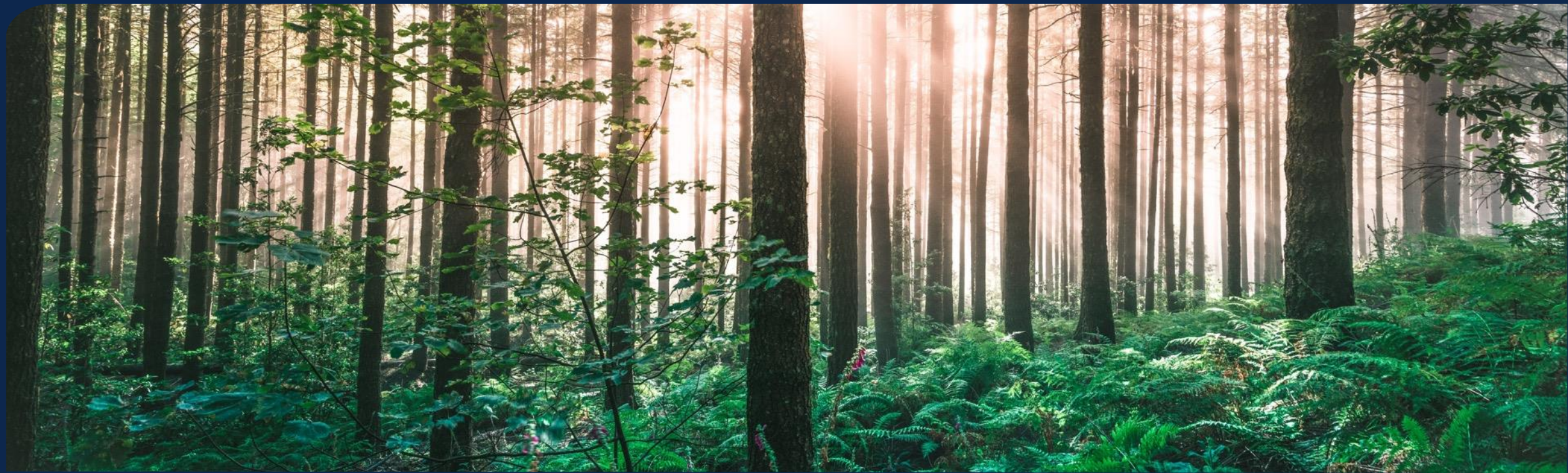
The bridge to possible

# Collaborating To Achieve Net Zero and Circular Economy Ambitions

Post event report from Cisco's first EMEAR Sustainability Executive Summit for Service Providers - January 2022



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# Join the community

Our first Sustainability Executive Summit was full of great ideas and insights to drive our momentum forward. We valued the open, sharing forum of the event and are already organising the next summit for the **summer of 2022**.

In the meantime, **let's continue the conversation**. We'd love to hear about your sustainability initiatives. Additionally, please let us know what you'd like to see at the next event or any questions you have about our sustainability programs. Get in touch with us on emear_sp_sustainability@cisco.com

We look forward to growing this collective effort with you.

– Cisco Service Provider EMEAR Team

# The summit highlighted the importance of industry collaboration in achieving net zero carbon emissions

The telecoms industry is facing significant sustainability challenges with an increase in data traffic and increased demands on data centres are testing Communication Service Provider's (CSP) efforts towards net zero commitments.


Many CSPs have also identified a potential opportunity in enabling their customers to reduce carbon footprints by using digital solutions.

CSP's play a key role in driving industry-wide change, along with their suppliers and partners. Establishing industry collaboration, standardised reporting and open communication are key to further this effort.

> *Urgent action is needed to achieve carbon neutrality. Service Providers should be focused both on driving down their own carbon footprints (even as data transmission increases) and on enabling other sectors to decrease their emissions through digital technology.*

Pearse O'Donohue
Director for the Future Networks Directorate at the European Commission

# Working towards a collective goal

## Ambition

- We have shared responsibility and goals. The dialogue between operators and vendors is critical. Achieving progress requires sharing our experiences.
- We are data-driven organisations. Strategy and goals need to be linked to measurable outcomes ensuring company-wide buy-in. Transparency is key.
- We need to collaborate to achieve greater alignment on standardized measurement and reporting including demonstrating to customers how technology supports sustainability goals.
- Drive sustainability led service creation to optimize, expand an asset's life, and virtualize services reducing the environmental impact.

## Actions

- Increase collaboration through joint initiatives and forums – including the Cisco Sustainability Executive Summit.
- Expand and communicate more across the industry on science-based targets and measurements – supporting industry reporting standards detailing service level and equipment level environmental impacts.
- Transition from innovation towards scaling up solutions requires continued investment – and delivers greater impact.
- Evolve business models, KPIs, goals to incorporate environmental impact assessments – and the benefit for end customers.

# Cisco Supporting Sustainability Goals

## Programs, Achievements and Goals

### Programs

Supporting sustainable service creation

- Cisco Recycling Program (Int'l) Supporting Circularity with >99% Electronics Recycling available
- IP/Optical Layer Convergence Architecture (Routed Optical Network) >40% Energy Reduction through convergence
- Silicon One Semiconductor technology exponentially increase energy efficiency and throughput

### Achievements to date

Steps taken towards Scope 1, 2, and 3

- 60% reduction in GHG (Scope 1&2) (vs 2007)
- 85% energy sourced from renewal sources
- 38% reduction in virgin plastic usage (vs. 2018)
- 19% reduction in foam usage in packaging (vs. 2021)
- 50% reduction in packaging

### Goals

Cisco publicized net zero target

- 100% of new Cisco products incorporate circular design principles by 2025
- Net zero scope 1 & 2 target 2025
- Net zero scope 3 target 2040

Check out Cisco's sustainability proposition for service providers >

# Driving Sustainability Goals

## The road to Net Zero : Collaborating to achieve net zero carbon emissions

### Standardizing reporting

Increase collaboration through joint initiatives and forums

- Industry alignment: Agree to publicly share who uses what corporate reporting
- Drive common approaches to customer level reporting
- Build, train and incentivise a methodology for supplier evaluation
- Clearly defined methodology and alignment among CSPs would allow impact to be consistently captured.
- Learn about Telia's customer-level reporting

### Scope 3 commitments

Growing business & reducing Carbon Footprints

- Reduce carbon footprint with innovative architectures
- Invest in innovative ideas that foster Sustainability and scale them up
- Ensure that CSPs have good quality data about the products/services they purchase including things like embedded carbon
- Learn about Telefonica's Supplier Engagement Programme

### Circular Assets

Applying circular design principles

- Embedding circularity in the design process
- Capture value from end-of-life equipment: Recycle, reuse
- Align sustainability with employees' business targets
- Train all business units to ensure they understand why sustainability is something they should be focused on
- Move to business models that better support the circular economy (e.g. technology as a service)
- Learn about STC Refurbishing devices for the community

Check out Cisco's sustainability proposition for service providers >

# Driving sustainability through the digital transition
## *by the European Commission*

**Pearse O'Donohue**
Director for the Future Networks Directorate at the European Commission

"A huge obligation and a huge opportunity…"

> Investment will be needed from Service Providers in order to reduce carbon emissions – the European Commission is focused on supporting these efforts both through R&D funding and through ensuring that those playing by the rules are not undercut by those failing to follow regulations and best practice.

## Key themes and takeaways

- There are two main technology trends that will impact the sustainability efforts of Service Providers: the rollout of 5G networks and the increased use of cloud computing
- It is forecasted that by 2030 3.2% of all EU electricity demand will come from data centres – SPs must be able to manage this number down even while demand for cloud and edge cloud increase
- This can be achieved through various initiatives including better eco-design and labelling of the constituent equipment of data centres and more stringent code of conduct on building resource efficient data centres
- 5G will be key enabler to driving the digital transformation of other industries – it can also play a key role in making sure this transformation is a sustainable one
- The power consumption per bit of data transmitted via 5G in comparison to 4G is 90% lower

# Collaborating to achieve net zero and circular economy ambitions

> Sustainability is a global issue, but it is also true that there is significant variation between the maturity of Service Provider efforts depending on their region. The priority, therefore, needs to be ensuring that there is a common understanding of goals among the whole ecosystem and in bridging the gap with between developed and more developing markets.

Abdullah Abdulrahman Alkanhl
Chief Corporate Affairs Officer at **STC**

> Our investors want to see three key things around climate: that companies have a strong ambition, that they are effectively using their industry influence to accelerate the ambitions of others too and that they are also contributing though their products and services and growing as a business at the same time as they are enabling the reduction of carbon emissions.

Maya Ormazabal Herrero
Director of Environment& Social Responsibility,
**Telefonica**

> Sustainability is deeply integrated into our strategy – we have identified what the critical sustainability issue is for each business unit and therefore have integrated sustainability targets into each of their scorecards

Anna Augustson
Head of Sustainability at **Telia Sweden**

## Key themes and takeaways

- Service Providers have two main roles to play in sustainability:
  - reducing their own carbon footprint
  - enabling their customers to reduce their environmental footprint through using digital solutions
- Focus on reducing their own carbon footprint is particularly critical as the amount of traffic passing through their networks increases – initiatives such as deploying optical fibre networks, decommissioning legacy networks and embracing circular economy principles are key to achieving this.
- Panelists also shared their experiences in enabling their enterprise customers to become more sustainable, for example through deploying smart metres to reduce water consumption or by using 5G and AI to improve agricultural efficiency
- Service Providers will need to collaborate closely with each other as well as with others within the industry – regulation, industry-wide initiatives and open forums for discussion will all play their part in enabling this collaboration to take place .

Breakout 01

# Standardizing requirements and reporting

## Topics discussed

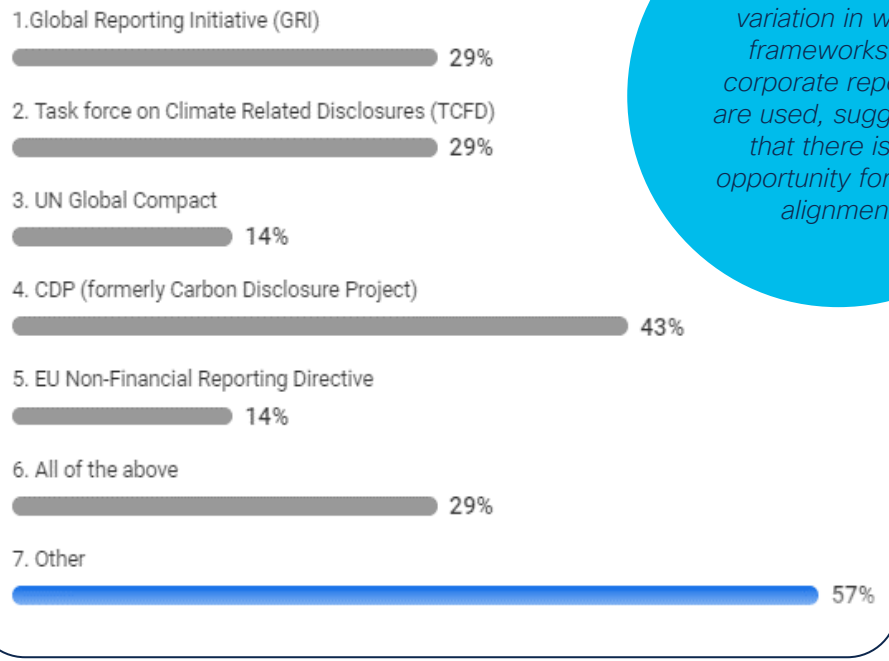
- Corporate-level reporting frameworks/standards used and current gaps
- Current approach to customer-level reporting
- Ability to develop, standardised and quantified enablement reporting without 'erroneous over-claims'
- How to best proactively collaborate and align when it comes to requests for information (investors, regulators, consumer customers and enterprise customers)

## Attendees

- Altice
- Cisco
- European Commission
- KPN
- STL Partners
- Talk Talk
- Telenor
- Telia Company
- Vodafone

# More alignment potential on corporate level reporting

## What reporting frameworks form the basis of your corporate reporting?




*The poll shows variation in which frameworks for corporate reporting are used, suggesting that there is an opportunity for more alignment*

## How to bring more industry alignment?

Opportunities, challenges and gaps in developing common frameworks for reporting

Challenge

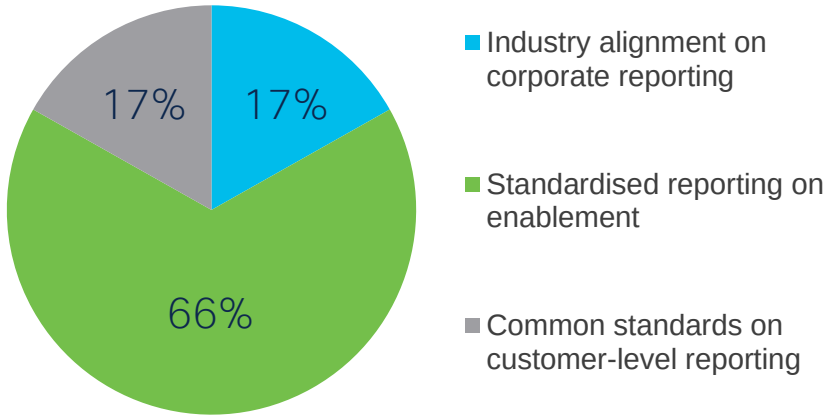
- National, regional and global coverage of different options
- Blurring between corporate reporting frameworks, standards and regulation/compliance

Opportunity

- Greater transparency and a 'level playing field' reduce actual / perceived greenwashing
- Drive greater systematic adoption of sustainability as an organizing principle for the Service Provider

# Enablement reporting: the best opportunity, with challenges

What are the best opportunities for industry collaboration?




## How to introduce standardised enablement reporting?

Opportunities, challenges and gaps in developing common frameworks for reporting the positive impacts of Service Provider services on customers' emissions

Challenge

- Larger operators 'collecting' big credit for no specific effort
- Not possible to attribute Service Provider services contribution to an outcome with many elements

Opportunity

- Drive greater systematic adoption of sustainability as an organizing principle in the Service Provider
- Clearly defined methodology and alignment among Service Providers would allow impact to be consistently captured

# Key breakout discussion takeaways

## Insights

- Customer level reporting is still methodologically limited (and caveated) but requests from customers are growing.
- A poll carried during the session showed variation in which frameworks for corporate reporting are used – suggesting there is an opportunity for greater alignment (for example on RFP responses).
- Four out of six breakout attendees chose standardized enablement measurement and reporting as the best collaboration option.

Attendee quotes

> *Transparency is key to creating a level playing field. We cannot achieve net-zero goal without better reporting.*

> *Customers want better and more granular reporting on the emissions from use of our services. This is growing in importance.*

> *Data challenge is significant to develop more detailed reporting including customer level reporting. It's a massive corporate workload.*

> *Our methodology for corporate reporting is 80% spend based and 20% actual energy of equipment. We could also apply this to specific customer solutions and customer-specific reporting.*

# Case study: Telia customer-level reporting

Telia has developed customer-level reporting to directly inform their customer's scope 3 reporting. Three approaches were considered before adopting the third, highlighted by the green box.

| Potential Assessment Approaches for Scope 3 | Pros and Cons |
|---|---|
| Supplier Data collection | • Huge data collection effort, and not practically feasible (if 100% coverage is the target)<br>• Results in a generic footprint figure with low quality that can be divided in relation to customer spend |
| Life Cycle Assessment (LCA) | • Require specialized LCA software and allocated resources and researchers<br>• Huge data collection effort required.<br>• Require an in depth knowledge of the customer and its ICT usage<br>• If properly assessed, the LCA approach results in the most detailed footprint assessment based on the customers actual ICT usage |
| Spend Input/Output (I/O) based calculation | • "Easy" to assess and calculate if SBTi reporting is performed<br>• Roughly 100% data coverage (spend)<br>• Emission data quality depending on spend/footprint recalculation factors according to best effort<br>• **The result is a generic footprint figure, easily divided in relation to customer spend, but without the direct connection to the customers actual ICT usage** |

# How to envisage the next steps

## Transparent reporting and strengthening standards alignment

### Communication Service Providers

Should consider the following next steps

- Agree to publicly share who uses what corporate reporting – to encourage adoption and alignment on existing initiatives such as EU taxonomy criteria
- Drive enablement reporting initiatives (ideally building on existing work e.g. EU)
- Propose common approaches to customer level reporting

### Suppliers and other industry influencers

Should consider the following next steps

- Provide Service Providers with good quality (and normalised) data on the products/services they purchase including embedded carbon
- Participate in industry initiatives to develop customer-level reporting (e.g. relating to customer equipment)

### The industry as a whole

Should consider the following next steps

- Make recommendations on alignment of standards based on existing corporate reporting frameworks
- Agree specific details around common approach(es) to customer level reporting
- Identify and review existing methodologies for enablement reporting and make recommendation on potential common principles and approaches

Breakout 02

# Meeting scope 3 commitments: barriers and opportunities

## Topics discussed

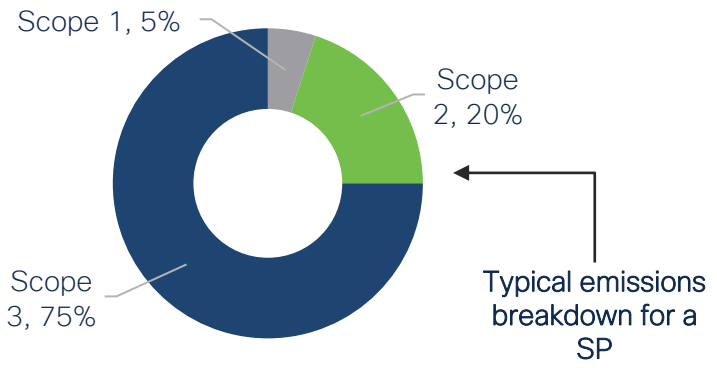
- Methodology used to capture upstream and downstream Scope 3 emissions today and what challenges are encountered in this process
- Biggest challenges & opportunities in trying to reduce scope 3 emissions
- Key learnings from those who are furthest along their journey in achieving Scope 3 emissions reductions
- How to encourage effective collaboration cross-industry stakeholders (e.g. suppliers) on scope 3 emissions

## Attendees

- BT
- Cisco
- Eco-act
- Elisa
- Orange Business Services
- STL Partners
- Swisscom
- Telefonica
- Telenor

# Scope 3 emissions must be addressed company-wide

## Scope 3 emissions: the key challenge for SPs




Scope 3 emissions are both the biggest contributor to their carbon emissions and the hardest category to impact.

Today many CSPs calculate scope 3 emissions on a generic 'factor' basis – i.e. we buy X value of products of a broad category of ICT equipment and therefore we will assume generic carbon emissions for these.

Specific methodology, insights and details are required to address the challenge to reduce emissions

## Engaging other business units is critical for success

### Challenge

Conflicts with other company targets e.g. cost reduction or performance targets can make buy in a challenge

Training is needed to ensure that every meeting doesn't start with having to convince colleagues of why sustainability is relevant to them

### Opportunity

There is no better way to get engagement from the board than by having a robust business case – the finance teams can be great allies for achieving this

You cannot drive scope 3 emissions alone – the procurement department is a key stakeholder

# Key breakout discussion takeaways

## Insights

- Telcos are data-driven organisations - strategy and the mission need to be linked back to concrete statistics to ensure company-wide buy in - transparency is key to avoid greenwashing and ensure accountability.
- Barriers to reducing scope 3 emissions can be split into internal challenges (e.g., ensuring training and buy-in from business units) and external challenges (e.g., collaboration with suppliers).
- The maturity of different suppliers varies, so Communications Service Providers need resources and skills for working with them to set individualised targets.
- Scope 3 emissions and circular economy are closely linked – importance of ensuring that the impact of circular economy efforts are being properly tracked and accounted for.

## Tracking scope 3 emissions is a key priority

### Attendee quotes

> *Having discussions with big suppliers when you are a smaller Communication Service Provider can be challenging - so industry collaboration where CSPs go to suppliers together is critical.*

> *Scope 3 action entails opportunities to contribute to sustainable development but also for things like access for green finance - but we should not focus on the "why" with scope 3, but the "how".*

# Case study: Telefónica's scope 3 reduction efforts

Telefónica's supply chain programmes include an emphasis on working collaboratively with other CSPs and their suppliers

## Scope 3 roadmap to be net zero by 2040

- Telefonica are industry leaders when it comes to reducing scope 3 emissions
- They have initiatives to address both their supply chain (which contributes 56% of their scope 3 emissions) and the use of products sold by them (which contributes 35% of their scope 3 emissions)
- To handle their supply chain, Telefonica have created a Supplier Engagement Programme which enables them to collect information about their suppliers
- To manage down the carbon impact of the products they sell, Telefonica has leveraged eco-design principles as well as creating initiatives that provide customers with data on the carbon impact of the services they use – this includes Eco Rating for consumer handsets and Eco Smart Services for their enterprise customers


Source: https://www.telefonica.com/en/communication-room/blog/slowing-down-climate-change-telefonica-s-scope-3-roadmap-to-be-net-zero-by-2040

# How to envisage the next steps

## Product level reporting and closer industry collaboration

### Communication Service Providers

Should consider the following next steps

- Explore product level reporting rather than supplier level (incl. scope 4) to better capture benefits like longer lifespans and carbon avoidance by customers
- Provide training for all business units to ensure they understand why sustainability is something they should be focused on

### Suppliers and other industry influencers

Should consider the following next steps

- Ensure that CSPs have good quality data about the products/services they purchase including things like embedded carbon
- Drive down scope 1 and 2 emissions to have a positive knock-on effect on CSPs' scope 3 emissions

### The industry as a whole

Should consider the following next steps

- Issue green bonds help to build the business case for sustainability
- Increase collaboration through joint initiatives and forums (such as the EU Commission's Green Digital Coalition

Breakout 03

# Circular asset lifecycle management

## Topics discussed

- Current approach for products at end of use (vs. end of life)
- Examples of adoption of circular asset management principles
- Biggest challenges you face when leveraging a circular approach for assets
- Scaling circular economy initiatives
- How to encourage sustainable change throughout the whole organisation

## Attendees

- Altice
- Cisco
- Eco-act
- STC
- STL Partners
- Telia Company

# CSPs face challenges with circular management of assets

> This is challenging for everyone, and we are trying to consider many options in parallel as we go forward.

> One of my key questions is how can we reuse or circulate hardware as much as possible, and how can we monitor how many times a specific router has moved through the system and been reused?

## Unlock value while supporting CSPs in their wider sustainability goals

**Challenge**

- How to reuse hardware as much as possible, and how to track this (e.g., monitoring the reuse journey of equipment)
- Finding the balance between extending asset lifecycle and replace assets with newer, more energy efficient versions
- Scaling refurbish programs so refurbished equipment is the first choice
- Overcoming internal politics and teams that are reluctant to adopt new processes

**Opportunity**

- Capture value from end-of-life equipment
- Reduce Scope 3 emissions and meet emissions targets
- Meet increasing pressure from stakeholders and investors

# Key breakout discussion takeaways

## Insights

- It is critical for executive leadership to set measurable sustainability / circularity goals cascaded throughout the organization.
- The dialogue between CSPs and vendors is essential – there's a huge intersection with vendors on this topic.
- Progress will require smaller pilots / trials of circularity that prove successful prior to expanding. Sharing these pilot experiences between CSPs is useful.
- In many cases, the most sustainable option is not to buy a replacement 'green' asset but to extend the life of the existing asset.
- Moving to virtualisation plays a key role in reducing environmental impact by making assets 'lighter' and reducing resource consumption – but the service must be designed that way upfront.
- Virtualisation changes the calculations as the *function* of the service needs to be compared, as opposed to simply the devices.

## The dialogue between CSPs and vendors is crucial

Attendee quotes

> *We need to make business case to go to the customer and say that when they invest in digital, they invest in green.*

> *We have incorporated sustainability into our business strategies so of course there is pressure to deliver and go out and get things going, not just have targets set.*

# Case study: STC's refurbishment initiative

## Refurbishing devices for the community

- STC realised that consumer devices were only being used for a short portion of their potential lifespan and were still usable upon being discarded
- They created a pilot that worked to recycle and refurbish devices so they could be passed on
- These refreshed devices were then donated to the community e.g. to students or those in need
- This pilot was successful so they are now expanding it further

There are many other circular economy initiatives that Service Providers can adopt

**Supply chain**

- Sourcing of sustainable materials
- Design for refurbishment of devices
- Sale of refurbished devices
- Packaging re-design for devices

**Operations**

- Waste management
- Optimisation of data centre
- Refurbishment of servers
- Resale of infrastructure assets

**Products & Services**

- Offering device as a service
- Reuse platforms (Product use extension)
- Device repair
- Bringing awareness among consumers regarding environmental impacts

> *"There's increasing pressure from customers (especially public sector), that are looking for sustainable and circular solutions more and more in procurement.*

# How to envisage the next steps

## Scaling pilots and new business models

### Communication Service Providers

Should consider the following next steps

- Share and leverage learnings from others and own pilots to scale programmes around circular asset management
- Align sustainability with employees' business targets – corporates and individuals will take it more seriously when there's a bottom-line impact

### Suppliers and other industry influencers

Should consider the following next steps

- Ensure CSPs can buy refurbished equipment as easily as new equipment (e.g. with the same guarantees)
- Provide data about the refurbished products CSPs purchase (e.g. number of times it has previously been reused)

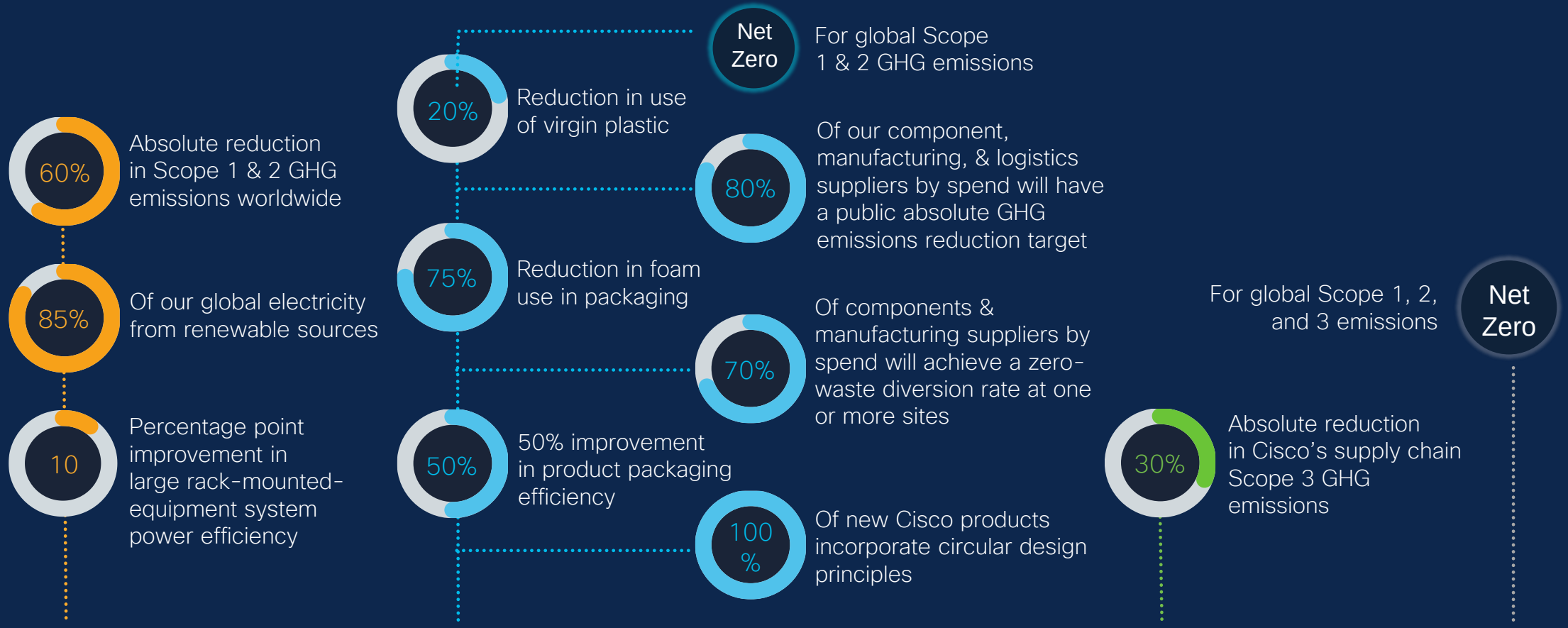
### The industry as a whole

Should consider the following next steps

- Introduce more commonality for target setting and KPIs (and ensure KPIs are quantitative and measurable)
- Move to business models that better support the circular economy (e.g. technology as a service)

# Net Zero is Another Milestone in Cisco's Purpose Journey

Check out Cisco's sustainability proposition for service providers >



# Explore more about these topics

## Article

Article discussing how IoT technologies can be leveraged to support the circular economy

Read article

## White paper

Paper discussing current Service Provider efforts to reach net-zero including challenges and best practices for the industry

Read report

## Cisco sustainability web site

Cisco's key resources on what they are achieving on their own net zero journey

View site

## Get in touch

Cisco valued the open, sharing forum of the event – the next EMEAR Sustainability Executive Summit will be organised in the **summer of 2022**.

In the meantime, we invite SPs to continue the conversation by **getting in touch** at:
emear_sp_sustainability@cisco.com