cisco *Live!*

Let's go

Agenda

Cisco's Sustainability Strategy – 20 mins

- "The Plan for Possible"
- Cisco's Net Zero Goal
- Circular Transformation

IT's Sustainability Strategy - 20 mins

- IT's Dual Responsibility
- Cisco IT Sustainability Framework
- Data driven sustainability

Fireside chat and Q&A – 20 mins

Cisco's Sustainability Strategy

"
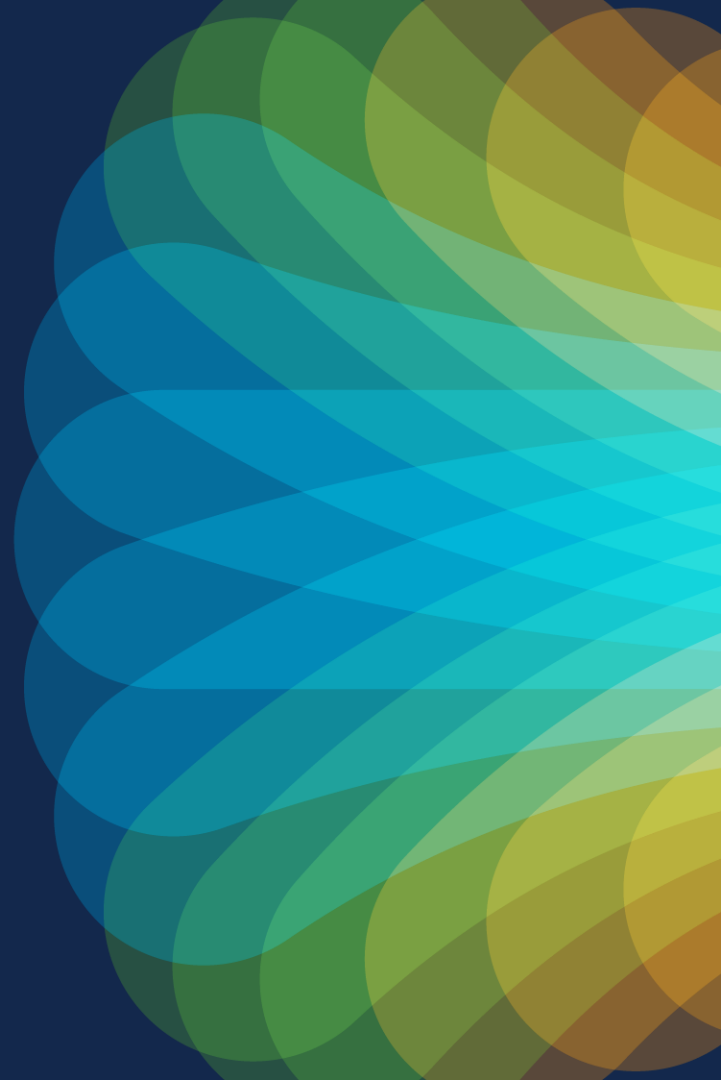
Delivering on important environmental, social, and governance (ESG) goals is not just critical for society, but also for our business.

- Chuck Robbins, Cisco Chairman & CEO
2022 Cisco Purpose Report

The Plan for Possible
Our plan to connect a regenerative future
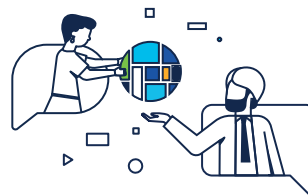
Clean Energy Transitions
Accelerate clean energy adoption and global Net Zero ambitions

Circular Transformation
Evolve to a regenerative, circular model

Resilient Ecosystems
Scale efforts to foster an inclusive future and a healthy planet

Enhanced Governance
Embed sustainability into the way we operate to manage risk prudently, enhance trust, uphold brand integrity & inspire
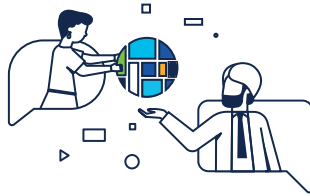
Key Cisco sustainability goals

Clean Energy Transitions

Net zero across our value chain by 2040

Reduce absolute Scope 1 & 2 GHG emissions 90% by 2025[1]

Reduce absolute Scope 3 emissions from purchased goods and services, upstream transportation and distribution, and use of sold products 30% by 2030[1]

Circular Transformation

100% of new Cisco products and packaging incorporate circular design principles by 2025

70% of our component and manufacturing suppliers by spend will achieve a zero-waste diversion rate at one or more sites by 2025

50% of plastic used in our products (by weight) will be made of recycled content by 2025[2]

Resilient Ecosystems

The Cisco Foundation will invest $100 million over 10 years to fund nonprofit grants and impact investing in climate solutions

[1] FY19 base year
[2] Excluding those plastics contained in commodity components sourced from suppliers (e.g., plastic screws, fans, and cables)

Cisco's goal

Net Zero across our value chain by 2040

SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Our 2040 net-zero target is approved by the Science Based Targets initiative (SBTi).

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

Scope 1 & 2
Cisco operations: <1%

Scope 3
Upstream transportation and distribution: 5%

Scope 3
All other categories: 2%

Scope 3
Purchased goods & services: 23%

Scope 3
Use of sold products: 70%
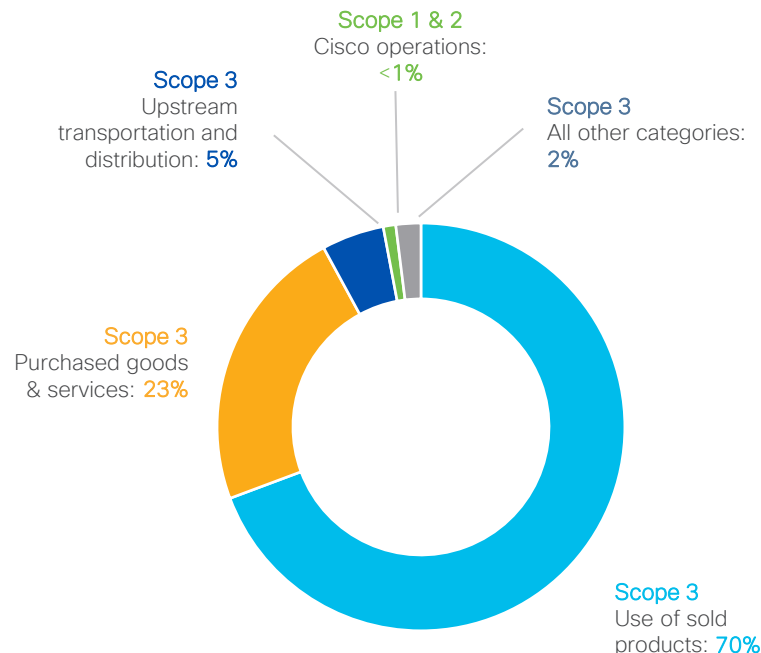
Source: Cisco's **Fiscal Year 2023** ("FY 23") Scope 1, 2, and 3 GHG emissions

What are Scope 1, 2, & 3

CO_2

CH_4

HFCs

PFCs

SF_6

Scope 3: Indirect

1. Purchased goods & services
2. Capital goods
3. Fuel & energy related activities
4. Transportation & distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Leased assets

Scope 2: Indirect

- Purchased electricity, steam, heating, & cooling for own use

Scope 1: Direct

- Company facilities
- Company vehicles

Scope 3: Indirect

9. Transportation & distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Leased assets
14. Franchises
15. Investments

Upstream activities → **Reporting companies** → **Downstream activities**

Based on: Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions

Net Zero Emissions Roadmap

Business as usual[1]

Reduced emissions

Additional carbon removal efforts

FY19 — Base Year

FY25 — Scopes 1 & 2 Reduce 90%

FY30 — Scope 3 Reduce 30%[2]

FY40 — All Scopes Net Zero
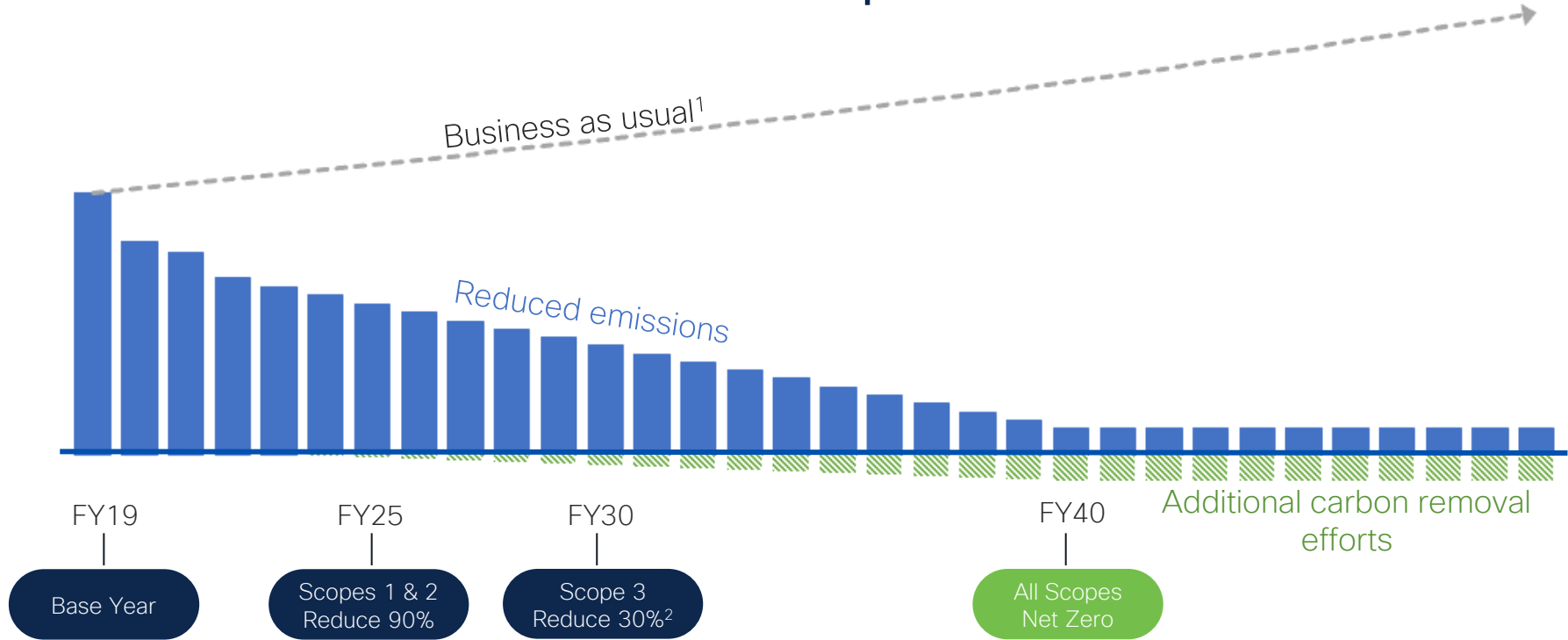
[1] This chart is for illustrative purposes only. BAU assumes a 1.7% annual growth across all scopes of emissions, based on 2022 European Commission data showing the average yearly percentage growth of CO_2 emissions between 1990 and 2021

[2] From purchased goods and services, upstream transportation and distribution, and use of sold products
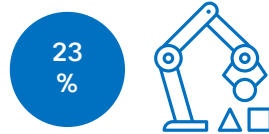
Cisco's Net Zero Action Plan

Product Use

70%
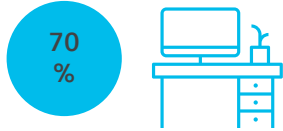
Reducing emissions from the use of our products requires collaboration between Cisco and our customers.
This means an emphasis on:

- Renewable electricity
- Product power efficiency
- Enhanced product data

Procurement and Product Manufacturing

23%

Tackling emissions in these Scope 3 categories is a shared mission between Cisco and our suppliers.
Together we will focus on:

- Renewables and energy efficiency in our supply chain
- Circular business transformation
- Supplier reporting and goal setting

Logistics

5%

Transportation and distribution accounts for ~5% of our overall footprint.
To reduce the impact of our logistics we are focusing on:

- Mode shifting
- Packaging
- Renewable and low-carbon fuels

Direct Operations

<1%

The emissions that arise from our operations are directly in our control. We seek to reduce them through:

- Renewable energy
- Energy management
- Electrification

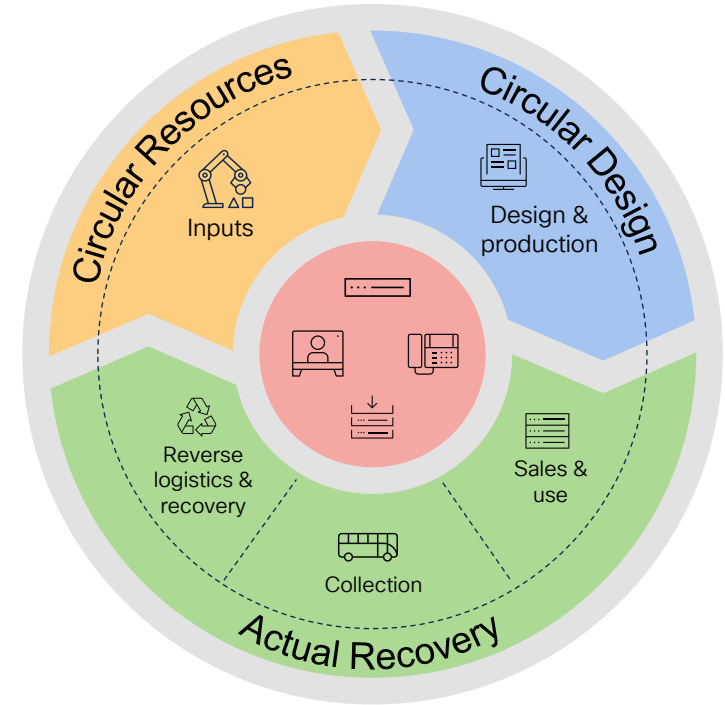| Scope 3	Scope 1 & 2

SOURCE: Cisco FY23 Purpose Report. NOTE: Other value chain activities (e.g. waste and business travel) are also accounted for in Scope 3, but do not represent a large share of emissions. Percentages shown may be rounded.
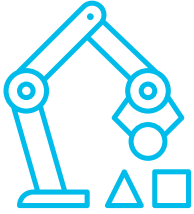
Industry Consortiums

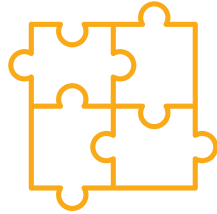# Circular Electronics Partnership (CEP)
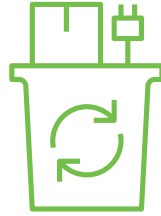

CEP Circular Electronic Product Framework

Cisco's Circular Design Strategy

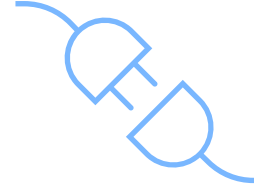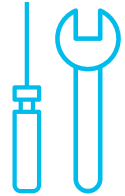Material use

Standardize and modularize

Packaging and accessories

Smart energy consumption

Disassembly, repair and reuse

100% of new Cisco products and packaging to incorporate circular design principles by 2025

Circularity in our Products and Packaging

Design for reuse, repair & recycling

UCS-X servers are engineered to be quickly assembled and disassembled. The latest generation uses recycled plastic parts, recycled foam packaging, no wet paint, and has a 62% reduction in powder coat compared to the prior generation.

Rethinking plastic

The majority of accessories for Cisco Meraki products are shipped in paper-based packaging, which is made of

70% recycled content.

"No Paint" project

Eliminating oil-based wet paint on Catalyst 9K switches in 2019 has enabled the elimination of 1200 metric tonne of CO_2e to date and approximately 82 metric tonne of hazardous VOCs (volatile organic compounds) per year.
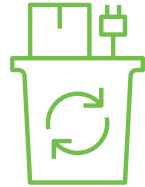
Fiber-based packaging

The packaging for the Catalyst IR8140 Heavy Duty Router is the first at Cisco to use a fiber-flute material in place of the foam cushioning typically required for heavier products

Industry Consortiums

Circular Electronics Partnership (CEP)

The Value Hill

Repair/maintain

Retail

Reuse/redistribute

Assembly

Refurbish

Manufacturing

Remanufacture

Material production

Recycle

Add value

Retain value

Pre-use

Use

Post use
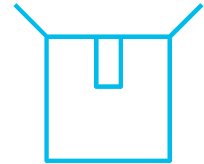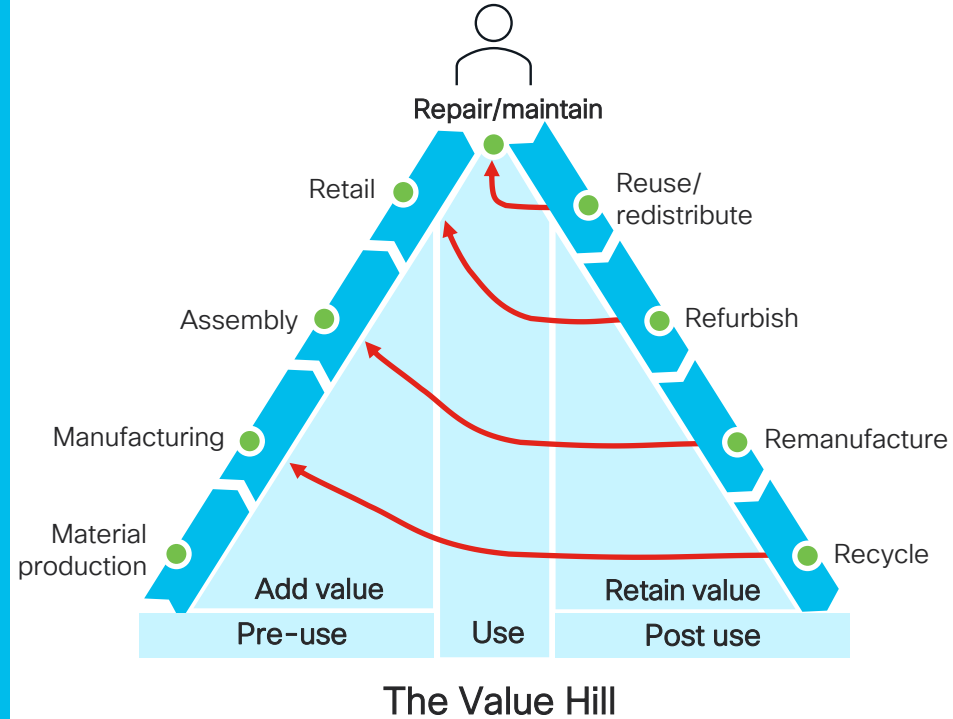
Cisco programs supporting circularity

Cisco
Takeback and reuse

- Cisco provides a free product takeback program upon request for Cisco and selected non-Cisco used equipment
- Helps Cisco and customers achieve their sustainability and circularity goals
- Cisco reuses or recycles nearly 100% of what is returned to us
- Increases the stock of refurbished products (Refresh)
- Mobile app available in the US, UK and all European Union countries
- Link here

Cisco
Refresh

- Certified remanufactured products
- Can help customers reduce emissions associated with the manufacture of new products
- Same warranty and support options as new products
- Often ships faster than new equipment
- Available globally in over 70 countries
- Link here

Cisco
Green Pay

- Green Pay (launched April 2022) & Lifecycle Pay Programs
- Cisco Green Pay offers a 5% incentive on Cisco hardware, predictable payments and free product returns
- Financing terms from 3 to 5 years
- Cisco Takeback included in offer
- Confirmation of entry of returned equipment into Cisco´s circular economy
- Available in select countries worldwide
- Link here

Embedding sustainability at Cisco through strategy and governance bodies
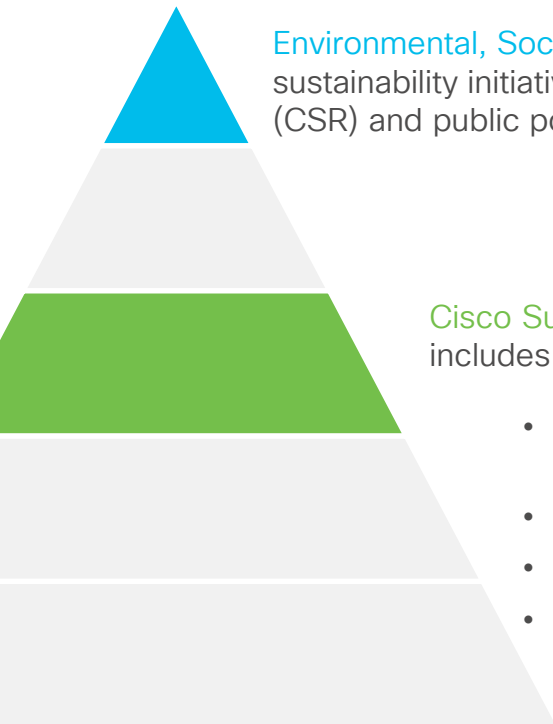
Environmental, Social and Public Policy (ESPP) Board sub-committee oversees Cisco's environmental sustainability initiatives, policies, programs, and strategies and other key corporate social responsibility (CSR) and public policy matters

Cisco Sustainability Council drives cross-company strategy, governance, and execution. It includes VP & SVP representation from critical functions including:

- Chief Sustainability Office
- Finance
- Legal
- Supply Chain

- Engineering
- Operations
- Marketing & Communications
- IT

- Procurement
- Government Affairs
- Cisco Services
- Cisco Sales, & Partner Organizations

Cisco is recognized for ESG leadership

#3 — World's Best Workplaces 2022 (Great Place To Work)

#1 — Green Supply Chain Corporate Information Transparency Index (CITI), in IT sector for 2021 and 2022 (IPE)

#5 — 3BL Media 100 Best Corporate Citizens 2022

#2 — Gartner Supply Chain Top 25

AA Rating — MSCI ESG RATINGS (CCC | B | BB | BBB | A | AA | AAA)

A List — CDP DISCLOSURE INSIGHT ACTION

Gold Class — Sustainability Award Gold Class 2021, S&P Global

World Index & North America Index — Member of Dow Jones Sustainability Indices, Powered by the S&P Global CSA

IT's Sustainability Strategy

What are Scope 1, 2, & 3 | Cisco

CH_4

CO_2

$HFCs$

$PFCs$

SF_6

Scope 3: Indirect

1. Purchased goods & services
2. Capital goods
3. Fuel & energy related activities
4. Transportation & distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Leased assets

Scope 2: Indirect

• Purchased electricity, steam, heating, & cooling for own use

Scope 1: Direct

• Company facilities
• Company vehicles

Scope 3: Indirect

9. Transportation & distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Leased assets
14. Franchises
15. Investments

| Upstream activities | Reporting companies | Downstream activities |

Based on: Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions

What are Scope 1, 2, & 3 | IT

CO_2 CH_4 HFCs   PFCs SF_6

Scope 3: Indirect

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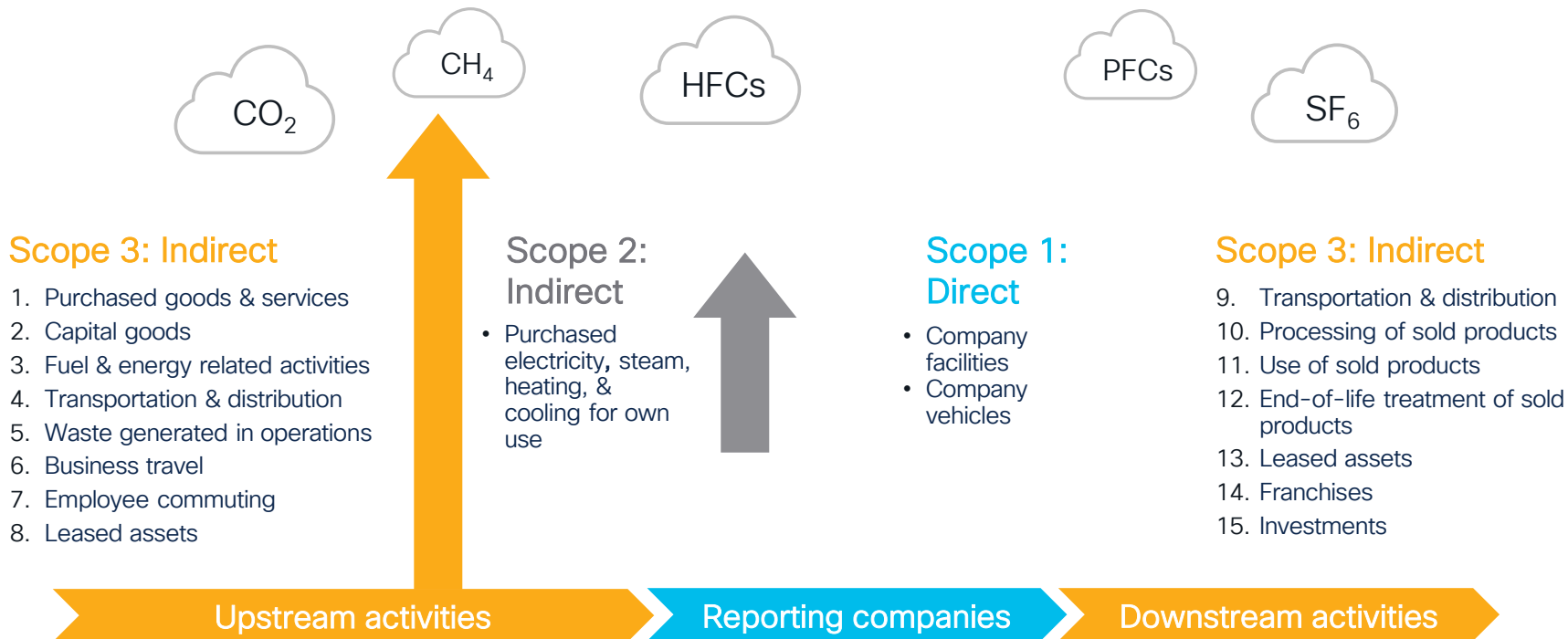7. Employee commuting
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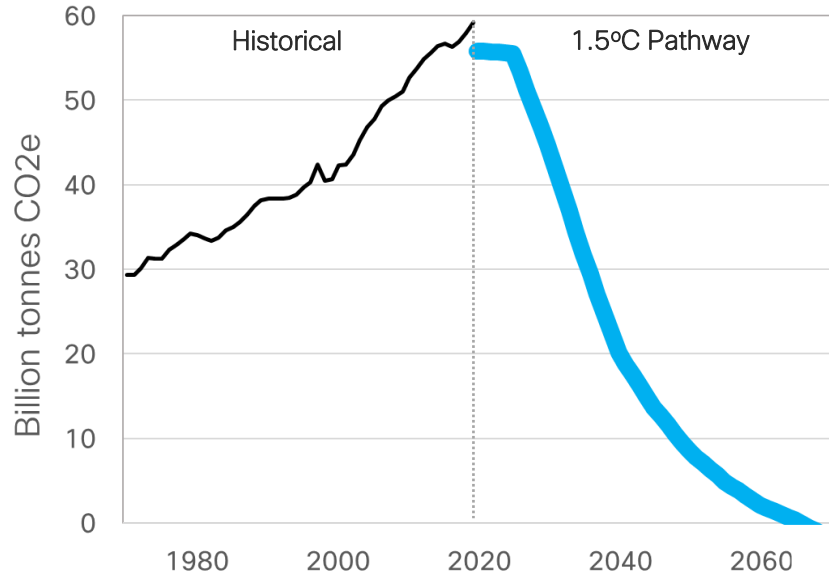
Based on: Greenhouse Gas Protocol, Technical Guidance for Calculating Scope 3 Emissions
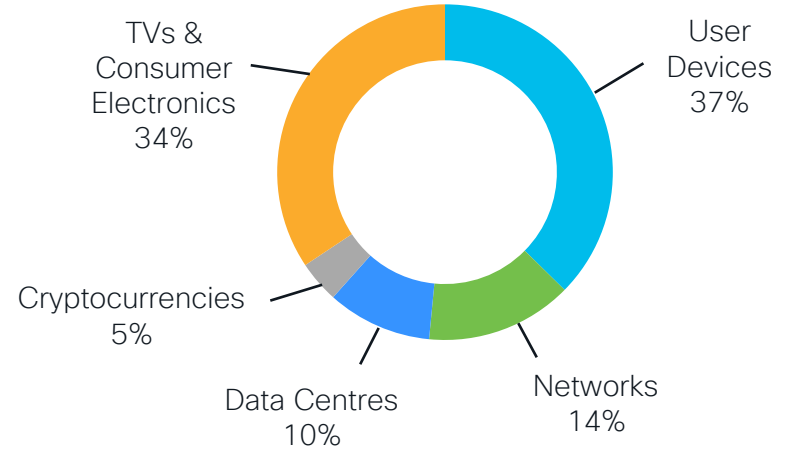
Based on data from Gartner (2022)

Putting IT in perspective

Total GHG emissions
~60 Billion tonnes CO2e

Based on data from: EDGARv7.0, Crippa et al (2021, 2022), IIASA (AR6 Scenario database)

Digital GHG emissions
~1.4 Billion tonnes CO2e (2-4% Total)

User Devices 37%

TVs & Consumer Electronics 34%

Cryptocurrencies 5%

Data Centres 10%

Networks 14%

Digital = ICT + Entertainment & Media

Source: Freitag (2021), Berners Lee (2020), Malmodin (2018, 2023)

Dual Responsibility

"Sustainability in IT"

- Renewable Energy
- Greener Data Centre
- Cloud Migration
- Energy Optimization
- Increased Asset Utilization
- Equipment Modernization
- Extended Life
- Remanufactured Equipment
- Supplier Management

2-4%

15%

"Sustainability by IT"

- Connected Transport
- E-Work / Hybrid Work
- E-Health
- E-Learning
- E-Commerce
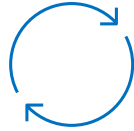- Smart Buildings
- Smart Grid
- Smart Agriculture
- Smart Manufacturing

Based on Exponential Roadmap 1.5.1 (2020)
Smarter 2030 (GeSI 2015), Malmodin (2015)

Cisco IT Sustainability Framework objectives

Circularity Principles

Focus on key stages of our IT service lifecycle: design, procurement, operations, and asset recovery and reuse

Supported by Culture

Increase awareness of industry standards and Cisco & IT emissions. Unleash employee passion, innovation and creativity

Company Alignment

Align and support corporate strategies and initiatives, and provide data foundation for company reporting

Special Areas of Focus

Alignment with goals for reducing Scope 1 & 2 emissions

Cisco IT Sustainability Framework

Align & Support Company Sustainability Goals & Initiatives
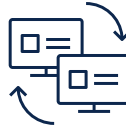
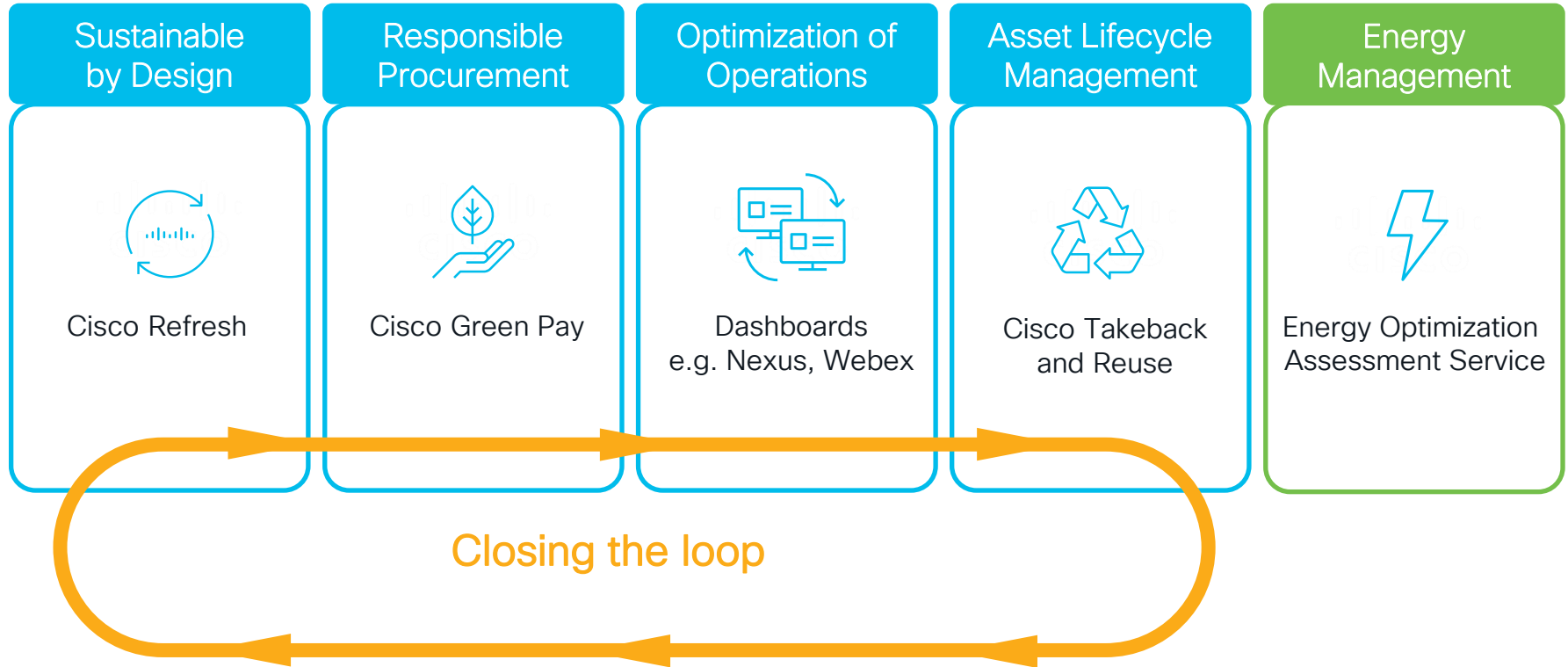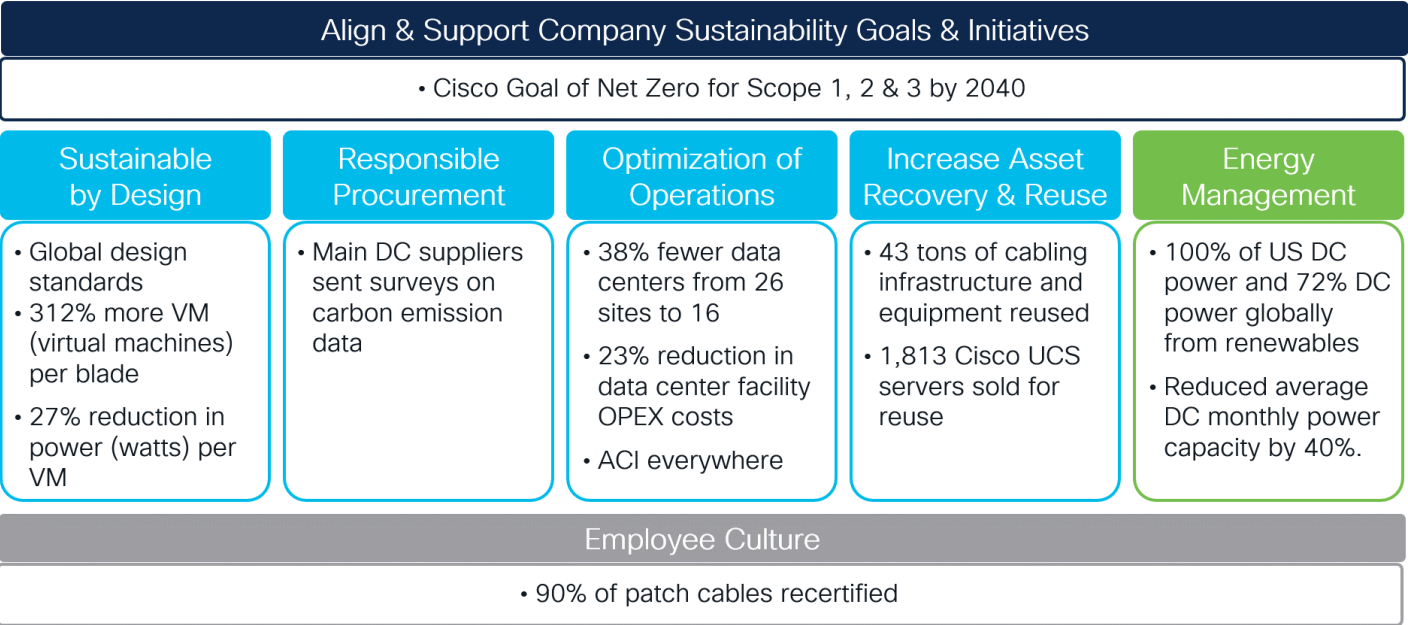| Sustainable by Design	Responsible Procurement	Optimization of Operations	Asset Lifecycle Management	Energy Management
• Design principles / Best practices • Life Cycle & System Thinking • Review design impact with stakeholders	• Analyze IT spend • Prioritize focus areas • Supplier scorecard / goal tracking • Supplier Code of Conduct	• Holistic service view • Extend life / Improve performance • Asset utilization / Remove excess • Automation to scale	• Consider at design phase • Process assets to next-best use • Leverage supplier best practices • Asset traceability	• Source renewables • Measure & monitor use / energy visibility • Improve power efficiency • Optimize energy consumption

Employee Culture

Closing the Loop: Suppliers + Customers

Sustainable by Design	Responsible Procurement	Optimization of Operations	Asset Lifecycle Management	Energy Management
Cisco Refresh	Cisco Green Pay	Dashboards e.g. Nexus, Webex	Cisco Takeback and Reuse	Energy Optimization Assessment Service

Closing the loop

Cisco IT Data Center Sustainability Results

White paper
Cisco public

illullu
cisco

The bridge to possible

Cisco IT Data Center Sustainability

Actions and outcomes related to design,
operations, energy management, asset reuse,
and procurement

July 2022

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Align & Support Company Sustainability Goals & Initiatives				
• Cisco Goal of Net Zero for Scope 1, 2 & 3 by 2040				
Sustainable by Design	Responsible Procurement	Optimization of Operations	Increase Asset Recovery & Reuse	Energy Management
• Global design standards • 312% more VM (virtual machines) per blade • 27% reduction in power (watts) per VM	• Main DC suppliers sent surveys on carbon emission data	• 38% fewer data centers from 26 sites to 16 • 23% reduction in data center facility OPEX costs • ACI everywhere	• 43 tons of cabling infrastructure and equipment reused • 1,813 Cisco UCS servers sold for reuse	• 100% of US DC power and 72% DC power globally from renewables • Reduced average DC monthly power capacity by 40%.
Employee Culture				
• 90% of patch cables recertified				

CISCO Live!

Carbon Footprint

What it is?[1]

Categories: Manufacturing, Transport, Use, End-of-Life
Items: Blade Server, IP Phone, Laptop, Smartphone

How many are there?[3]

Categories: Manufacturing & EOL, Use
Items: Data centres, Network, User devices
Axis: 0, 50, 100, 150, 200, 250, 300, 350, 400

Where it is?[2]

Webex Desk Pro

Categories: Manufacturing & EOL, Use
Items: Oslo, London, San Francisco, Sydney
Axis: 0, 200, 400, 600, 800, 1000, 1200
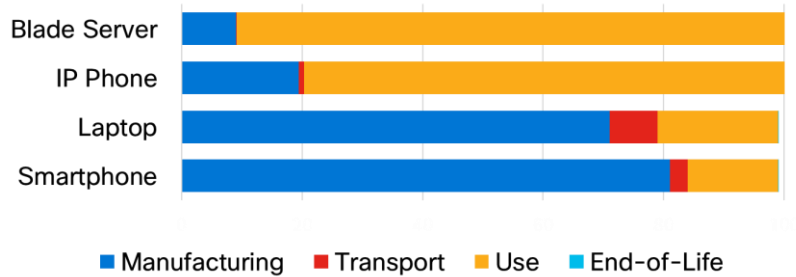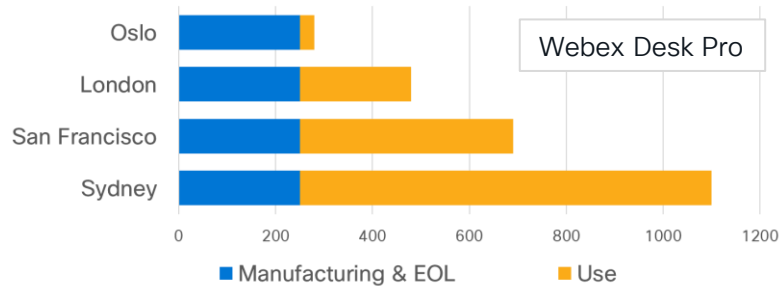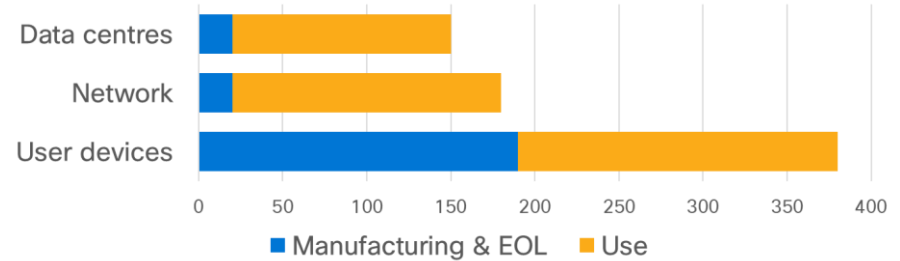
Systems thinking[4]

Data centre — WAN — Wired / Cellular — User device

Sustainable by Design

Customer Data Center Example

Old Architecture

Nexus 2k, 5k and 7k

New Architecture

Nexus 93XX
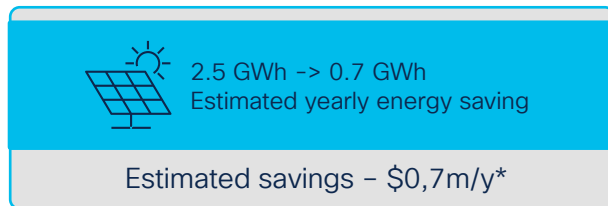
Illustrative example

2.5 GWh -> 0.7 GWh
Estimated yearly energy saving

26 -> 10
Racks consolidation

Estimated savings – $0,7m/y*

Estimated savings – $0,33m/y**

ROI and Green Pay Value

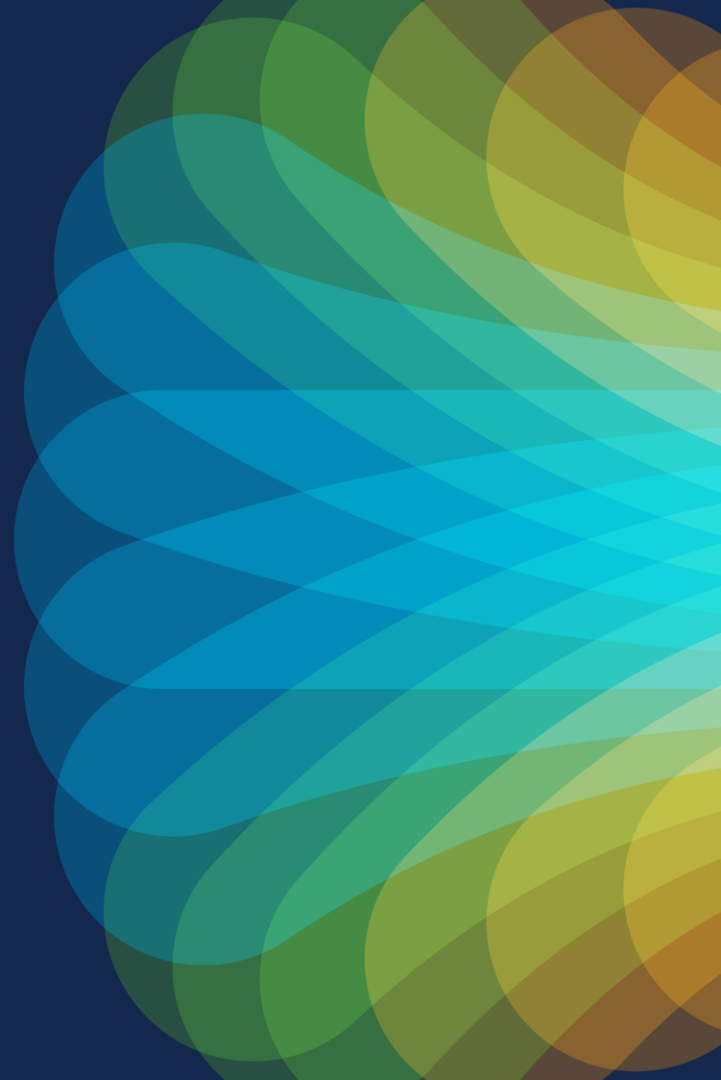| HW cost	Estimated*** yearly savings	ROI Years	Green Pay annual cost (M)
Est. $5.7m	Est. $1.04M	Est. 5.4	$1.08M

Smart Buildings for Hybrid Work
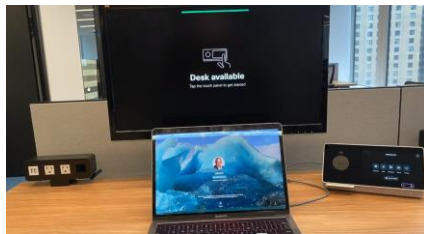
- One Penn Plaza, New York City
- 5,000 square meters; opened April 2022
- Technology was the 4th utility (along with water, gas, and power)
- Outcome driven
  - ✓ Improved user experience
  - ✓ Safety & compliance
  - ✓ Real estate utilization
  - ✓ Automation & optimization
- Cisco Smart Building Framework
  - ✓ 100% collaboration enabled
  - ✓ Catalyst 9300 and 9400 Series Switches
  - ✓ POE devices (lights, shades, desks, cameras)
  - ✓ DNA Center & Cisco Spaces
  - ✓ Environment sensors, energy metering

Sustainability by IT
Sustainability Data Foundation (SDF)

Use cases

Strategy & Performance	
Strategy Decisions	Scenario Planning
Goals and Milestones	Investment Decisions
Narrative	Claims & Commitments

Products & Solutions	
Product Design	Ecolabels
CX Cloud	Cisco Spaces
Nexus Dashboard	Meraki Dashboard

Go To Market	
RFP/RFI Responses	Calculators & Simulators
Sales Collateral	Marketing Materials
Campaigns	Customer partner access

Purpose & ESG	
Financial Disclosures	Regulatory Bodies
Purpose Report	Raters and Rankers
People Policy decisions	...

Conceptual Foundation

Data Foundation

Single Taxonomy	Standard Calculations	Data Governance

- Lifecycle, Environmental Impact
- Return, Recycle, Refurbish
- Supply Chain / Component
- Standardized Product Power
- Packaging
- Telemetry-based Power
- Transportation
- Others...

Principles:

✓ Safe ✓ Practical ✓ Easily Accessible ✓ Automated ✓ Relevant ✓ Up to date ✓ Feasible

Fireside Chat

Sustainability

Sustainability

Cisco has set a goal to reach net zero greenhouse gas (GHG) emissions across its value chain by 2040. Cisco products and technologies can help to reduce energy consumption, which can result in a reduction of GHG emissions and waste, improve energy efficiency, and enable more circular business models. Together, Cisco solutions and longstanding focus on sustainability can help business and IT make the right choices now with an eye towards a more sustainable future.

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

Monday, February 5 | 2:00 p.m.
TECGRN-2760
Design Thinking Working Session on Journey to Sustainability

Tuesday, February 6 | 8:00 a.m.
PSOGRN-1776
Best practices in sustainability leadership: Learn from Cisco's experts

Tuesday, February 6 | 11:45 a.m.
PSOGRN-1712
Sustainable Product Design: How designing with sustainability in mind can help your organization make progress on its climate goals

Tuesday, February 6 | 2:15 p.m.
IBOGRN-2229
Actionable Ideas to unlock sustainability

Tuesday, February 6 | 3:15 p.m.
PSOGRN-1848
Best Practice for a Sustainable Hybrid Workplace

Wednesday, February 7 | 10:10 a.m.
PSOGRN-2878
Assessing the Maturity of your Technology Capabilities and Accelerating your Sustainability Journey

Wednesday, February 7 | 12:30 p.m.
PSOGRN-2322
Re-imagine property and buildings using the network as a sensor

Wednesday, February 7 | 12:30 p.m.
DEVNET-2844
Measure and report network CO2eq emissions

Wednesday, February 7 | 2:50 p.m.
PSOCX-1389
Accelerate Your Sustainability Outcomes for a Greener Future

Wednesday, February 7 | 3:45 p.m.
PSOGRN-2446
Driving Sustainability Excellence: Exploring Key Data Considerations and Metrics Modeling Approaches

Thursday, February 8 | 9:45 a.m.
ITLGEN-1420
IT's Role in Data Driven Sustainability

Thursday, February 8 | 12:00 p.m.
PSOGRN-2201
Your Kick-Start for the Sustainability Journey

LABMER-2278 (Walk-in Lab)
Sustainability, Simplified with Cisco Meraki

Sustainability Demos

in Showcase

NETWORKING

Design Smarter Workspaces ● ●

Build a more resilient, safe, and sustainable workplace with Meraki cameras and sensors. In this demo you'll learn how to revolutionize surveillance with intelligent, cloud-managed smart cameras and feel like your spaces have a sixth sense thanks to our sensors.

Create Smart, More Sustainable Buildings ● ● ●

Chart your path to smarter, more sustainable buildings with Catalyst and Meraki. Combine the power of Catalyst 9000 and Meraki switching infrastructure with Cisco Spaces and the Meraki IoT platform to manage and measure energy consumption and intelligently automate systems based on occupancy, schedule, and current environmental conditions.

Win with High-Performance DC Switches ● ●

Explore the benefits of the Cisco Nexus 9808 Switch, which is designed to keep you ahead of changing application architectures, data growth, and sustainability priorities. These switches deliver scalability and investment protection with 1/10/25/50/100/400G multispeed ports, while enhancing security and visibility with streaming telemetry, advanced analytics, and line-rate encryption (MACsec).

NETWORKING Compute

Leveraging Cisco UCS X-Series ● ●

Join us to learn about Cisco UCS X-Series, a modular server system managed from the cloud. You'll see how it meets the needs of modern applications and improves operational efficiency, agility, and scale through an adaptable, future-ready, design. We'll showcase the entire UCS X-Series portfolio and the 100G 6536 Fabric Interconnect.

MIG

Routed Optical Networking and Automation ● ●

Discover how Routed Optical Networking offers a simplified transport architecture through physical and service layer convergence. This architecture lays the groundwork for layer convergence via Private Line Emulation (PLE) and the use of high-speed Digital Coherent Optics (DCO). This architecture, paired with automation, facilitates multilayer, multivendor service lifecycle management, providing clear visibility and network assurance. This expedites the deployment of new services and results in reduced CapEx and OpEx.

● Energy Efficient Infrastructure

● Energy Management

● Sustainable Design

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