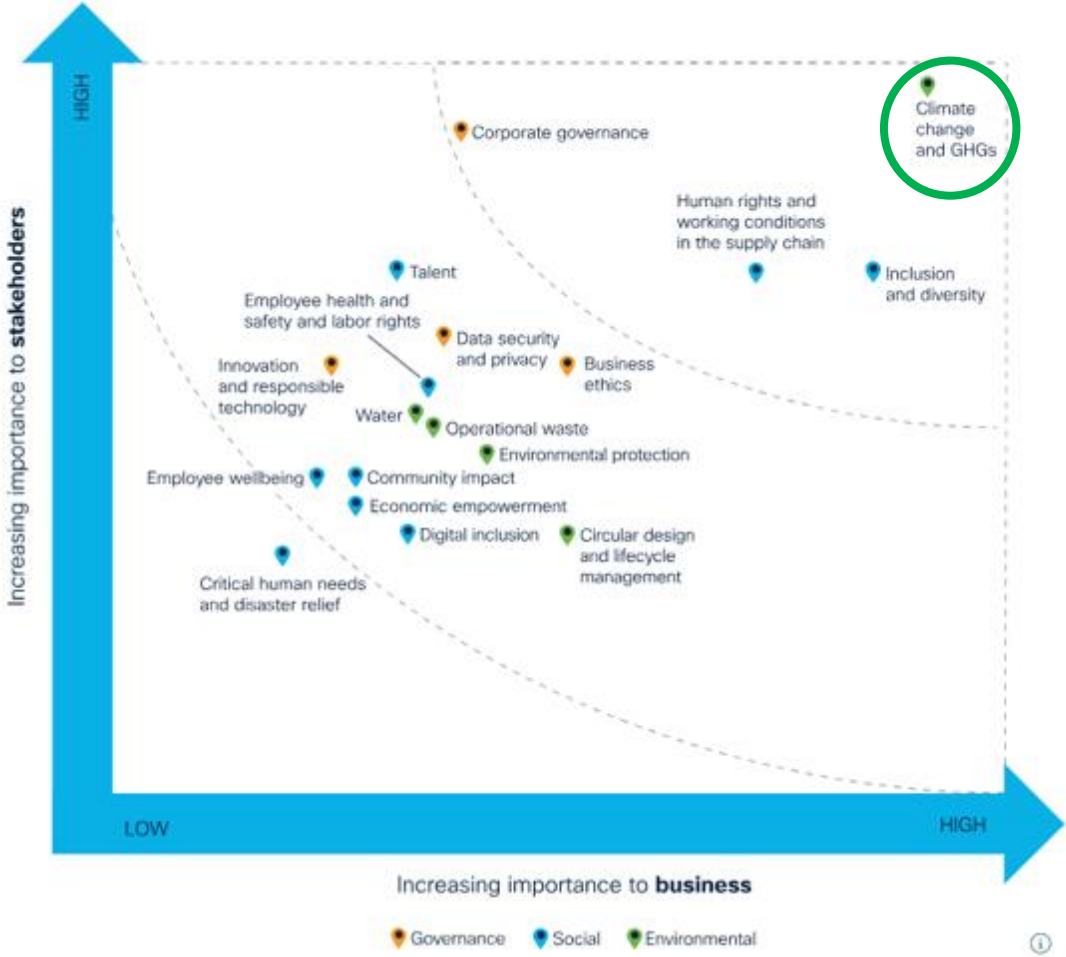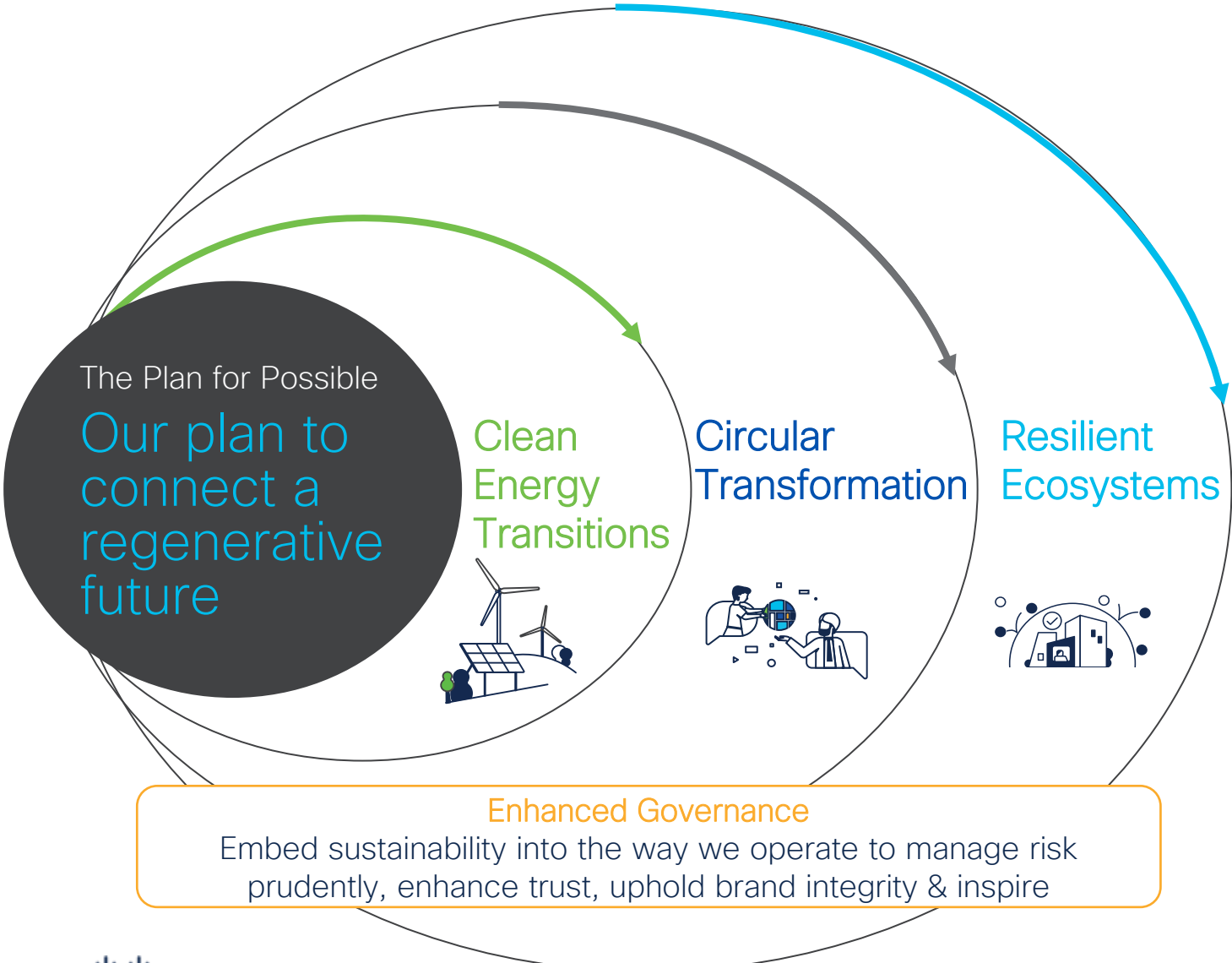# ESG is Front and Center in Cisco's Business Model

"

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*

Cisco's FY 21 ESG Materiality Matrix

Clear Targets, Including on Energy Reduction

The Plan for Possible

Our plan to connect a regenerative future

Clean Energy Transitions

Circular Transformation

Resilient Ecosystems

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

Clean Energy Transitions

Net zero across our value chain by 2040

Reduce absolute Scope 1 & 2 GH 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]

Approved

The Way Forward for Energy Reduction

Priority 1: Transition to clean energy

It is possible to accelerate clean energy adoption toward Net Zero.

How we'll do it:

- Lead in energy efficiency innovation

- Connect clean energy and digitize the grid

- Collaborate with our customers, partners, and suppliers to accelerate the energy transition

How we've started:

- Developing the Silicon One chip to reduce energy consumption while increasing bandwidth

- Pioneering Universal Power Over Ethernet to optimize energy use for smart buildings

- Helping our supply chain set GHG reduction targets[1]

[1]Cisco has a goal that 80% of our component, manufacturing, and logistics suppliers by spend will have a public, absolute GHG emissions reduction target by FY25. Progress as of FY22: 78%

Approved

Where Can Cisco/Accedian Help Service Providers Make a Difference?

Customer Challenges

- Achieve sustainability targets

- Demonstrate OPEX savings to stakeholders

- Single pane of glass operational view

- Energy generation diversity across the globe

Cisco/Accedian Solutions

Solution
Accedian Skylight analytics and sensors
Cisco SDN Automation solution
Cisco 8000 hardware based on SiliconOne
'GreenVPN' application

Outcomes

- Single pane of glass view for sustainability data alongside performance assurance metrics
- Leverage Analytics capabilities to enact quick decisions and take actions based on insights more efficiently
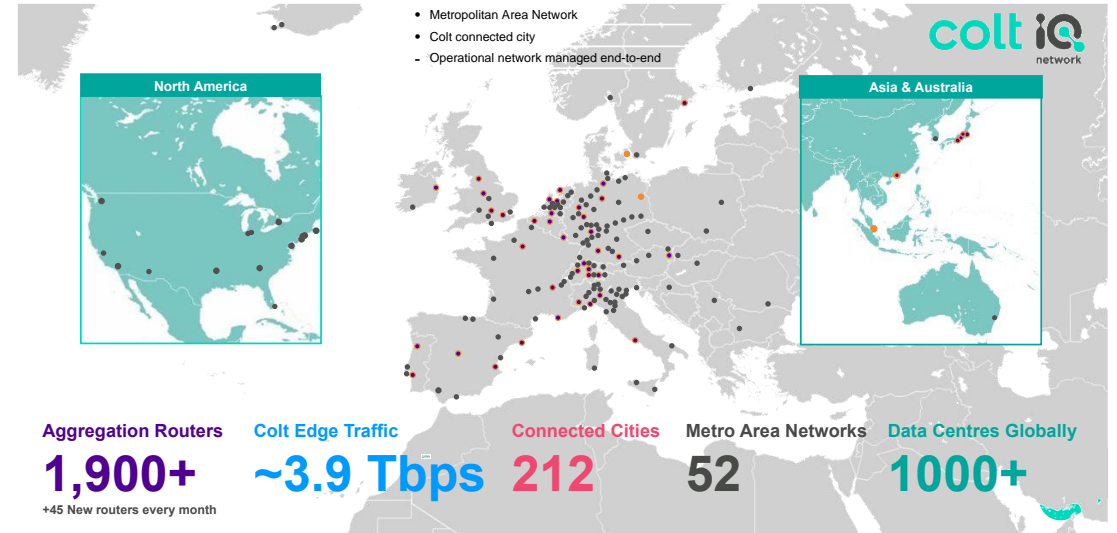
- Full life cycle management of services
- Service optimisation based on metrics such as latency, carbon footprint etc.

- Best in class power efficiency (2.5W/100Gbps)
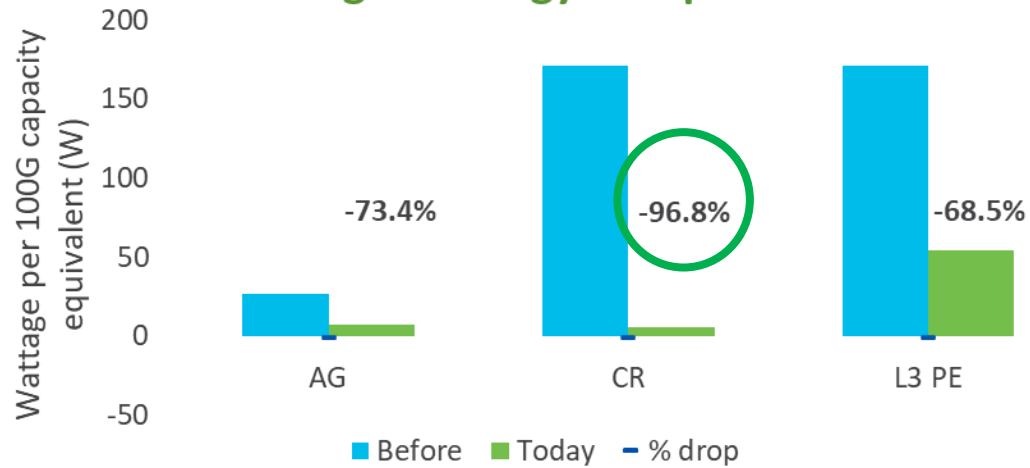- Helps achieve Net zero targets for SP's

- Common API to collect carbon footprint data for power generation per country
- Calculate power/carbon footprint per service
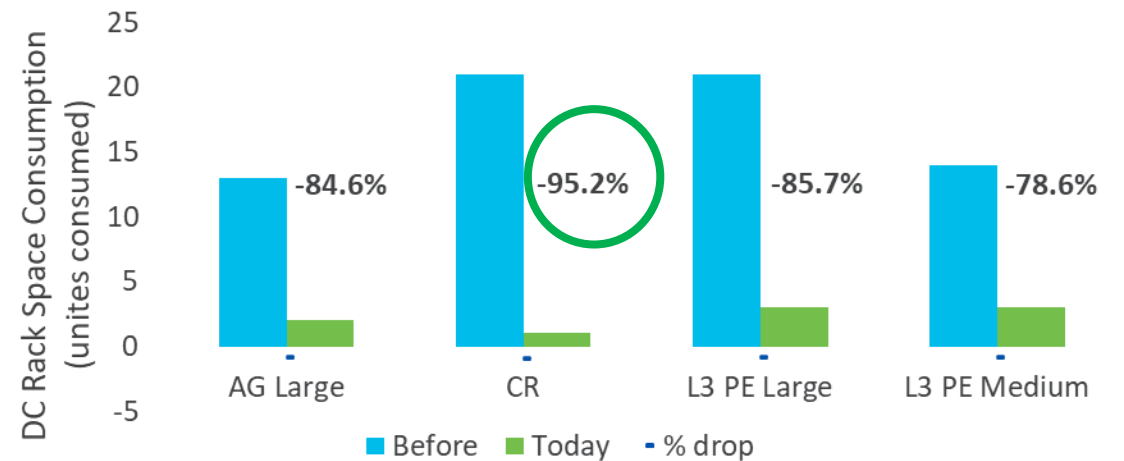
Cisco SiliconOne Shows Results

⚡**20GW/hr** power saving across the network

North America

Asia & Australia

colt iQ network

Aggregation Routers
1,900+
+45 New routers every month

Colt Edge Traffic
~3.9 Tbps

Connected Cities
212

Metro Area Networks
52

Data Centres Globally
1000+

Reducing its Energy Footprint

Wattage per 100G capacity equivalent (W)

- AG: -73.4%
- CR: -96.8%
- L3 PE: -68.5%

Legend: Before / Today / % drop

Reducing its Physical Footprint

DC Rack Space Consumption (unites consumed)

- AG Large: -84.6%
- CR: -95.2%
- L3 PE Large: -85.7%
- L3 PE Medium: -78.6%

Legend: Before / Today / % drop

https://www.segment-routing.net/conferences/Paris23-Colt-Bart-Janssens/

Approved

GreenVPN Solution – Sustainability Use Case

Electricity Price in Europe

€ per megawatt hour

Max EU price
Germany
France
Sweden
Min EU price

Source: ENTSO-e · Prices are average day-ahead spot prices per MWh sold per time period; Max and min prices refer to the highest and lowest average values of any country in the EU in that period

EMBER

Leverage the Grid

Carbon intensity (gCO₂eq/kWh)

0   300   600   900   1200   1500

Source : https://app.electricitymaps.com
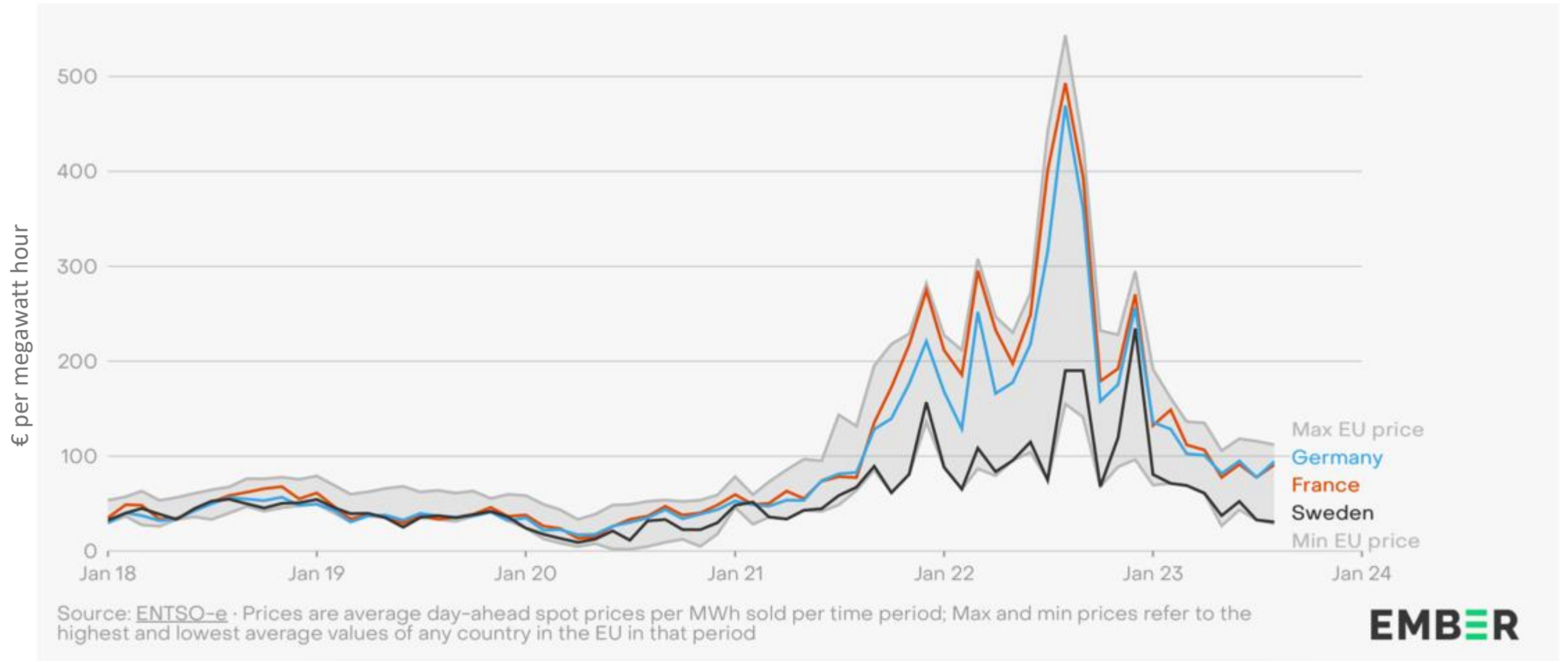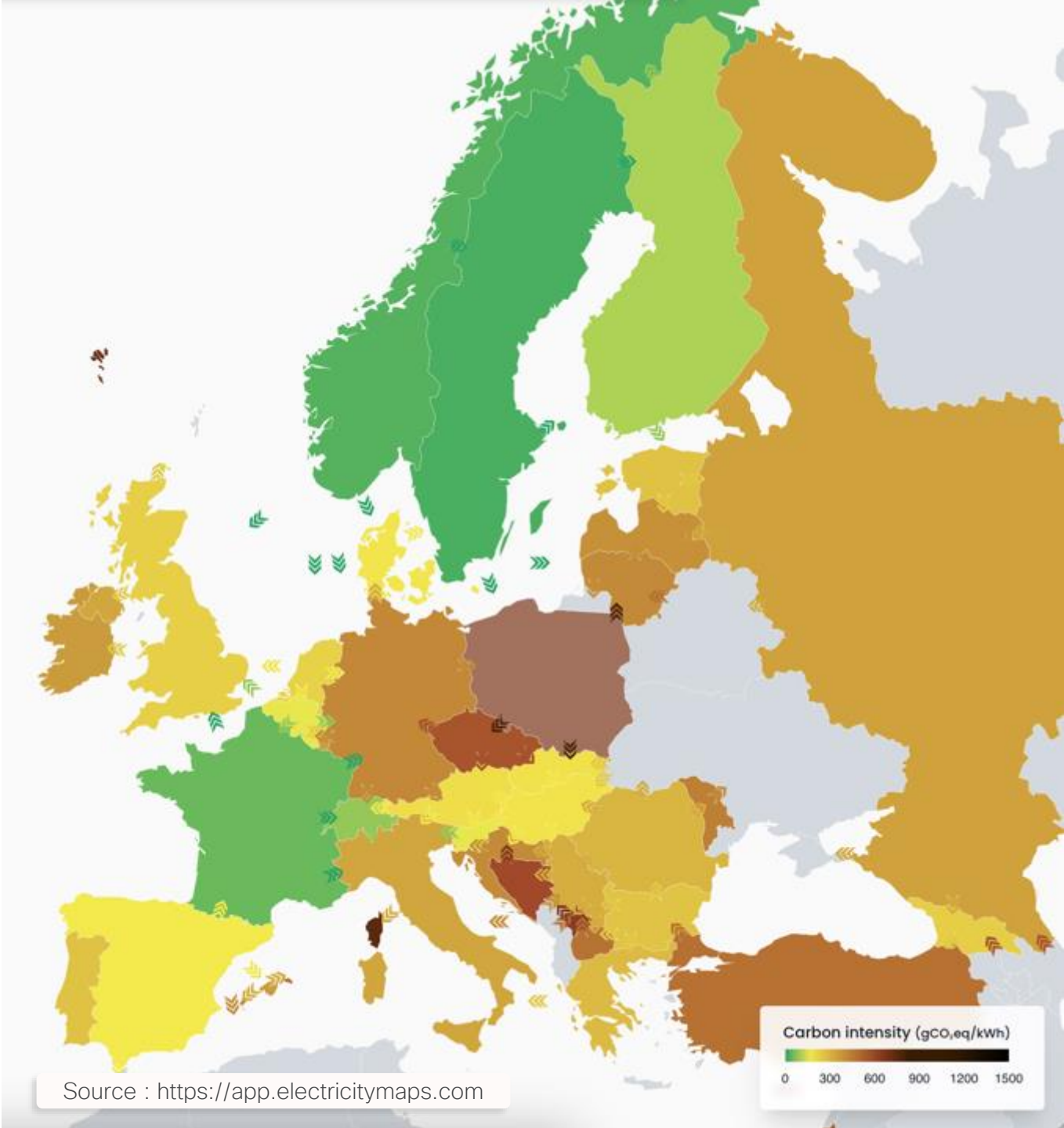
GreenVPN: End-to-end KPI Insights

GreenVPN: New Optimization Metrics

Optimization

Performance : Power and Carbon reduction

Crosswork Network Services
Orchestrator

+

GreenVPN
Energy dashboard   Carbon Footprint

+

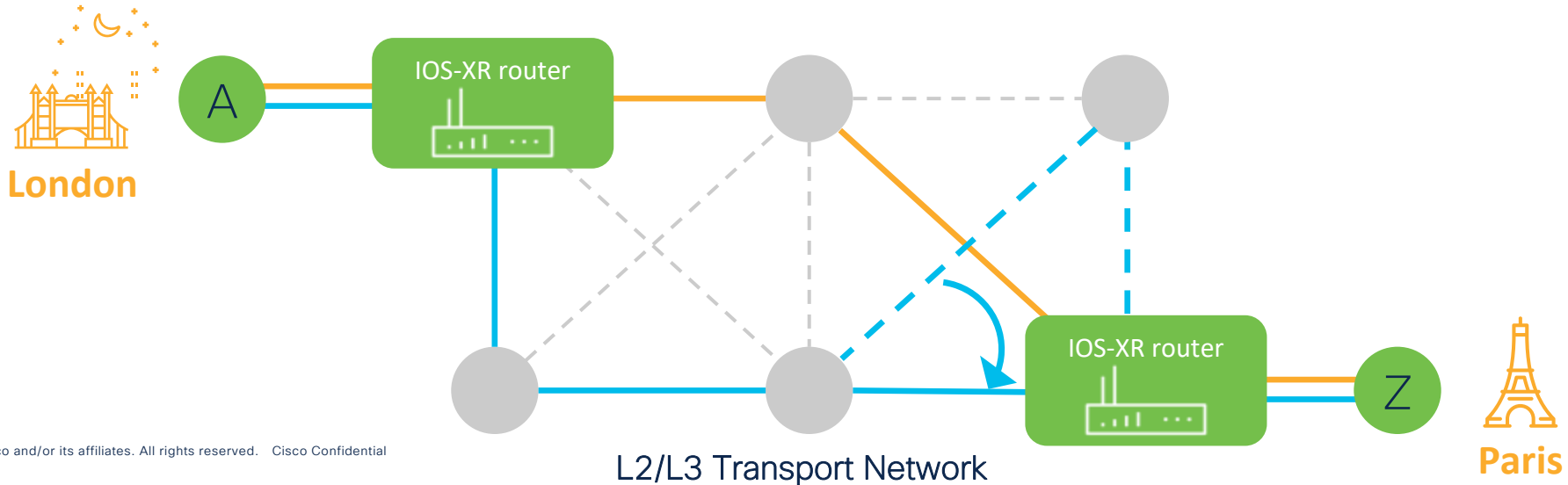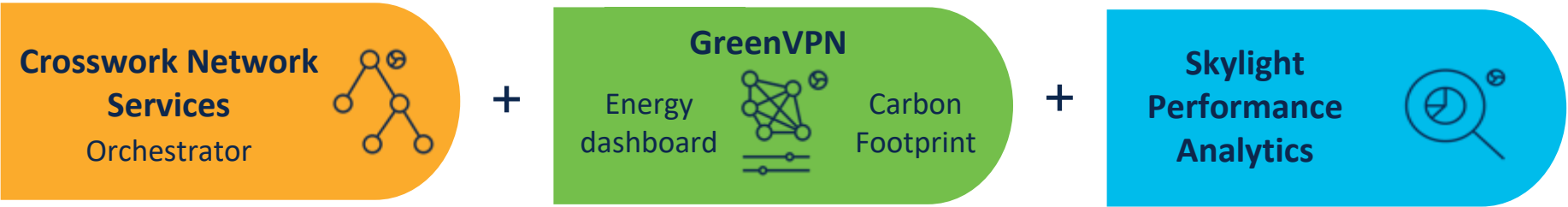**Skylight Performance Analytics**

London

A — IOS-XR router

IOS-XR router — Z

Paris
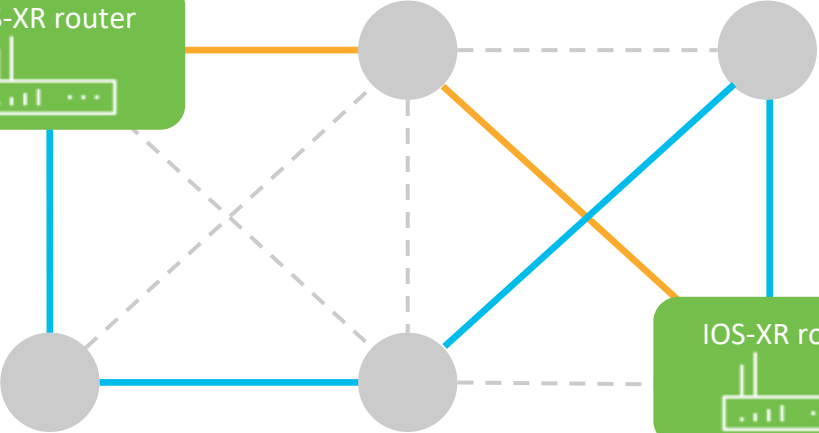
L2/L3 Transport Network

GreenVPN: End-to-end Service KPI Insights

- Visibility of the power/carbon footprint of services over time

- Derive greater insights from the combination with other performance assurance metrics

- Make this information available to customers in an end-customer portal

- Take well-informed optimization decisions to reduce power consumption and lower OpEx of services
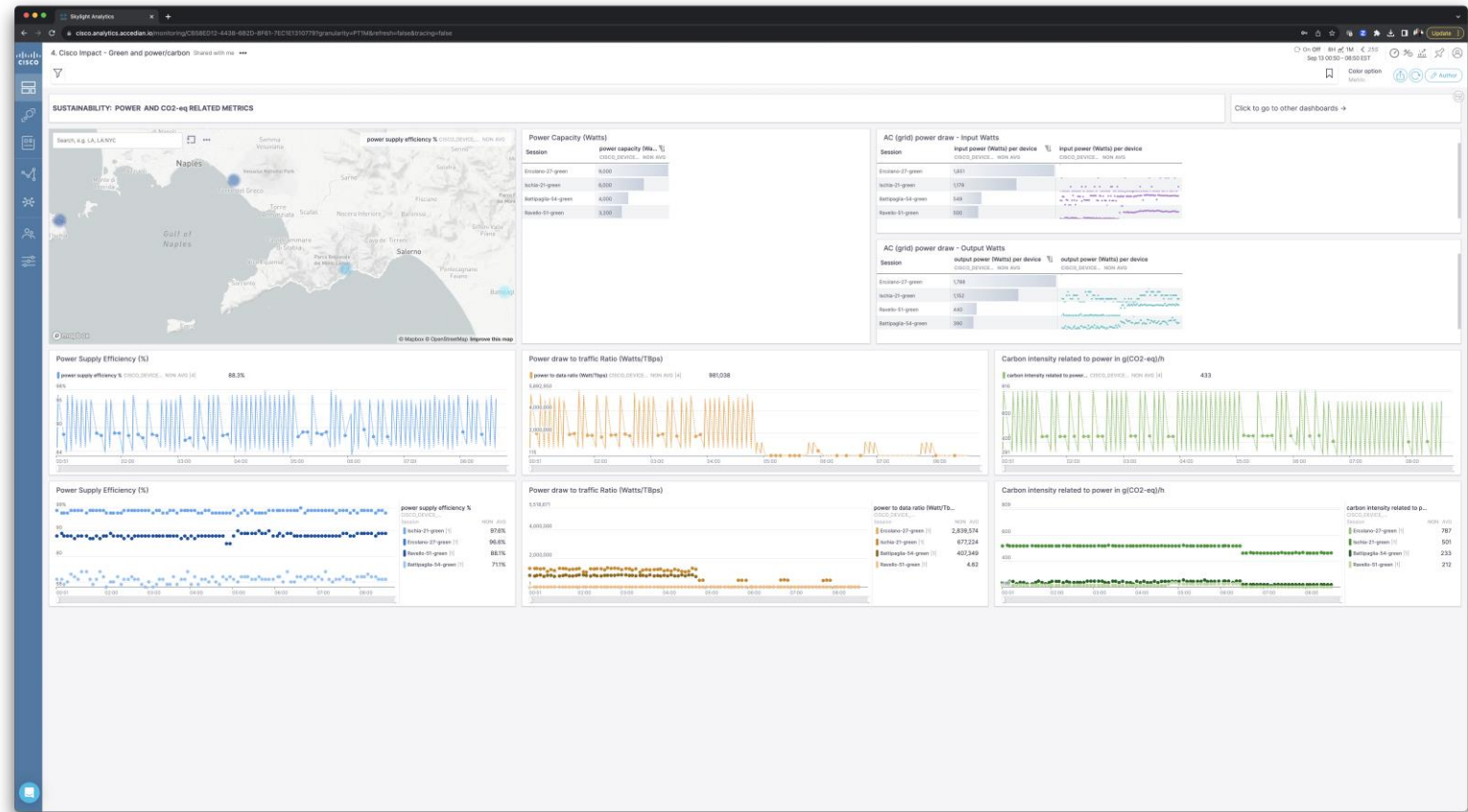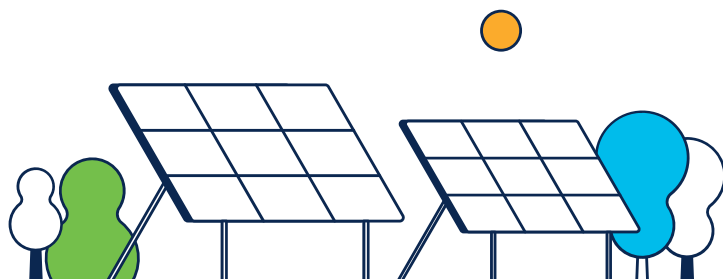
A Clear Use Case for 'GreenVPN'

Customer Challenges

- Achieve sustainability targets

- Demonstrate OPEX savings to stakeholders

- Single pane of glass operational view

- Energy generation diversity across the globe

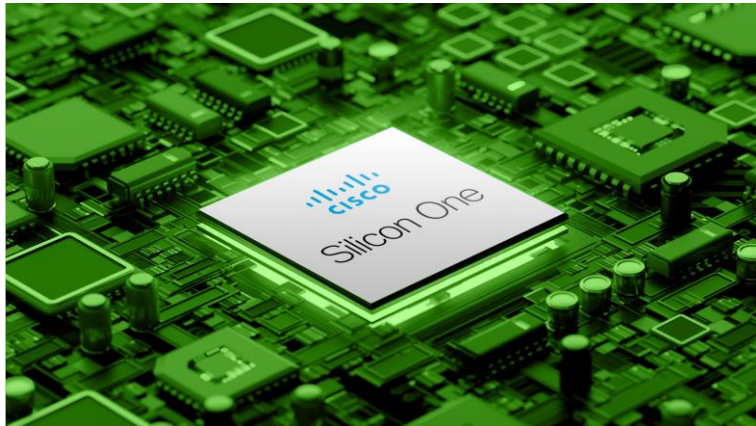- Reporting of carbon footprint per service

Outcomes

- Demonstrate carbon footprint reduction

- Service visualization over a defined time period

- Detect abnormal power consumption and take corrective actions

- Highlight benefits with SDN automation

- Showcase energy efficiency per country

- Differentiate services based on sustainable KPIs

Cisco is Spearheading Change Within the Industry

SBTi approved Net- Zero Target

2022 CDP Climate Change Score

Silicon One

WORLD'S BEST WORKPLACES — Great Place To Work. 2022 — **#3**

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

3BL MEDIA 100 Best Corporate Citizens 2022 — **#5**

#2 Gartner Supply Chain Top 25

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

AA Rating

CDP DISCLOSURE INSIGHT ACTION

A List

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

Gold Class

Member of **Dow Jones Sustainability Indices** Powered by the S&P Global CSA

World Index & North America Index

CISCO

The bridge to possible