ	1	xx	xx
UCS FI	UCS-SP-INFRA-FI96	UCS FI 6296UP	2	xx	xx
UCS Chassis	UCS-EZ-INFRA-CHSS	UCS EZ BUN 5108	1	xx	xx
N7k Chassis	N7K-C7010-BUN2-R	Nexus 7010 Bundle	2	xx	xx
...

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Sample data, not exhaustive.

Model building: Power information

Recurring Costs
OPEX

	System Workload Factor (W)	Max Power (W)	Max Current Draw (A)	Idle Power (W)	Cooling System Workflow (BTU/hr)
Servers	3134.2	4864	20.3	1465.1	10694.3

[UCS Power Calculator](#)

Slot	Line Card	Output Current (A)	Output Power (W)	Typical Power Used (W)	Heat Dissipation (BTU/Hr)
	Total	94.36 Amps	4718.0 Watts	2794.0 Watts	15101.89 BTU/Hr
SYSTEM-FAN	N77-C7710-FAN	12.0	600.0	30.0	2276.67
FABRIC MODULE	-- Reserved Power --	2.46	123.0	114.0	---
...
6	N77-SUP3E	2.6	130.0	110.0	493.28
7	N77-F348XP-23	9.6	480.0	450.0	1821.33
8	N77-F348XP-23	9.6	480.0	450.0	1821.33

[Cisco Power Calculator](#)

Assumptions

For this exercise and for simplicity, we assume:

- Day Average constant emission factors
- Constant maximum power
- Constant power price
- No investment after year 5
- Same expenses after year 5
- Amortization and inflation will not be considered
- Rack Space Cost = 0
- Same labour cost during 5 years
- Water usage not accounted
- Focus on products in use. Next phase will include the equipment life cycle and circular economy
- Virtual Machine as a unit of value. To be extended to server utilization and containers

Model building: Static data

Power Cost per kWhr (€): 0.1604

[Electricity price statistics](#)

Rack Space Cost = 0

(For this exercise considered 0 for simplicity)

Labour Cost = 110.000 €

Power usage effectiveness (PUE) = 1.8

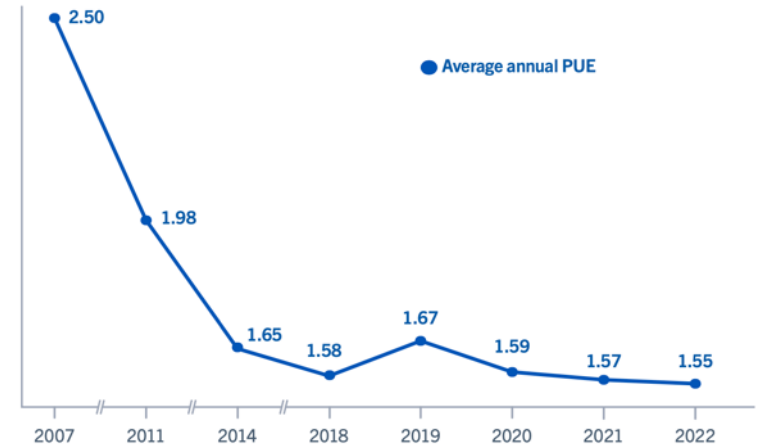
(Amount of power needed to operate and cool the data center vs.
the amount of power drawn by the IT equipment in the data center)

$$\text{PUE} = \frac{(\text{Total Facility Energy})}{(\text{IT Equipment Energy})}$$

Recurring Costs
OPEX

PUE progress has stalled

What is the average annual PUE for your largest data center? (n=669)



UPTIME INSTITUTE GLOBAL SURVEY OF
IT AND DATA CENTER MANAGERS 2007-2022

UptimeInstitute | INTELLIGENCE

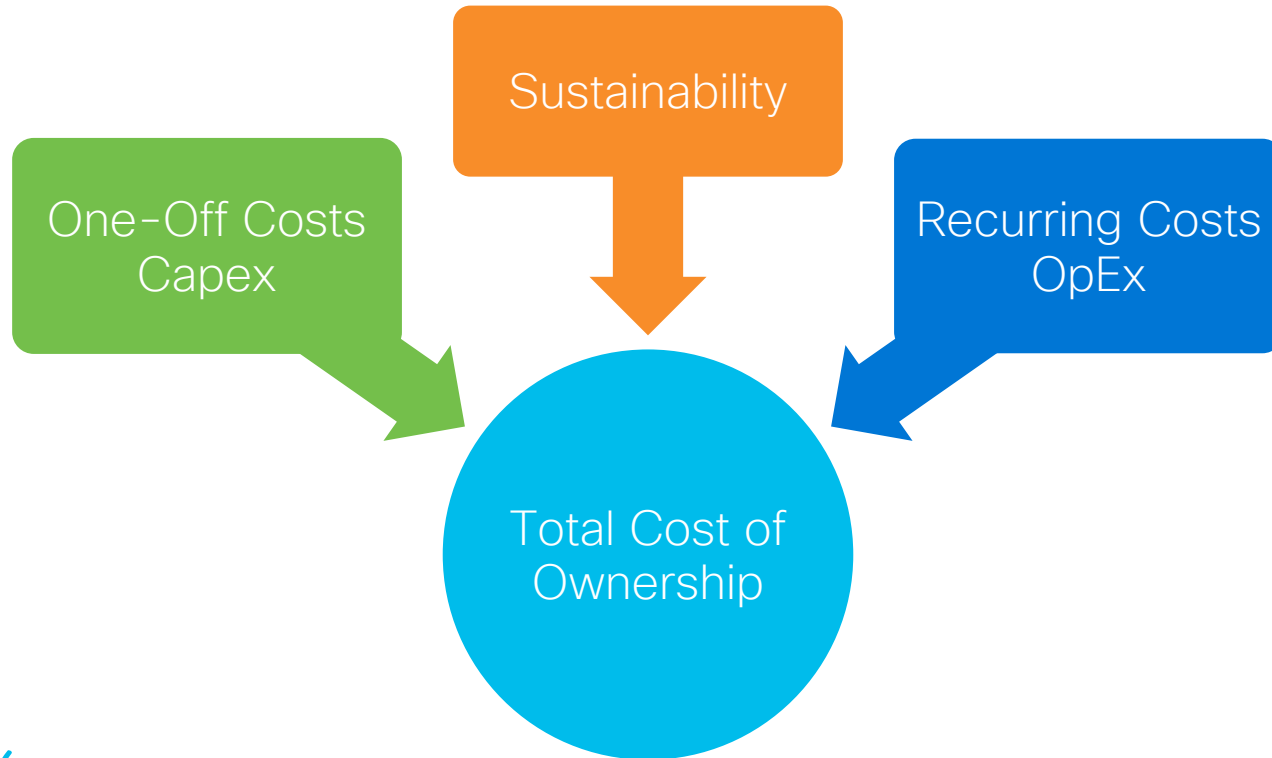
Total Cost of Ownership

Data Center Solution

Estimated Investments and expenses (thousands of €)	Now	Year 1	Year 2	Year 3	Year 4	Year 5
One-Off Costs (CAPEX)						
Infrastructure	10,782	6,000	12,335	18,268	34,365	-
Implementation Services	526	286	473	729	1,290	-
Recurring Costs (OPEX)						
Power & cooling	-	490	733	1,178	1,851	3,155
Services & Operations	-	643	917	1,312	2,003	3,391
Total	11,309	7,419	14,457	21,487	39,509	6,546

For Demo Purposes Only. Based on Hypothetical, Not Actual Customer Data.
Sample data, not exhaustive.

Towards Total Sustainability Cost of Ownership



Towards Total Sustainability Cost of Ownership

Data Center Solution

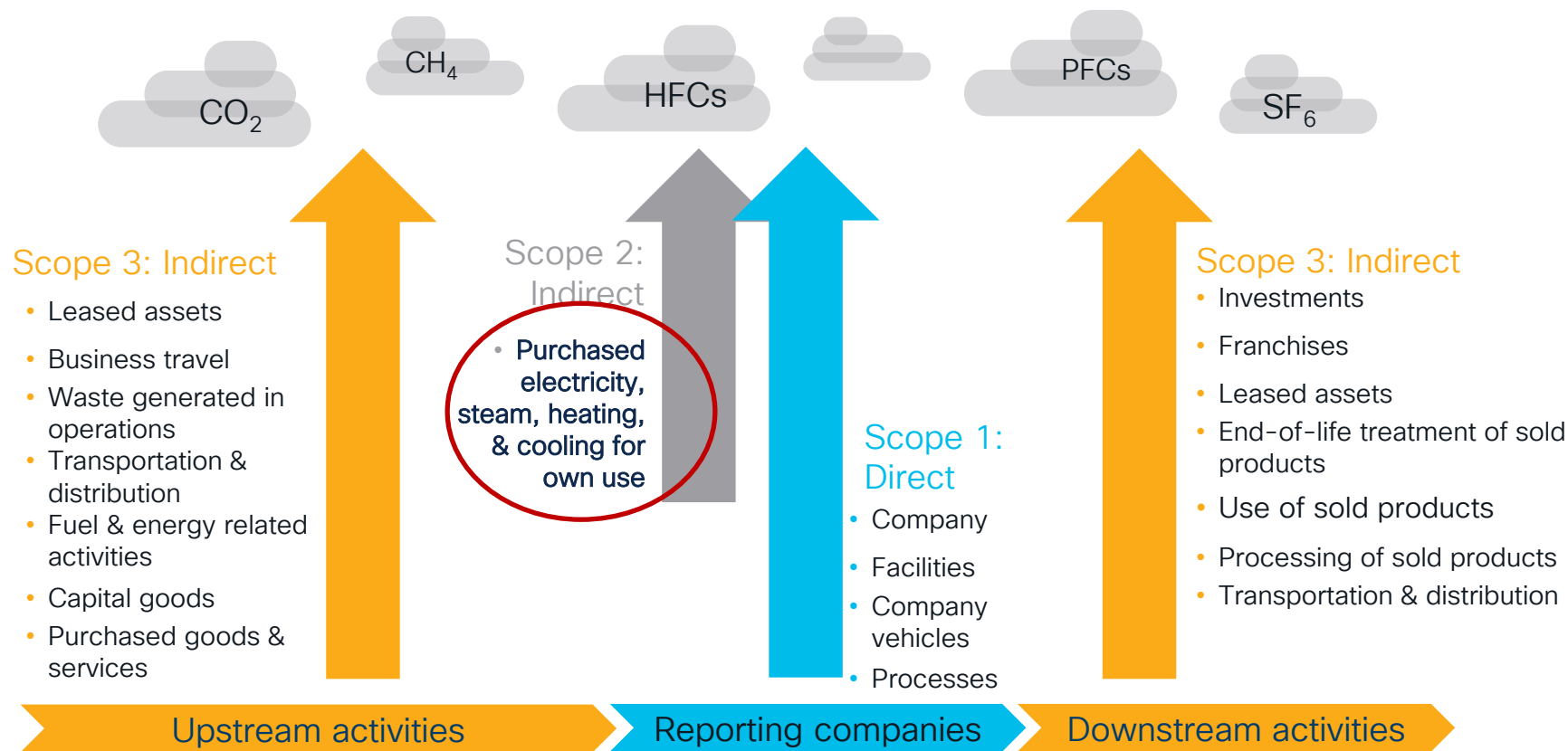
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Sustainability						
??	??	??	??	??	??	??
Total	11,309	7,419	14,457	21,487	39,509	6,546

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Note: for this first iteration we are focusing in the **product in use**.

Which GHG should you consider for TCO?





Country mix of energy sources generation



redOS

Red Eléctrica de España

Convert to emissions

Day Average: 0.118162 tCO₂/MWh

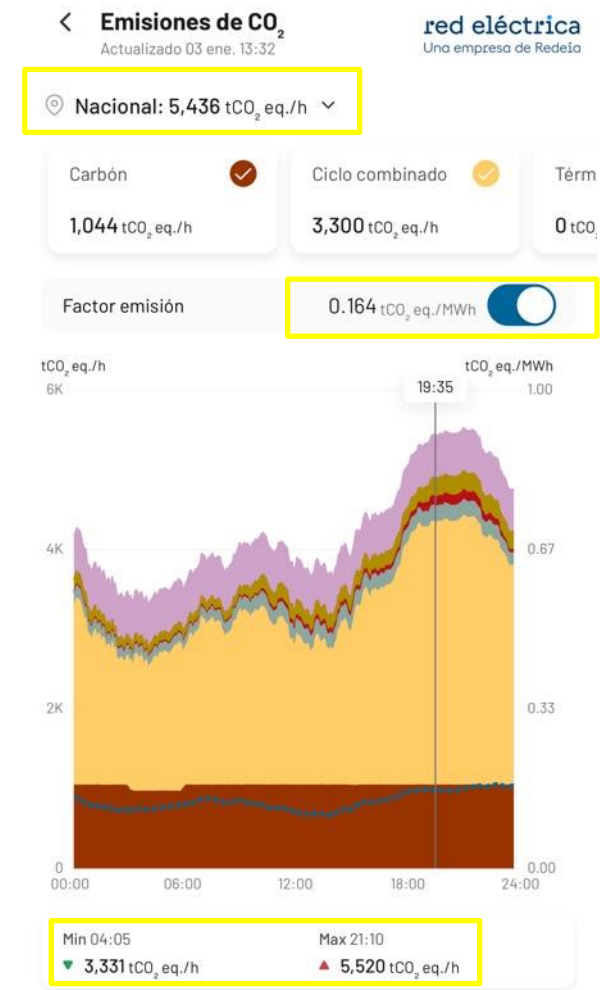
Energy is measured in watt-hours

Power is measured in watts

CO₂: Carbon Dioxide

GHG: Greenhouse Gas

CO₂e, CO₂eq, CO₂-e: Carbon dioxide equivalent is calculated from Global Warming Potential, GWP.



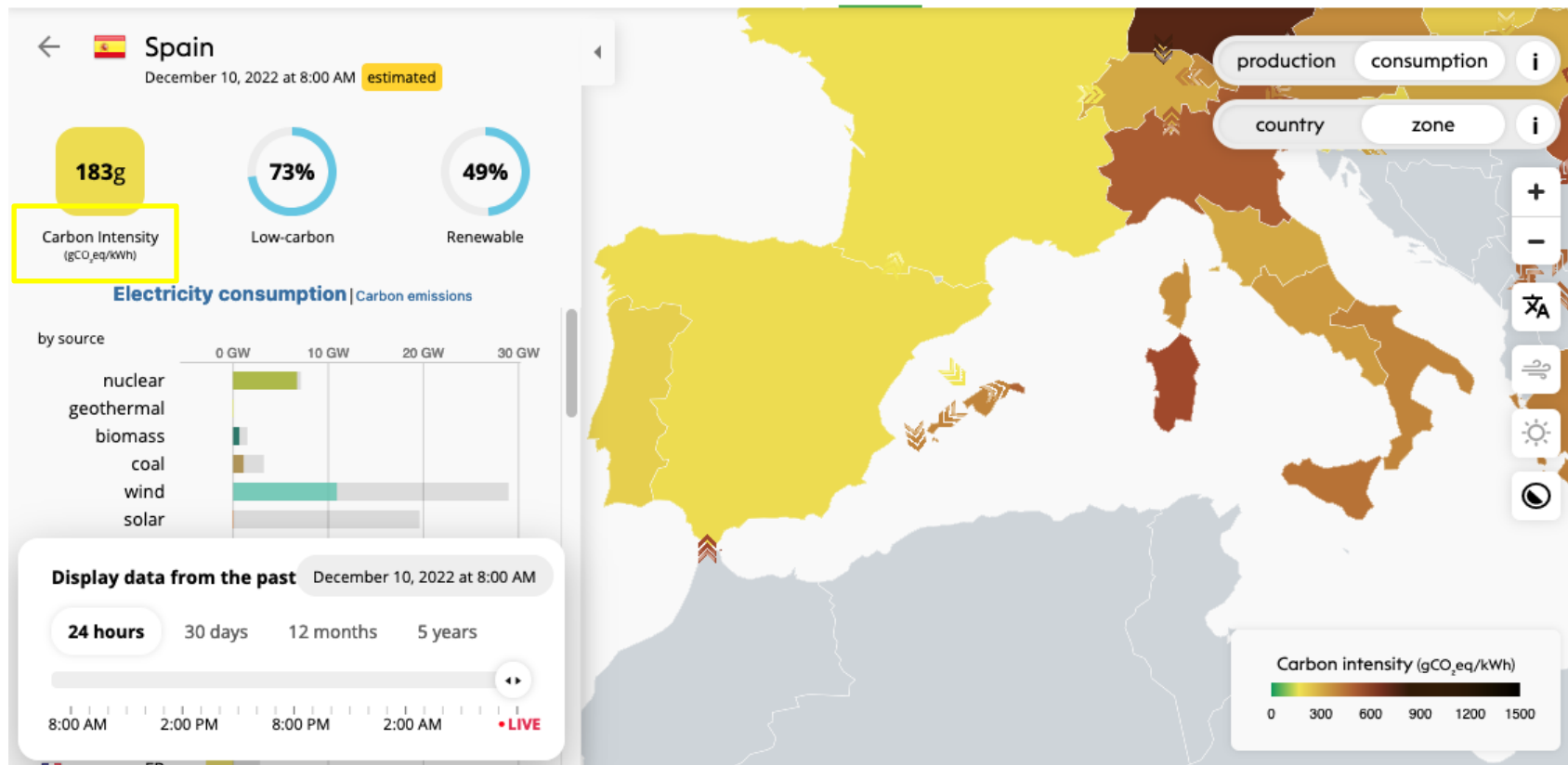
Retrieve information via API

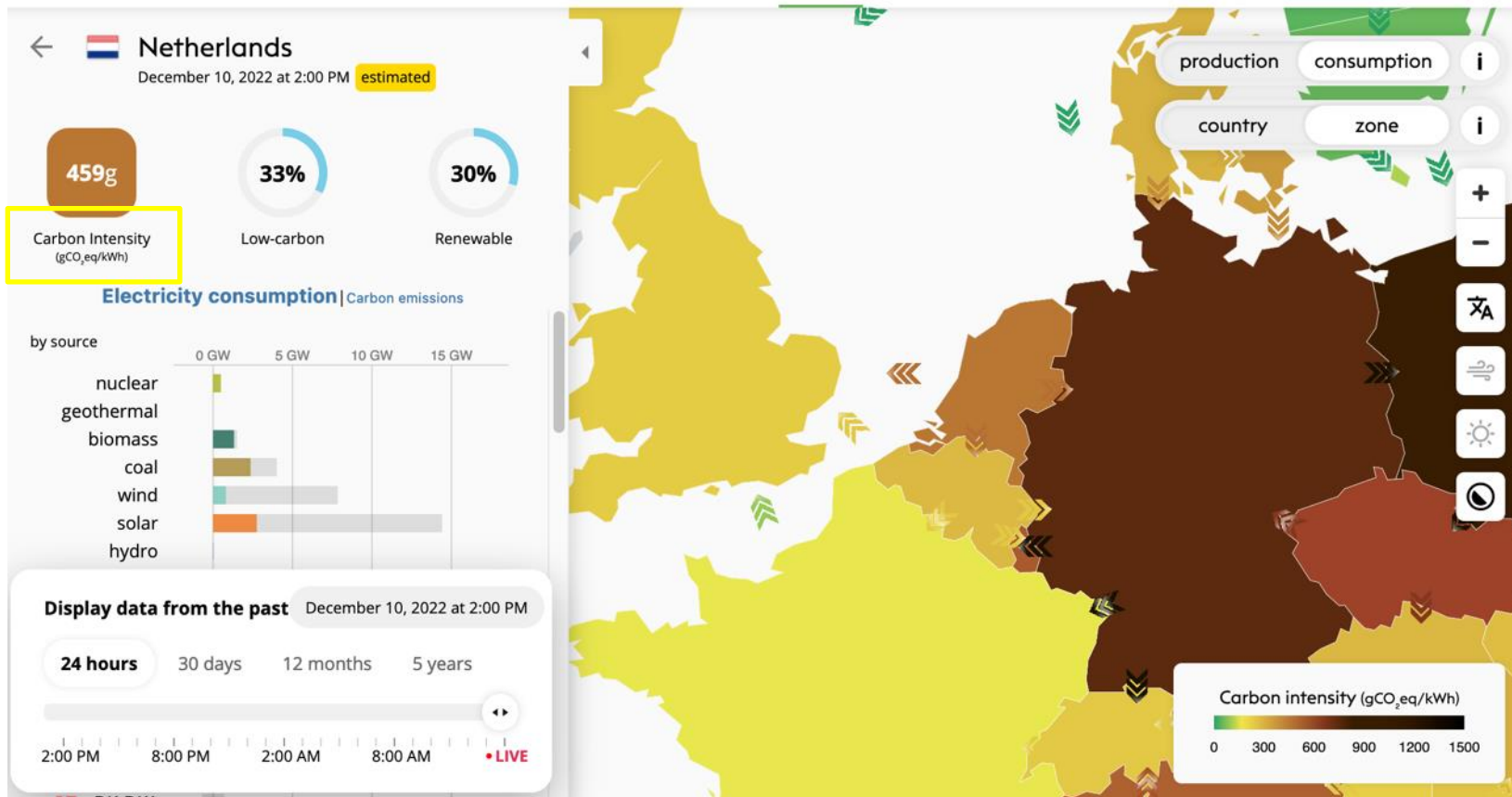
GET https://apidatos.ree.es/en/datos/generacion/no-renovables-detalle-emisiones-CO2?start_date=2022-12-09T00:00&end_date=2022-12-09T23:59&time_trunc=day&geo_limit=ccaa

```
data
  type ""CO2 emission factor and GHG emissions regarding
    non-renewable generation"
  id "gen7"
  attributes
    title "CO2 emission factor and GHG
      emissions regarding non-
      renewable generation"
    last-update "2022-12-09T07:54:02.000+01:00"
    description null
```

```
type "Total tCO2 eq."
id "tCO2 eq."
groupId "tCO2 eq."
attributes
  title "Total tCO2 eq."
  description null
  color "#00527a"
  type "Total tCO2 eq."
  magnitude null
  composite true
  last-update "2022-12-09T 07:53:52.000+01:00"
  values
    0
    value 123253.034000000001
    percentage 1
    datetime "2022-12-09T 00:00:00.000+01:00"
```

```
type "tCO2 eq./MWh"
id "MWh"
groupId " MWh "
attributes
  title "tCO2 eq./MWh"
  description null
  color "#00527a"
  type "tCO2 eq./MWh"
  magnitude "tCO2 eq./MWh"
  composite true
  last-update "2022-12-09T 07:53:52.000+01:00"
  values
    0
    value 0.16598032003697744
    percentage 1
    datetime "2022-12-09T 00:00:00.000+01:00"
```





What is the
carbon price?

Carbon pricing, why?

Assigns an explicit price on GHG emissions



Market
mechanism



Governments

Revenue to
finance change



Businesses







Long-term
investors



Mobilize the
financial
investments

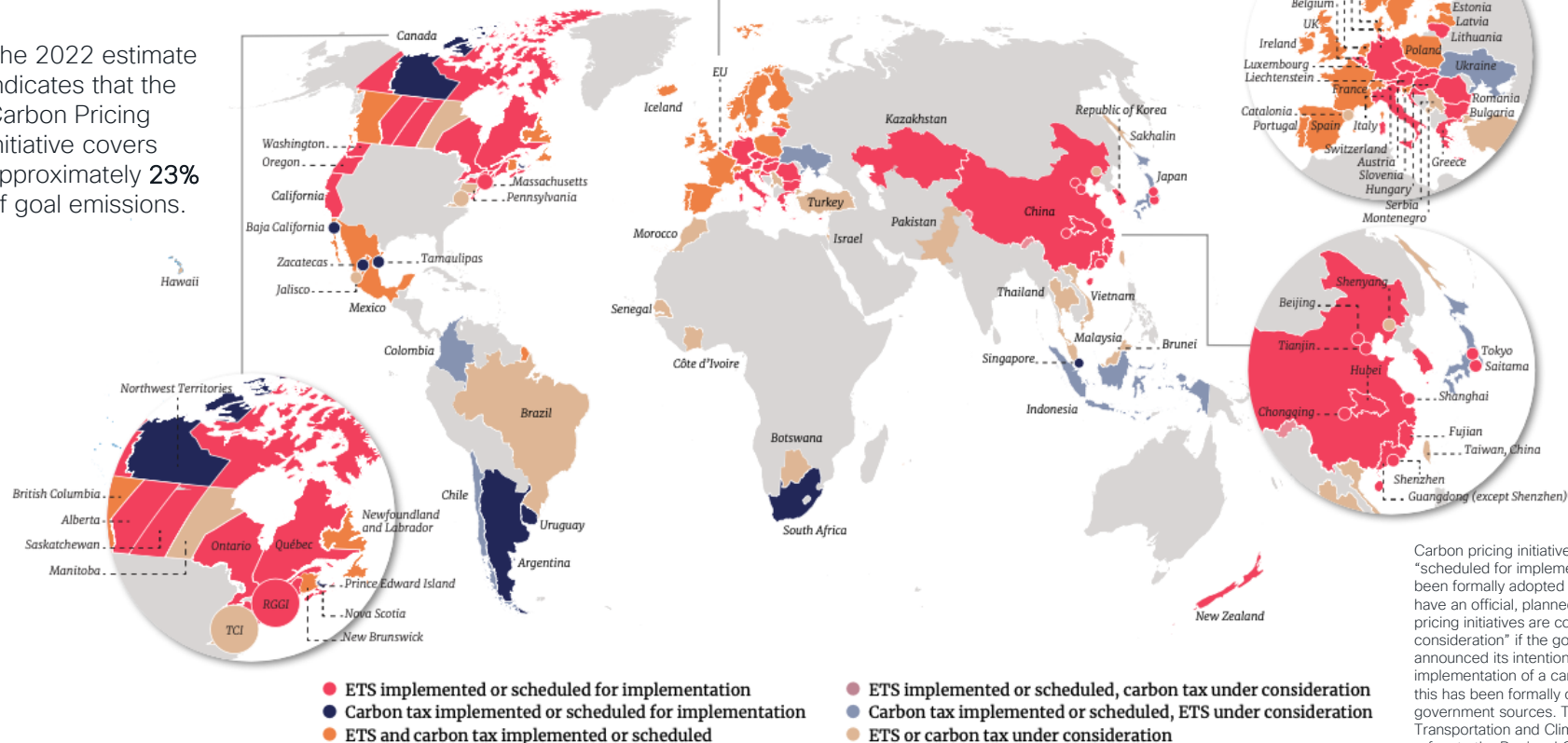
Carbon pricing, how?

	Carbon taxes	Emission Trading System (ETS)
Certainty on the price		
Certainty of emissions reduction		

Map of carbon taxes and ETSs

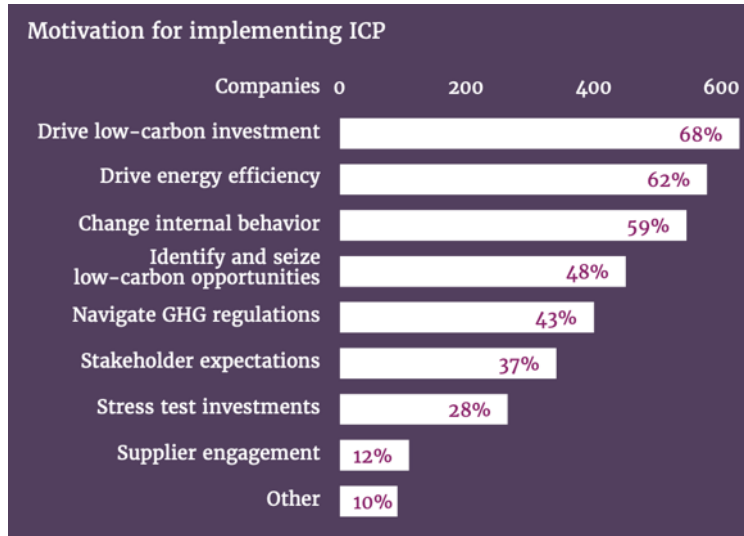
State and Trends of Carbon Pricing 2022, The World Bank

The 2022 estimate indicates that the Carbon Pricing Initiative covers approximately **23%** of goal emissions.



Carbon pricing initiatives are considered "scheduled for implementation" once they have been formally adopted through legislation and have an official, planned start date. Carbon pricing initiatives are considered "under consideration" if the government has announced its intention to work towards the implementation of a carbon pricing initiative and this has been formally confirmed by official government sources. TCI refers to Transportation and Climate Initiative. RGGI refers to the Regional Greenhouse Gas Initiative.

Internal carbon pricing



The number of companies disclosing to CDP that they embed an internal carbon price into their business strategies has grown from 150 global companies in 2014 to over **850 companies** in 2020.

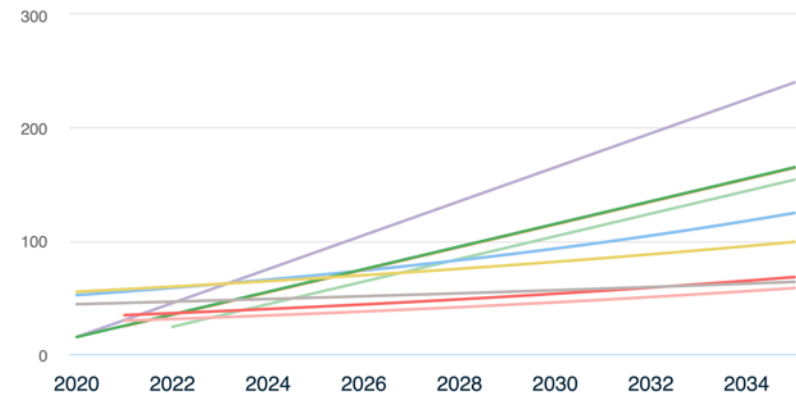
CDP data of 500 U.S publicly listed firms confirms that Internal Carbon Pricing reduces **carbon emissions per employee and per revenue** by **13.5%** and **15.7%**, respectively

[CDP Carbon Pricing](#)

The World Bank. 2022. "State and Trends of Carbon Pricing 2022" (May), World Bank, Washington, DC. Doi: 10.1596/978-1-4648-1895-0. License: Creative Commons Attribution CC BY 3.0 IGO

How much?

Source: Goulder-Hafstead E3 model and RFF Carbon Pricing Calculator at www.rff.org/cpc



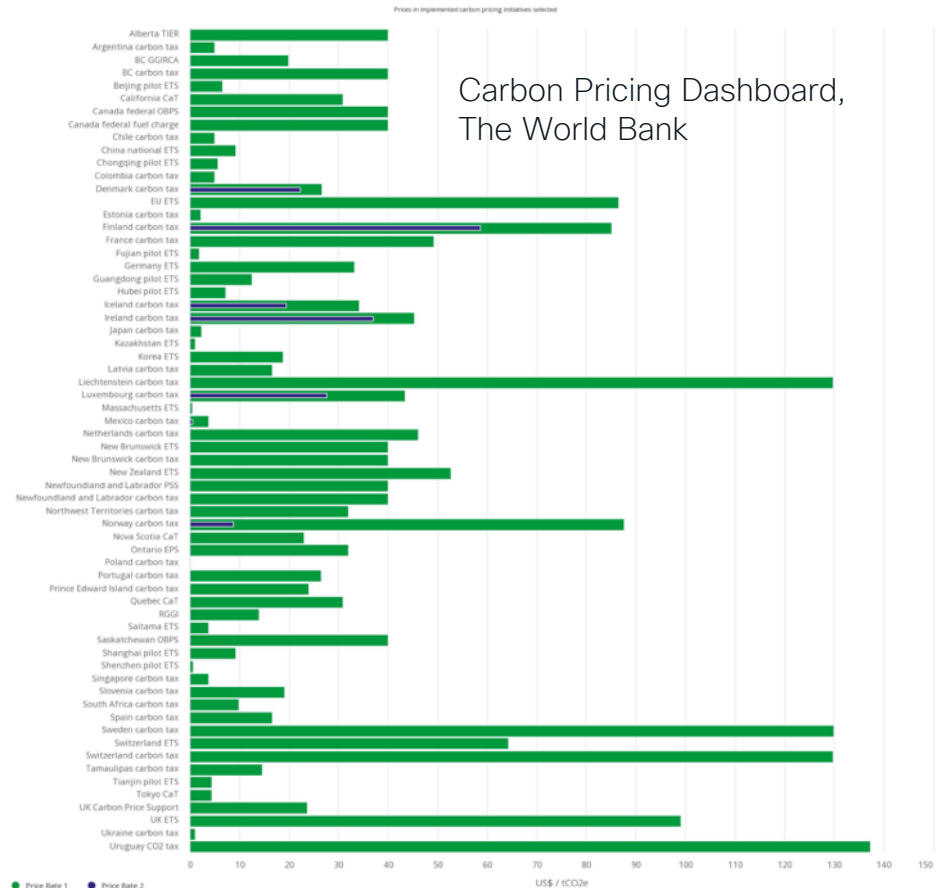
- America Wins Act (Larson)
- America's Clean Future Fund Act (Durbin)
- American Opportunity Carbon Fee Act (Whitehouse-Schatz)
- Climate Action Rebate Act (Coons-Feinstein)
- Consumers REBATE Act (McNerney)
- Energy Innovation and Carbon Dividend Act (Deutch et al.)
- Healthy Climate and Family Security Act (Van Hollen-Beyer)
- MARKET CHOICE Act (Fitzpatrick)
- Raise Wages Cut Carbon Act (Lipinski)
- Stemming Warming and Augmenting Pay Act (Rooney)

Source: Goulder-Hafstead E3 model

<https://www.rff.org/publications/data-tools/carbon-pricing-calculator/>

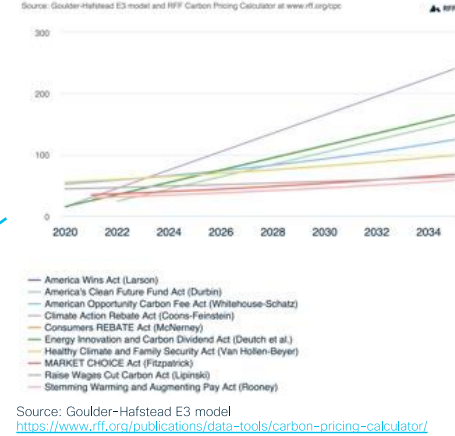
CISCO *Live!*

Carbon Pricing Dashboard, The World Bank



Source: https://carbonpricingdashboard.worldbank.org/map_data

Internal carbon price estimation



	Now	Year 1	Year 2	Year 3	Year 4	Year 5
Carbon Price (€ tCO ₂ e)	0	42.80	48.69	54.65	60.68	66.80

Towards Total Sustainability Cost of Ownership

of a Data Center Solution

Estimated Investments and expenses (thousands of €)	Now	Year 1	Year 2	Year 3	Year 4	Year 5
One-Off Costs (Capex)						
Infrastructure	10,782	6,000	12,335	18,268	34,365	10,782
Implementation Services	526	286	473	729	1,290	526
Recurring Costs (Opex)						
Power & cooling	-	2,898	4,330	6,961	10,937	18,646
Services & Operations	-	643	917	1,312	2,003	3,391
Sustainability						
Estimated Internal Carbon Price Spain	-	77	78	97	180	337
Total	11,309	7,497	14,535	21,583	39,688	6,883

Towards Total Sustainability Cost of Ownership

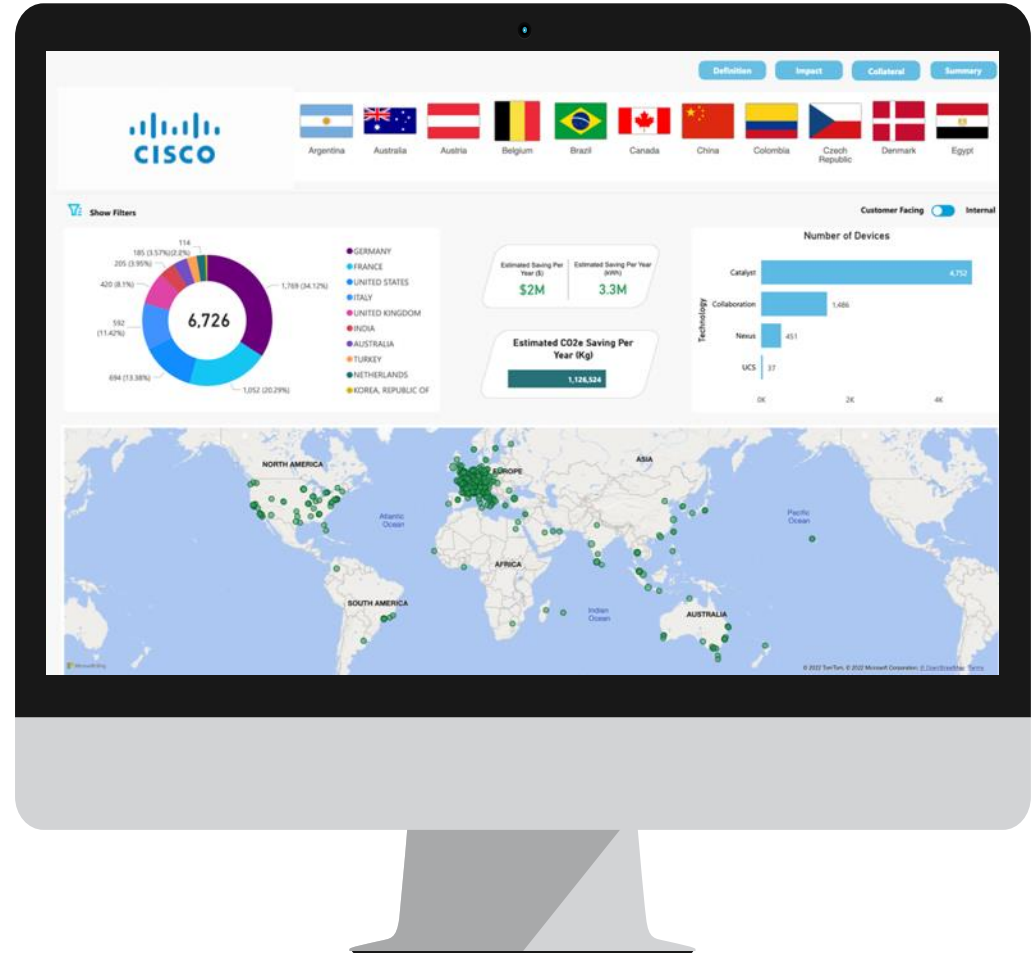
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Estimated Internal Carbon Price Netherlands	-	300	301	375	698	1309
Total	11,309	7,497	14,535	21,583	39,688	6,883

Sustainability Simulator

The Sustainability Simulator models the estimated amount of energy savings, emissions reduction, and environmental impact that a customer may realize by migrating from hardware that will no longer be supported within the next 3 years to Cisco's latest generation of products.

Check out the demo
@ The Hub,
Sustainability Zone



Legal Disclaimer Customer Simulator View

- The data generated by the simulator, including potential savings, are indicative only, not predictions or guarantees of actual outcomes
- Customer shipment information (like name, product name, delivery location) may be used to tailor data estimates, with the customer's permission, but even then the data are not predictions or guarantees.
- The calculation of emissions reductions are based on the most current edition of the International Energy Agency country-specific Emission Factors, not actual customer use cases or environments
- The simulator is based on the emissions generated by the use of the products over one year and does not include emissions from manufacturing and transportation
- The model assumes a 1:1 hardware replacement based on standard hardware migration mapping (e.g., converting from one generation of a product to the current generation in the same product line). Estimation are calculated over one year
- All modeling is based on the average energy consumption for the specific Cisco product at issue. Actual energy, emissions, and cost savings will vary depending on a customer's architecture, product configuration, and other variables specific to the customer's environment
- The translation to environmental impact is indicative only, not a prediction or guarantee of actual outcomes. These are only estimates and should not be used for emission inventory or formal carbon footprinting exercises
- The outputs of this simulator are illustrative only and do not convey any commitment or guarantee from Cisco
- There outputs of the simulator are based on assumptions, including but not limited to the assumptions identified here
- The outputs of the simulator are provided solely for customer's own illustrative use. They may not be shared further or used for any other purpose without Cisco's express written consent.
- The Simulator is under development and is subject to change. Access to the Simulator and the information it generates is offered at Cisco's sole discretion; availability may change without notice from Cisco.

Customer Experience Sustainability Insights

Explore what's possible

Dynamic Telemetry

Real-time data

- ✓ CPU temperature
- ✓ Fan Speed
- ✓ Energy efficiency data
- ✓ Infra cooling data
- ✓ Emissions factor

Static Telemetry

Lifecycle of individual components

- ✓ Manufacturing
- ✓ Transportation
- ✓ End-of-use equipment return

Solution Impact

- ✓ Technology Domain/Solution data



- ✓ Analytics and ML
- ✓ Sustainability Index
- ✓ Recommendations

Implement
using
Automation

Check out the demo
@ The World of Solutions, CX
Sustainability booth

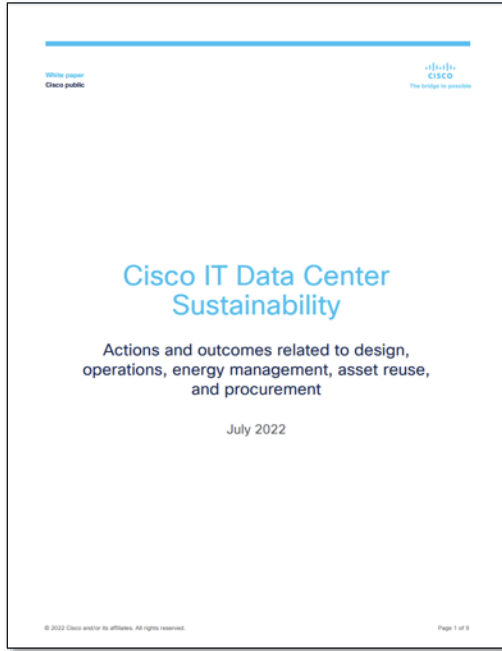


Under-Construction

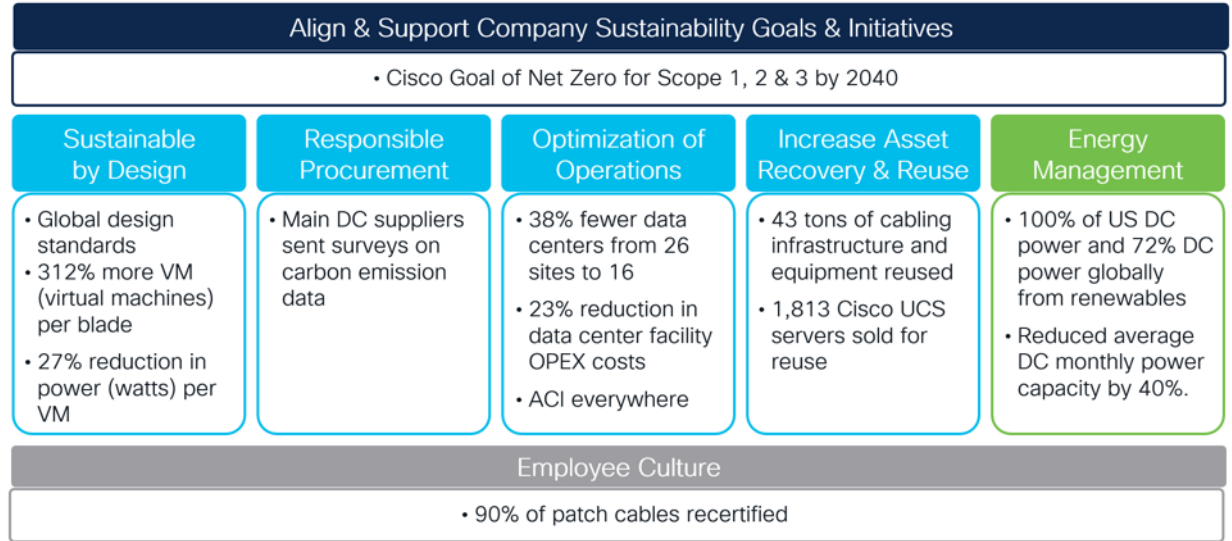
How to transform Sustainability Goals into Operational KPIs



Cisco IT Sustainability Framework



Cisco IT Sustainability Framework



Transform to achieve net-zero emissions by 2050




Objective

- Transform to achieve net-zero emissions by 2050

Solutions

- Migrate to the cloud
- Evolve the network
- Renew network infrastructure and transform it into a software-defined network

Outcomes

-  Migrated to the cloud for flexibility and efficiency
-  Evolved the network with digitalization and automation
-  Renewed the headquarters' network and infrastructure

Sustainability Goal

Digital equity

Challenge

- 35 years ago, MCNC set out to provide communities across North Carolina with **equal access to the Internet**.

Business Outcome / KPI

- Ensure equal access to the Internet in rural communities
- **Enable schools** and colleges across the state to access **the power of the network**
- Address the "homework gap" for students who lack Internet access at home

Solution

- MCNC has created the largest **fiber optic network** in the state
- They help community anchor institutions harness the power of the network across the state
- North Carolina is becoming one of the most connected states in the country with **strong rural broadband**
- Using the network to improve care: MCNC and ECU School of Dental Medicine, delivers dental services to rural communities while ensuring their students stay connected.

Product

- [Cisco Digital Network Architecture \(Cisco DNA\)](#)
- [Cisco Collaboration](#)
- [Cisco Data Center](#)
- [Cisco Next-Generation Firewalls](#)

Customer reference

[Case Study: MCNC](#)

Conclusion and Key Takeaways

“What you do makes a difference, and you have to decide what kind of difference you want to make.”

Dr Jane Goodall, Scientist & Activist

- ✓ Broaden your view on sustainability
- ✓ Introduction to Legislation and its impact
- ✓ Exemplification on how to incorporate a Sustainability KPI into your TCO
- ❑ Consider sustainability as a business driver and build your business model based on it.

Reference

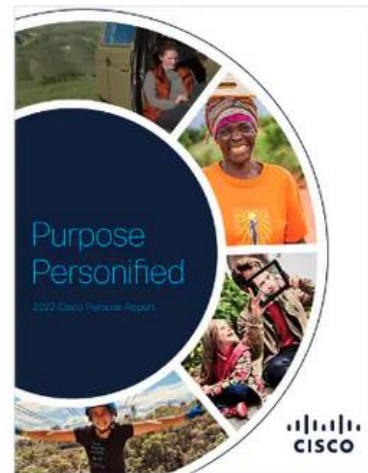
Learn more: ESG Reporting Hub & Purpose Report

Welcome to the Cisco ESG Reporting Hub

Here, you will find relevant information and data related to many aspects of our environmental, social, and governance (ESG) initiatives, performance, and policies.

Cisco has a purpose to Power an Inclusive Future for All. Our 2022 Purpose Report summarizes how we have brought this purpose to life. The report describes our commitments, goals, progress, and impact for the ESG topics that are significant to achieving Cisco's purpose and are important for our stakeholders. This ESG Reporting Hub includes in-depth information on all reporting topics.

[Purpose Report \(PDF\)](#)



Visit: cisco.com/go/esg-hub

Learning Map

Sustainability Sessions

Social, Environmental, Market, and Technological Trends:

Cisco is embedding sustainability into everything we do. Cisco has sustainable technology offers and solutions that are available today. We're on the journey to net zero with you and we have new sustainable technologies on the roadmap.

We also are featuring our Sustainability Solutions, Technologies, Programs and Resources in this eBook – Scan QR Code to access.



Read our eBook to
Learn More

START

Feb 6 | 2:00 p.m.

TECGRN-2760

Design Thinking Working Session
on Journey to Sustainability

Feb 6 | 3:00 p.m.

Fireside Chat - WoS

Accelerating Today's Sustainability
Efforts With An Eye To The Future

Feb. 7 | 11:30 a.m.

CCP-1301

Building The Bridge To A More
Sustainable Future

Feb 7 | 3:00 p.m.

PSOGRN-1650

Sustainability As A Business

Driver

Feb 7 | 3:00 p.m.

BRKIOT-1203

Connecting And Securing
Renewable Energy

Feb 8 | 10:30 a.m.

BRKGRN-1009

The Road to Net Zero:
Advancing Sustainable IT

Feb 8 | 3:00 p.m.

BRKETI-1001

The Road to Net Zero: How
Emerging Technologies
Accelerate Cracking the
Use Case of the Century

Feb 8 | 3:30 p.m.

PSOGRN-2200

Your Kick-Start for the
Sustainability Journey

Feb 8 | 4:30 p.m.

BRKMER-1662

Sustainability by Cisco Meraki
IoT: Small Actions, Big Impact

Feb 8 | 5:00 p.m.

BRKGRN-1886

It's Getting Cold, But the heat
is On

Feb 9 | 9:00 a.m.

BRKGRN-2137

Lessening the Impact – How
Cisco Networking Products
Support Sustainability

Feb 9 | 10:15 a.m.

ITalk-1200

Accelerate your Journey to
Net Zero with Cisco Solutions
and the Power of Data

Feb 9 | 12:00 p.m.

BRKAPP-1028

Sustainable Digital
Transformation Leveraging
Full-Stack Observability

Feb 9 | 12:20 p.m.

PSOSPG-1408

Achieving Automation,
Sustainability and Performance
Yes! You Can Have It All

Feb 9 | 12:30 p.m.

BRKDCN-2625

Considerations on Data Center
Sustainability

If you are unable to attend
a live session, you can
watch it On Demand after
the event.

[Link to Cisco Live
Session Catalog](#)

FINISH

Sustainability Demos

- Energy Efficient Infrastructure
- Energy Management
- Sustainable Design

IT Ops Area

NETWORKING IT Ops Area

Building Smarter Spaces ●●●

Create a workplace that is smarter, safer, and enables seamless experiences with Cisco Spaces. In this demo we'll showcase the entire Cisco Spaces solution, including the dashboard and integrations. We'll also discuss hybrid work and how location analytics, applications, IoT services, and more can enhance your health and safety plan.

MIG IT Ops Area

Green Routed Optical Networks ●●●

Learn how to build and operate a cost effective and sustainable converged IP and Optical network that can be managed through a single pane of glass with Crosswork Automation. This provides a consolidated platform to monitor and manage all transport services reducing OPEX and reducing environmental impacts.

CLOUD IT Ops Area

Nexus Cloud-Simple Managed Networks ●●

Nexus Cloud gives customers a new way of deploying, managing, and operating Nexus networks from the cloud, providing an option to run network operations with simplicity, visibility, and sustainability. Nexus Cloud supports both our flagship Cisco Application Centric Infrastructure (ACI) architecture as well as NX-OS based Nexus deployments.

UCS X-Series Powers any App ●●

Modernize compute infrastructure with the UCS X-Series Modular System by combining density and efficiency of blade servers with the expandability of rack servers. With 100G unified fabric and UCS X-Fabric Technology for GPU acceleration, X-Series is a future-ready platform for any application.

Showcase

NETWORKING Networking Area

Cloud Managed Networking ●●

Start your journey to cloud management and see how you can simplify, scale, and extend your network operations. Learn about the new cloud monitoring and cloud management capabilities connecting Catalyst access technology and the Meraki cloud networking platform.

Smart Sustainable Buildings ●●

Concerned about energy cost and your employee wellness? Learn how Cisco smart building solutions can help you take control of your building to create a healthy and sustainable workplace that provides employee safety, well-being, collaboration, and productivity.

API Powered Assurance ●●

See how Cisco DNA Center and Meraki dashboard can help you automate operations and gain network visibility, observability and insights using AI and Machine Learning. Discover innovations such as like AI-Enhanced RRM and AP Performance Advisories that improve wireless performance, all resulting in a better IT and user experience.

NETWORKING SD-WAN / SASE Area

Provider Managed SD-WAN ●

Learn how Cisco SD-WAN Multitenancy enables management of multiple customers with a single vManage, vBond, and vSmart set. Experience the workflows of tenant creation, onboarding devices, and monitoring. Learn capabilities of co-management, SDCI, Multi-Region Fabric and Lawful Intercept

Sustainability

Demo Zone

There will be 6 key areas within the sustainability zone demo area:

1. A **central welcome desk** showing the full Cisco approach to IT
2. **Cisco Refresh and Cisco Green Pay demo**
3. **Energy saving dashboards:**
 1. Meraki dashboard for AP programming
 2. IWO Dashboard: Data center optimizing
 3. Meraki MT sensors
4. **Sustainability Simulator** – Based on IB data, Demonstrating a refresh impact
5. **Cisco Returns Portal** demonstrating returns, send it back and take back and reuse programs
6. **Receiving and processing demo** – a live demo with a technician showing what happens when a product is received back to Cisco.



Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at <https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>



Continue Your Education



Visit the Cisco Showcase for Sustainability demos.



Book your one-on-one Meet the Engineer meeting.



Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.



Visit the On-Demand Library for more sessions at ciscolive.com/on-demand.



The bridge to possible

Thank you

CISCO *Live!*

CISCO *Live!*

