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Executive Briefing

SERVICE PROVIDER ROADMAP TO NET-ZERO CARBON EMISSIONS: WHY, WHEN AND HOW

Based on discussions with 40 service providers (SPs) this report explores the challenges, priorities, strategies and best practices they identified around reducing carbon emissions.



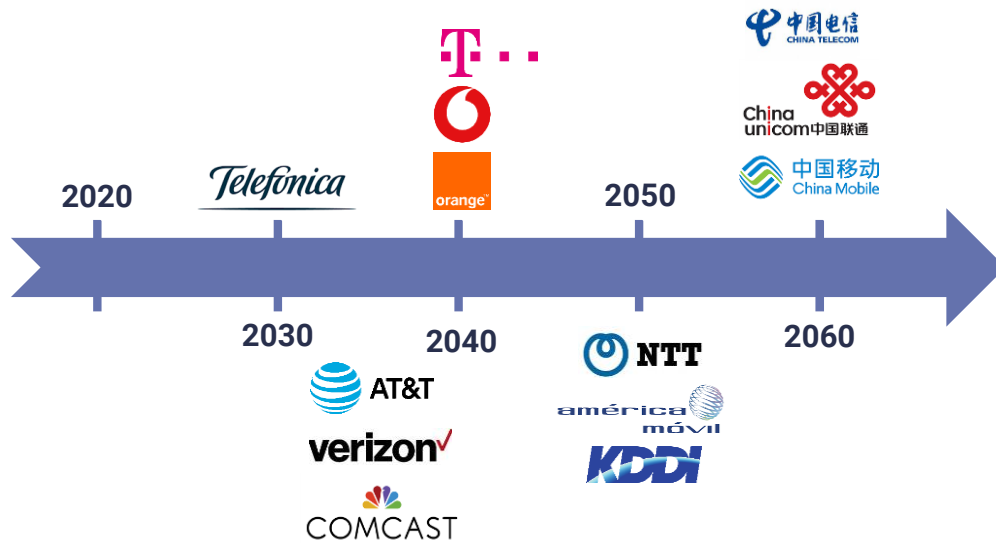
Executive Summary

In August 2021, the UN’s IPCC (Intergovernmental Panel on Climate Change) published a report that stated that globally we will experience an increase in temperatures of more than 1.5C by 2040 unless emissions across the board are slashed.¹ This has led to an acceleration in discussions about carbon emissions, and, in particular, the responsibility of governments and large corporates to reduce them.

The telecoms industry is no exception. While there is evidence of service providers (SPs) reducing their carbon emissions over the last five years, the speed of reduction is slow. For example, twelve of the leading SPs² have only managed to reduce their carbon emissions from a cumulative total of 33.31 million tonnes of carbon dioxide emitted in 2016 to 30.53 million tonnes in 2020.

The slow speed of carbon reduction may make it difficult for SPs to deliver on their commitments to becoming net-zero emission companies (when a company has achieved a balance between the amount of greenhouse gas produced and the amount they remove from the atmosphere).

Figure 1: SPs have committed to net-zero but within different time frames



Discussions with 40 individuals holding a range of roles at SPs have led us to some key findings on the SP carbon reduction journey. We have identified two main criteria that impact how mature an SP is likely to be in their carbon emissions reduction strategy:

- **SP commitment:** Based on the timeframe they have committed to becoming net-zero (see Figure 1), and other key factors such as the rigor of their public reporting.

¹ IPCC report, August 2021

² AT&T, Verizon, Orange Group, KDDI, BT, Bell Canada, SK Telecom, Singtel, Swisscom, Rogers Communications, MTN, Virgin Media and Telefonica

- **Market dynamics:** The market the SP operates in will impact their carbon emissions journey e.g. because it will impact the regulations that the SP needs to operate within and because factors like the dirtiness of the country’s grid will impact the challenges an SP faces.

Evaluating SPs using these two dimensions led us to the following key conclusions:

- Market dynamics are a key reason why many European SPs are further ahead in their journey and are more likely to have committed to net-zero emissions in a more aggressive timeframe. EU regulation means that SPs have little choice but to introduce reduction initiatives, while SPs in North America and Asia are weighing up whether reducing carbon emissions will increase their customer, employee or shareholder satisfaction.
- Global supply chains are impacted by these regional nuances. Cross-industry initiatives, such as the Joint Audit Committee, focus on ensuring compliance of suppliers in markets that are less highly regulated. In practice, this often means European SPs working together to audit their suppliers based in China in particular.
- SPs earlier in their carbon emissions reduction journey tend to focus on procuring green energy (e.g. from renewable sources) or on being more energy efficient whereas those with more mature strategies are increasingly focused on their whole supply chain – this is where all SPs need to focus since supply chain activities account for more than 70%+ of overall SP emissions.

To accelerate carbon emissions reduction, SPs will need to see commitment and collaboration across the organisation. We identify five key stakeholder groups who will be critical in furthering efforts and split our recommendations out for each.

Figure 2: Key recommendations by stakeholder

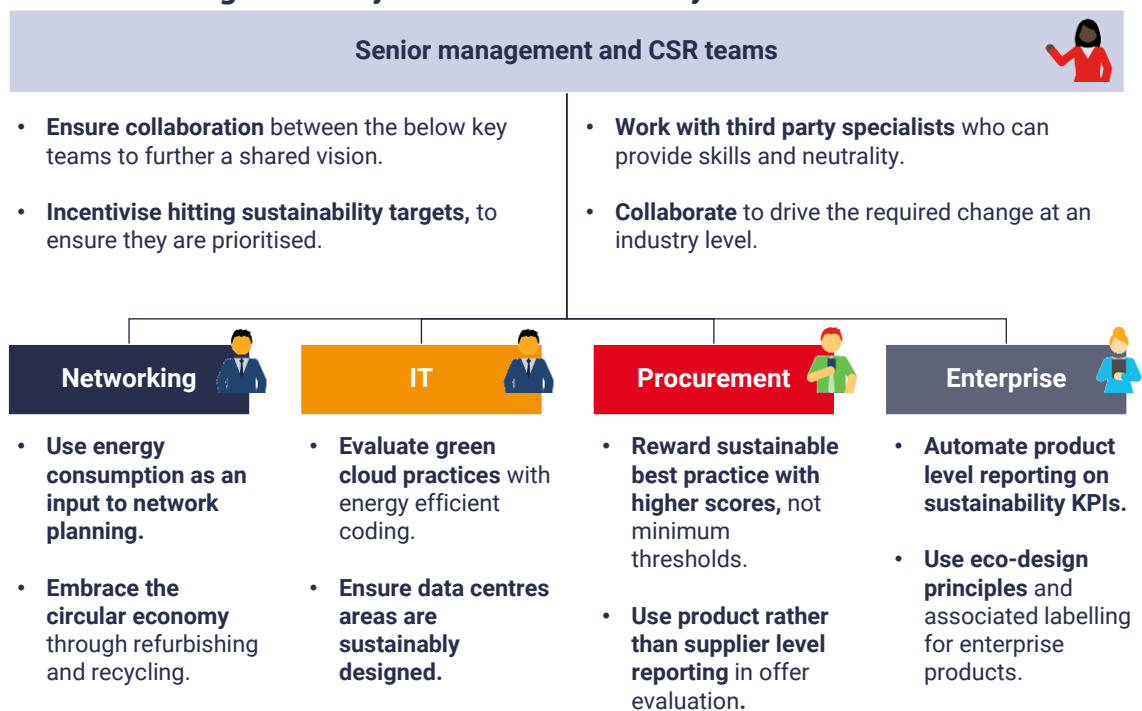


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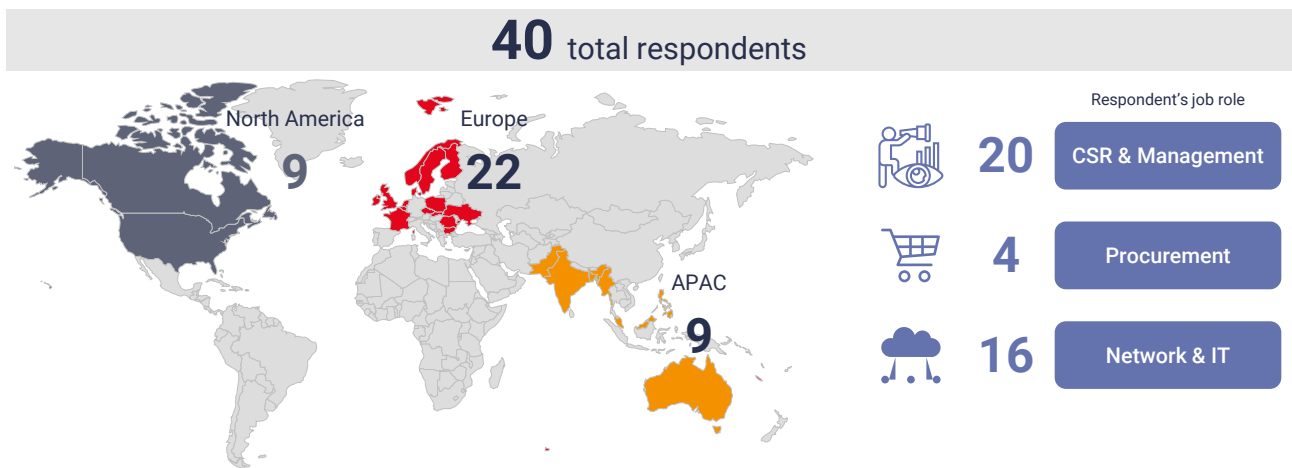
Introduction

There are over eighty telecoms operators globally that turn over \$1 billion or more in revenues every year. As major companies, service providers (SPs) have a role to play in reducing global carbon emissions. So far, they have been behind the curve. In the Corporate Knights Global 100 of the world’s most sustainable corporations, only five of them are telcos (BT, KPN, Cogeco, Telus and StarHub) and none of them are in the top 30.³

In this report, we explore the aims, visions and priorities of SPs in their journey to become more sustainable companies.⁴ More specifically, we have sought to understand the practical steps they are undertaking to reduce their carbon footprints. This includes discovering how they define, prioritise and drive initiatives as well as the governance and reporting used to determine their progress to ‘net-zero’.

Each SP’s journey is unique; we’ve explored how regional and market influences affect their journey and how different personas and influencers within the SP approach this topic. To do this, we have spoken to 40 individuals at SPs globally. Interviewees have varied, from corporate and social responsibility (CSR) representatives, to those responsible for the SP’s technology and enterprise strategies. The following report reflects the strategies and ambitions we learnt about during these conversations.

Figure 3: This report is informed by interviews from SPs globally



Source: STL Partners

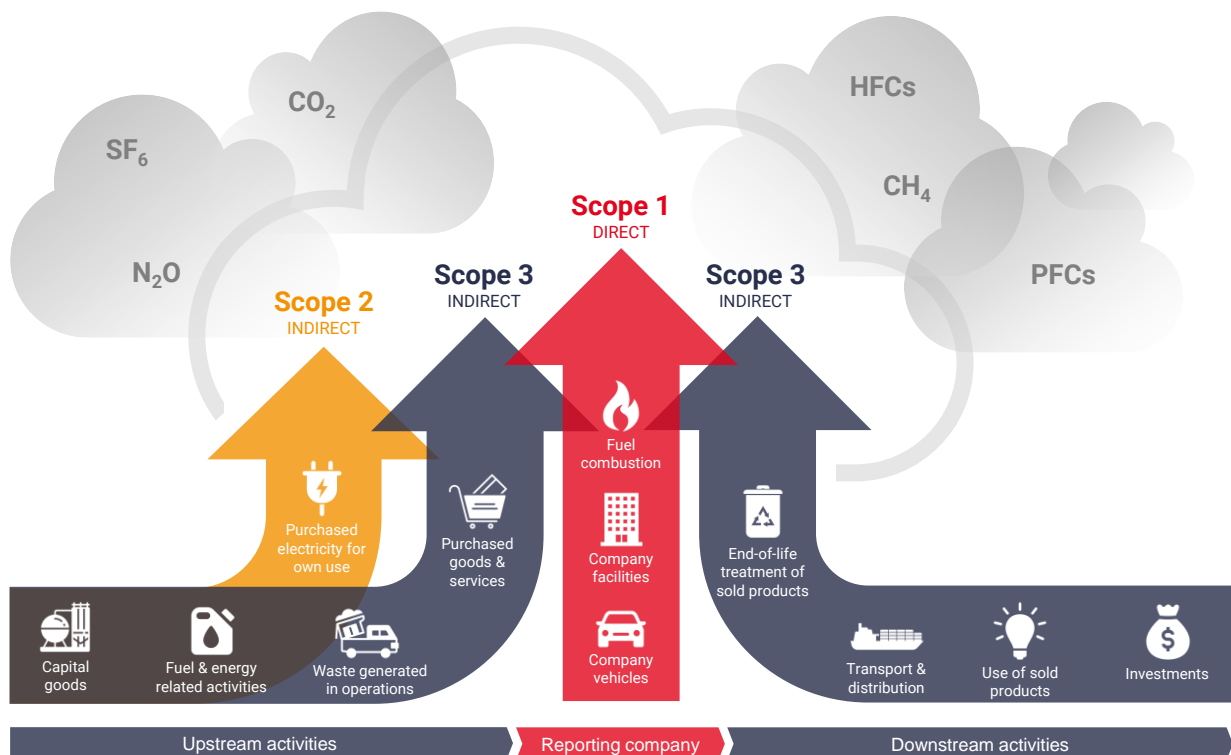
³ To learn more, see [STL Partners sustainability manifesto](#)

⁴ Most SPs definition of “sustainability” is broader than their carbon emission reduction target (e.g. it may include social development and diversity initiatives). These are not the focus of this report but for more detail on them, see [Sustainability: Why it's good for business](#).

What do we mean by scope 1, 2 and 3?

Before diving in further, it's important to align on the key terminology that all major SPs are drawing on to evaluate and report their sustainability efforts: in particular, how they disclose and commit to reducing their greenhouse gas emissions.

Figure 4: SPs divide their carbon emissions into scope 1, 2 and 3 – scope 3 is by far the most significant

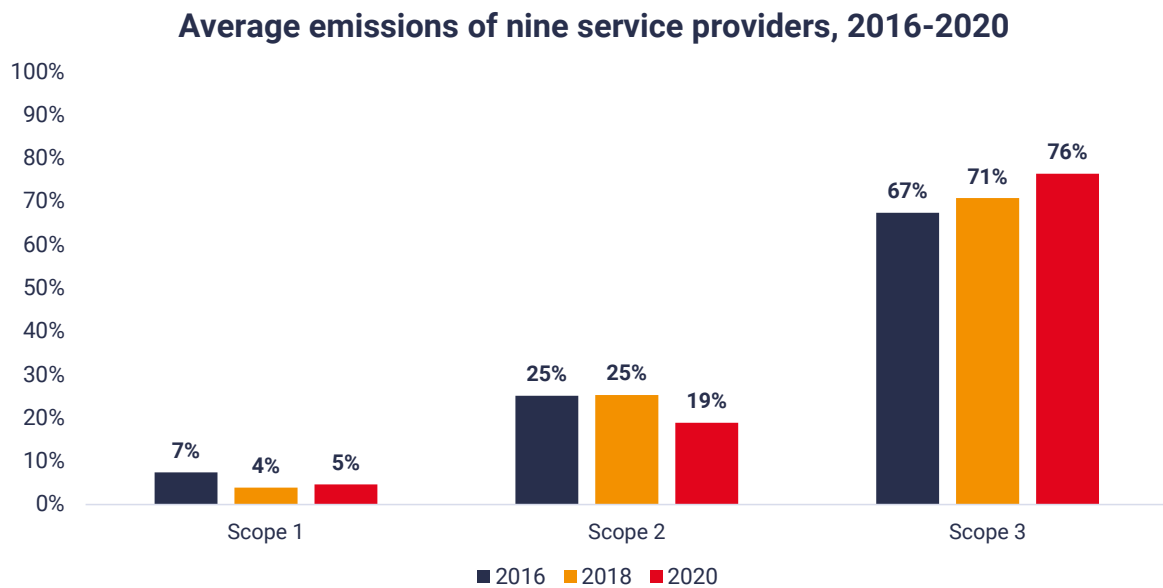


Source: STL Partners

For most SPs, scope 1 (e.g. emissions from the fleet of vehicles used to install equipment or perform maintenance tasks on base stations) and scope 2 (e.g. the electricity they purchase to run their networks) makes up less than 20% of their overall footprint. These emissions can be recorded and reported on accurately and there are established methodologies for doing so.

Scope 3, however, is where 80%+ of SP carbon emissions come from. This is because it captures the impact of the SP's whole supply chain, e.g. the carbon emissions released from manufacturing the network equipment that they deploy. It also includes the carbon emissions arising from supplying customers with products and services that an SP sells, e.g. from shipping and de-commissioning consumer handsets or servers provided to enterprise customers.

Figure 5: As SPs succeed in reducing their scope 1 and 2 emissions, scope 3 becomes the major focus



Source: Sustainability reports of Deutsche Telekom, Vodafone UK, KDDI, BT, SK Telecom, Taiwan Mobile, Swisscom, MTN, Telefonica, STL Partners analysis

While there are some established frameworks for emissions reporting (e.g. those produced by the GHG protocol and the Carbon Disclosure Project), methodology for reporting on scope 3 provides more challenges. Partly, this is a difficult process because you need to gather information from the very beginning of a supply chain to the very end. This means SPs are reliant on partners (suppliers, channels) and customers providing them with the data they require to accurately calculate their scope 3 emissions. To get around this, today many SPs calculate scope 3 emissions on generic 'factor' basis – i.e. we buy X value of products that fall into the broad bucket of ICT equipment and therefore we will assume X times the carbon emissions factor for ICT against this. While it will provide an order of magnitude figure, this methodology cannot capture information that would enable SPs to make better choices, such as:

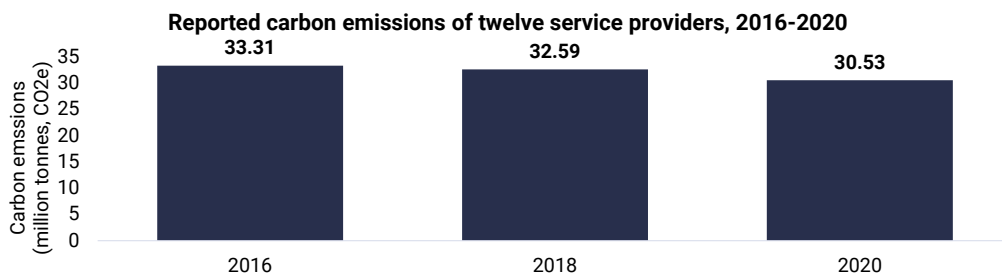
- What difference will it make if the company switches equipment providers to a company with greener practices?
- What difference will it make if the company buys a product which has been built from recycled materials?
- What difference will it make if a given product is collected and refurbished or recycled?

The challenges and limitations of scope 3 reporting mean that, despite it being the biggest contributor to a SP's carbon footprint, it is also the most nascent area in terms of measures being undertaken to reduce it.

Where are SPs in their sustainability journey?

Different elements of sustainability are moving at different speeds. Some SPs have been actively pursuing bold sustainability agendas for years. However, there has been a more recent and universal development across the industry, inspired and spurred by national governments’ and high-profile corporations’ pursuit of ‘net-zero’ commitments.⁵ This has catalysed many SPs into action.

Figure 6: Some of the leading SPs have significantly reduced carbon emissions over the last 5 years – but they are not yet close to net-zero

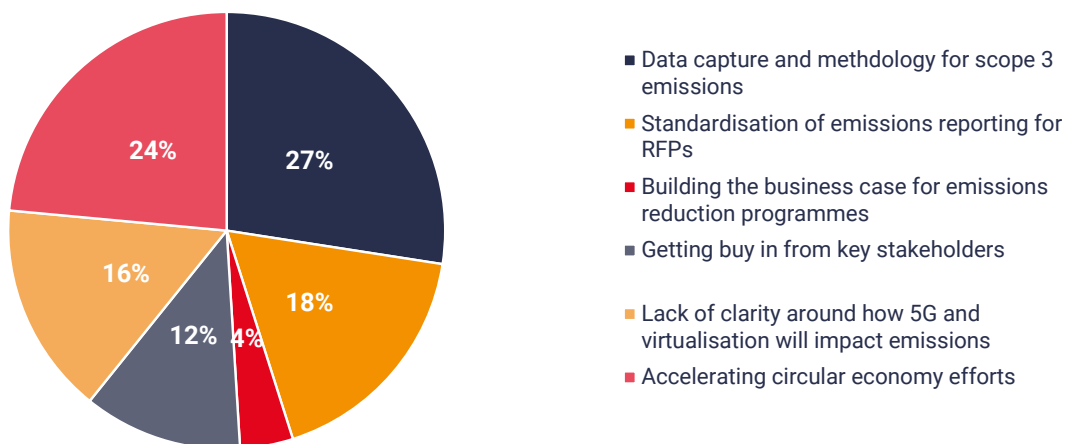


Source: Company sustainability reports of AT&T, Verizon, Orange Group, KDDI, BT, Bell Canada, SK Telecom, Singtel, Swisscom, Rogers Communications, MTN, Virgin Media, Telefonica, STL Partners analysis

Sustainability efforts across SPs nonetheless remain highly variable and fragmented. While some SPs are taking committed and ambitious actions around carbon emissions, many others are still trying to determine what they need to be measuring and reporting in the first place. All have their own unique challenges, though even the most ambitious SPs are still struggling with the circular economy and its impact on scope 3 emissions in particular.

Figure 7: Data capture and the circular economy were identified as key challenges

What are the biggest challenges around reducing carbon emissions for telcos?



⁵ “Net-zero” is defined as when a company has achieved a balance between the amount of greenhouse gas they produce and the amount they remove from the atmosphere.

Source: Research discussions with 40 SPs, June-August 2021

Pressure to ramp up efforts around sustainability stem from many parties:

- **Employees:** who want their personal values to align with the corporate values of their employer
- **Investors:** who believe that the long term economic costs of climate change will have a negative impact on share value
- **Regulators and public policy makers:** who are mandating that companies make efforts to reduce their carbon footprints
- **Consumer customers:** who want to purchase products and services from green companies
- **Enterprise (including public sector) customers:** who have their own carbon emission reduction targets that they want to hit and want SPs, as suppliers, to ensure they work with them to achieve this



CASE STUDY

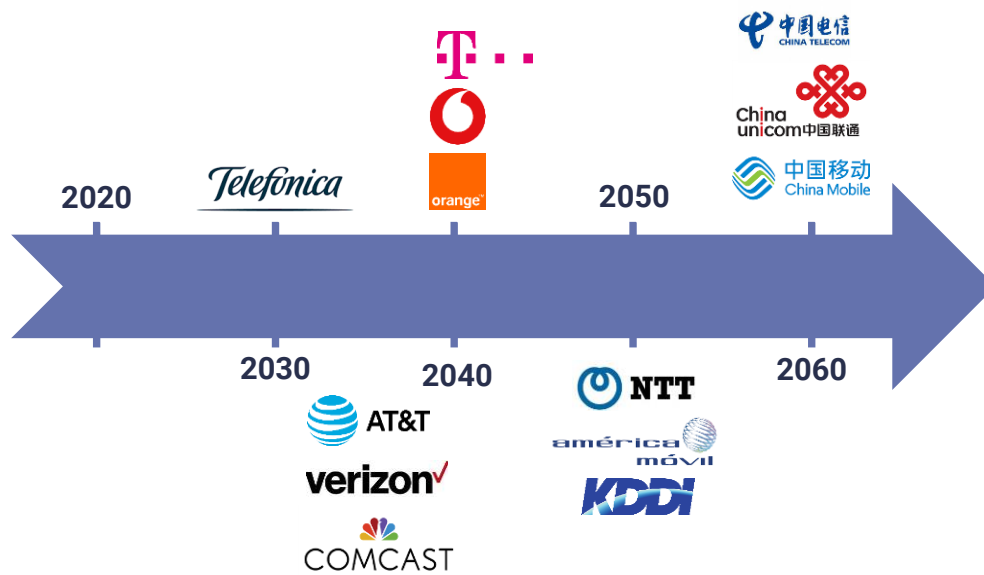
As an industry leader, Microsoft's aggressive targets put pressure on SPs and others in the technology space

- While most SPs are on their journey to net zero carbon emissions, technology giant Microsoft has committed to some highly ambitious targets: it will aim to be **carbon negative by 2030** and then **by 2050** it has committed to **remove from the environment all the carbon the company has emitted** either directly or by electrical consumption since it was founded
- While it is not clear how Microsoft will reach these commitments, its January 2020 announcement has:
 1. Demonstrated that it believes these aggressive targets are achievable
 2. Set a precedent for other technology companies to follow suit

Source: [Microsoft blog](#), January 2020

Many SPs making commitments to becoming a net-zero company will have specific carbon reduction targets which have been validated by the Science Based Targets initiatives (SBTis). Targets are considered 'science-based' if they are in line with what the latest climate science deems necessary to meet the goals of the 2015 Paris Agreement – limiting global warming to below 1.5°C above pre-industrial levels.

Figure 8: The largest SPs globally have all committed to net-zero carbon emissions – but will deliver in different timeframes



Source: STL Partners

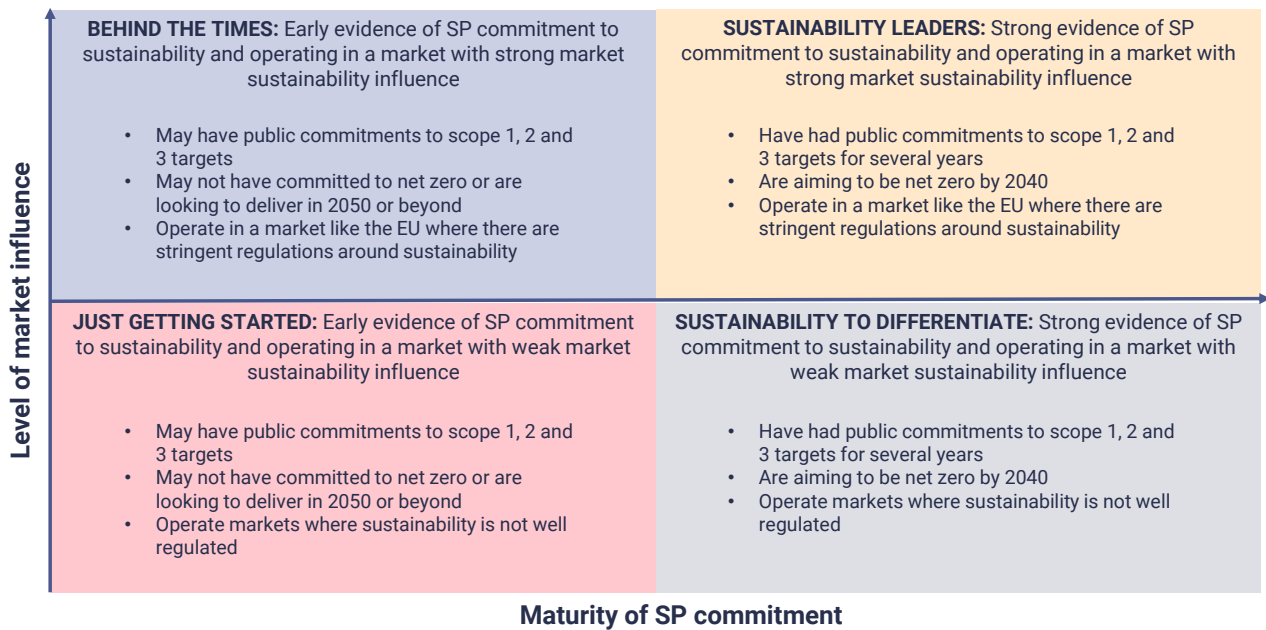
How does this differ by region?

SPs in different regions are operating with different regional pressures. These can impact SPs efforts in several ways:

- Countries with very 'dirty' grids (where the majority of electricity is generated through carbon intensive fossil fuels such as coal, gas and oil, and the energy markets do not incentivise renewables) will make it harder for SPs to reduce their scope 2 emissions
- Countries with stringent regulations incentivising sustainability (e.g. across the European Union) will strongly encourage SPs to pursue wider environmental initiatives – this adds urgency and some level of standardised measures to their sustainability efforts

Essentially, a SP's sustainability journey will be impacted by two main factors (see Figure 9), one of which is closely tied to their operating region.

Figure 9: Regional differences between SPs often stem from variable market influences towards reduction of greenhouse gases



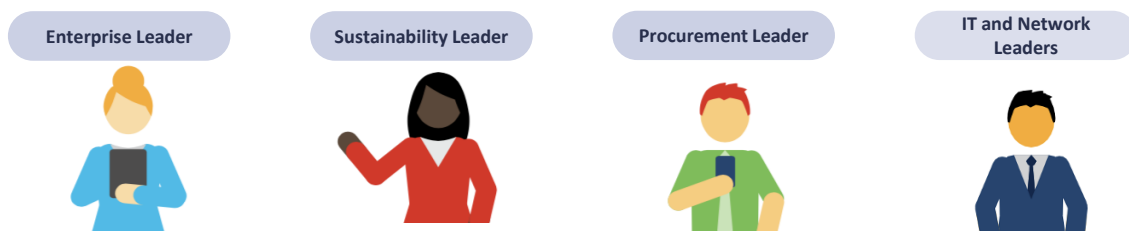
Source: STL Partners

What’s covered in the rest of the report?

We cover the SP sustainability journey across four key personas⁶:

- **Network leaders** in charge of running SPs’ own networks
- **IT leaders** in charge of running SPs’ own IT and facilities e.g. offices and data centres
- **Procurement leaders** in charge of creating a sustainable supply chain
- **Enterprise leaders** in charge of providing services to enterprises who themselves have SBTis

Figure 10: The report covers sustainability from the perspective of key stakeholders

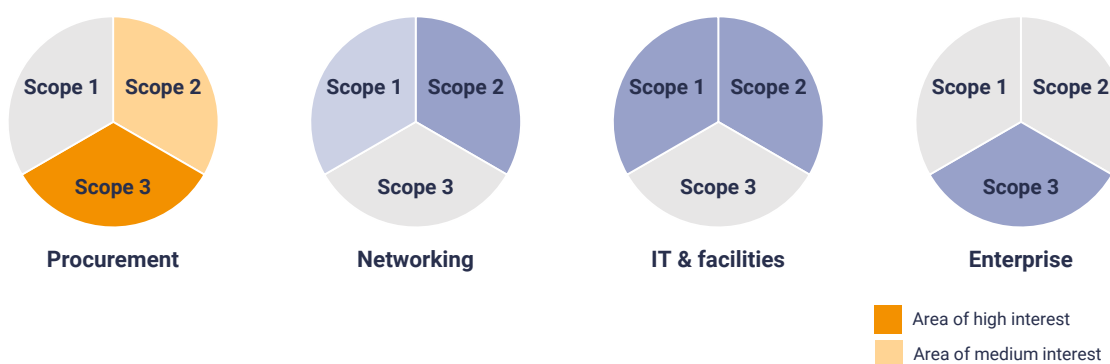


⁶ We have not split out the sustainability leaders (e.g. those that work in CSR department) because of their umbrella role and cross-business responsibility. While initially often accountable only for compliance and reporting, CSR teams today are lobbying and pushing forward sustainability strategies in conjunction with all of the above teams.

Procurement and sustainable supply chain

Those in charge of procurement are increasingly tasked with developing and implementing a sustainable sourcing strategy for the purchase of goods and services. A Head of Procurement generally cares about securing the best value from suppliers and balancing this with sustainable procurement practices.

Scope 1, 2 and 3: Where are procurement teams focused




For an SP with a relatively mature sustainability strategy, the procurement team, from a carbon emissions perspective, are largely focused on **scope 2 and scope 3** emissions. This is because they are responsible for sourcing from suppliers – they wish to evaluate their impact both from an energy consumption perspective (feeding into scope 2) and from embedded and downstream emissions perspectives (feeding into scope 3).

Current priorities

The procurement teams we spoke to in our interview programme had a few key priorities:

- **Managing a move from supplier CSR capabilities forming an informational appendix to RFPs where it is a deal-breaking business requirement:** SPs more and more are including CSR KPIs (including but not limited to carbon emissions) in their selection criteria, which they use to evaluate supplier bids. Typically, SPs that are earlier in their sustainability journey ask for this data but only use it as general information (or a low bar minimum qualification) rather than as a strict requirement. Those further ahead are starting to weight CSR information as high as 20% of the overall scoring for decision making.
- **Building, training and incentivising a methodology for supplier evaluation:** Procurement teams need to develop clear frameworks on how they evaluate carbon impact (e.g. considering not just the energy consumption of products but also the embedded carbon from its manufacture and downstream impacts including decommissioning, refurbishment and recycling). They also need to ensure that their employees are trained, and capable in doing this.
- **Working with suppliers to reduce their carbon impact:** SPs want to continue to push their suppliers to reduce their carbon footprint – since this in turn will drive down their own emissions.

We have seen evidence of suppliers and SPs working together with a joint value proposition to try and drive best practices.



CASE STUDY

Western European SP is demonstrating best practice in supplier evaluation based on sustainability KPIs

- One Western European SP has evaluated 27 suppliers (so far) representing 66% of their supply chain emissions across seven key criteria: **strategy, reporting and verification, reduction, products and services, offsetting, communication and engagement**
- Based on the results, suppliers are graded into five buckets from those furthest along their sustainability journey, to those just at the beginning
- This carbon disclosure questionnaire is used in two main ways:
 - Those that score in the bottom 25% are not considered in RFPs
 - The SP engages differently with each supplier on sustainability topics depending on how mature they are
- The SP worked with a specialist consultancy to gather and evaluate this information, starting with public targets and then conducting interviews with the suppliers as well

Source: Research discussion with Western European SP

Regional nuances

As stated previously, there are some regions (notably Western Europe) where sustainability policy is well established along with associated regulations. This leaves procurement teams in a different position to those in markets where suppliers are less geared to sustainability, though all SPs will engage with global suppliers rather than only those operating within their region. Notably, 17 SPs have come together to form the Joint Audit Commission (JAC, founded 2010) that seeks to agree on standards and common frameworks including those on sustainable supply chains. While these SPs are global (including MTN, Telstra and Verizon), the majority of them are Europe-based. JAC provides a central lobbying point for SPs to the suppliers and also provides auditing capabilities by sending regular representatives to evaluate supply chain practices and ensure suppliers are compliant.

Best and next practices

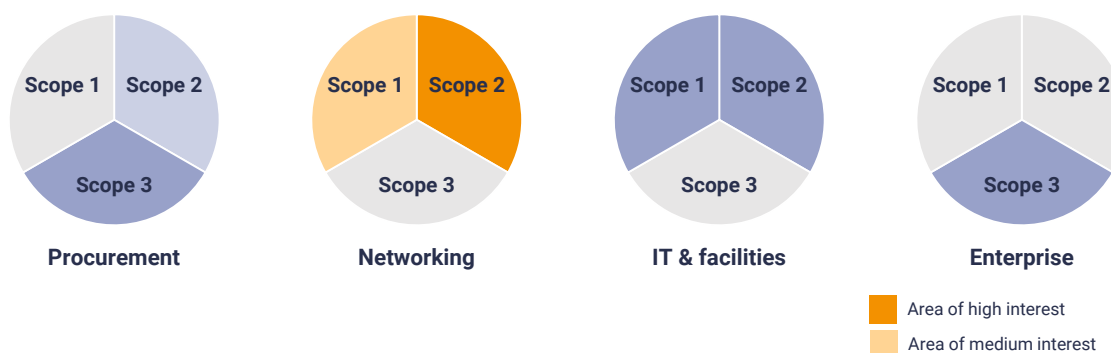
There are two key areas that will continue to develop within procurement and that define best practice:

- Rewarding sustainability best practice rather setting a minimum-bar hygiene factor:** Many SPs are measuring suppliers' CSR efforts but using them only to nudge suppliers who fall below a specified threshold rather than to reward suppliers who are making the most significant efforts. Threats to reject non-compliant vendors are rarely carried out. A trend has already begun to change this, and we expect it to continue to drive best practice rather than only minimum compliance-driven efforts.
- Product level rather than supplier level reporting:** Most SPs report their scope 3 emissions based on supplier level evaluation i.e., they look at the overall company and their carbon footprint rather than looking at the carbon footprint for specific products they are procuring. Conducting a product level evaluation and reporting is challenging and should not be the sole responsibility of the procurement teams. Doing this would require SPs to develop new accounting systems to log embedded carbon alongside other product information. However, if achieved, it means a total cost of ownership calculation can be made that reflects specific benefits like longer lifespans.

Networking

Those in charge of the networks are focused on monitoring performance and implementing improvements. Many SPs with mobile networks are currently developing and delivering on a strategy to roll out 5G connectivity, while on the fixed side the focus is on delivering fibre to the premises.

Scope 1, 2 and 3: Where are network teams focused



For an SP with a relatively mature sustainability strategy, the networking team are largely focused on **scope 1 and 2** emissions. While network equipment contributes significantly to scope 3, network teams often see this more as the remit of CSR and procurement. They are instead likely to evaluate the energy efficiency of network components and management systems from the perspective of electricity consumed. They are also likely to evaluate scope 1 emissions from the perspective of number of truck rolls required for equipment installation and maintenance.

Current priorities

The networking teams we spoke to in our interview programme had a few key priorities:

- **Managing the impact of increased data traffic with the rollout of 5G mobile networks:** There is significant discussion within the industry of the impact of 5G on carbon emissions. While most agree that on a per byte transmitted basis 5G is a more energy efficient technology than 4G, it is also likely to drive an increase in data consumption. Most SPs are therefore looking to reduce their electricity consumption in other areas, including in their fixed network (see below) to ensure they can balance offering 5G with hitting their scope 2 targets.
- **Accelerating the replacement of copper with fibre on the fixed side:** Many SPs have indicated that a move from copper to fibre will increase the energy efficiency of their fixed network. This is because of light waves transmitted through the glass or plastic threads require less energy than data signals sent through metal conductors, and also require fewer intermediate devices and amplifiers.
- **Shifting the way that network performance and total cost of ownership (TCO) is evaluated:** Network teams are used to a set of performance KPIs that they monitor closely including network uptime, throughput, latency and packet loss. While these KPIs will always be critical,

they can sometimes stand in the way of sustainability efforts. For example, prioritising network uptime at all costs can result in having all base stations running at full capacity in rural areas in the middle of the night. This will make network performance statistics look good but won't necessarily benefit customers and may prevent green features such as sleep modes from being implemented. Recognising this, some SPs are trying to adopt a more holistic, customer-centric view of the network, and sustainability benefits can stem from this.

Regional nuances

There are two main regional nuances – the first is how aggressive the rollout of next-generation networks like 5G and fibre are. In general, we have seen bullish 5G efforts from North America and some Asia-Pacific SPs in countries such as South Korea and Japan. They will therefore also be furthest ahead in their evaluation of the carbon footprint impact.

The second key regional difference is surrounding how accessible green electricity sources are within a country. Some SPs have already announced that their networks run 100% on renewable energy. But there is not an even playing field to achieving this – some regions in South America and Western Europe have very green electric grids already, so there are fewer barriers to the SP purchasing green energy. In others, particularly in Asia, this is very challenging or simply not possible.

Best and next practices

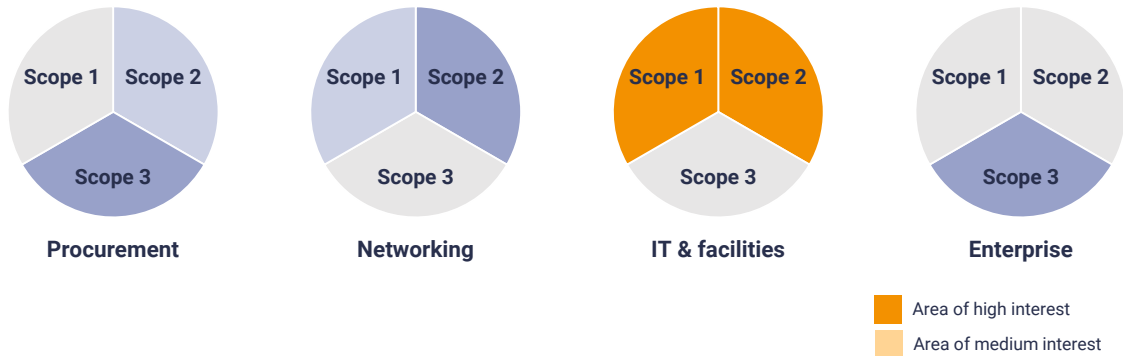
There are three key areas that will continue to develop within networking and that define best practice:

- **Stronger evaluation of scope 3 within networks:** In SPs with more mature sustainability strategies the networking team are often aware of, and evaluating, the scope 2 impacts of running networks. However, these teams need to be increasingly aware of, and trained on, the scope 3 impact of networks too. Tying middle management incentives to CSR KPIs is one way to ensure this message is proliferated beyond the CSR team and into other key teams.
- **Measure energy use as an input to network planning rather than an output:** Some SPs already have tools to evaluate the differing energy requirements of different network architectures. However, in general this is often as an output rather than an input: energy usage is not a parameter requirement that is fed into the planning tool at the start, but something which is reported on once a plan has been generated. Moving to energy consumption as an input will ensure it is considered from the inception of network planning, rather than as secondary evaluation. This will be particularly important as we see new technical facilities to support a highly distributed, cloud native network – like edge computing sites.
- **Increased use of refurbished network equipment and increased recycling of end-of-life kit:** The circular economy is a concept that many SPs have bought into, but the practicalities of implementing and reporting on it is a difficult challenge. Partly this is because networking teams need a guarantee that refurbished equipment will perform as well as the new kit. Equally, it is a challenge because with current scope 3 reporting methodology (see **What do we mean by scope 1, 2 and 3?**) it is hard for SPs to ensure recycling efforts actually have a positive impact on their reported carbon footprint. Either way, embracing the circular economy is a key next step for SP networking teams and the suppliers that they work with.

IT and facilities

Those in charge of IT and facilities are concerned with running SPs’ own offices, retail, logistics and shared-use facilities, and IT facilities including data centres efficiently and reliably. They are facilitating a move to the cloud for IT applications such as CRM systems or HR and accounting software. This is also being extended to more core OSS/BSS applications.

Scope 1, 2 and 3: Where are IT and facilities teams focused



Those in IT and facilities teams are generally focused on scope 1 and 2 emissions. The emissions from running SP facilities (e.g. fossil fuel heating in offices) falls into scope 1 while emissions from purchased electricity falls into scope 2. Significant portions of SP purchased electricity will be used to run the networks, but those focused on IT and facilities will care about the portion used to run SP offices and data centres.

Current priorities

IT and facilities teams we spoke to in our interview programme had a few key priorities:

- **Committing to compliance with ISO standards:** Many SPs are now ensuring they adhere to standards such as ISO 14001 and ISO 50001 (which focus on having energy management systems in place).
- **Reducing energy usage and waste through efficiency programmes:** IT and facilities teams are often driving energy efficiency programmes such as implementing smart, AI-enabled HVAC (heating, ventilation and air conditioning) systems. Some of these programmes rely heavily upon employee engagement – such as in a reduction in the amount of printing the SP does.

**CASE STUDY****Asia Pacific SP is running risk analysis of inaction around sustainability**

- One Asia Pacific SP highlighted that they have run a series of risk analyses around their sustainability efforts
- They evaluated the business impact of scenarios such as:
 - **What if they increased their use of renewable energy sources?**
 - **What if the government introduced more stringent energy usage standards in datacentres?**
 - **What if the government introduced a carbon tax on all large organisations in the region?**
- The SP has not developed a new or competing sustainability evaluation system, but instead is using well-established, existing frameworks (risk analysis) to understand how doing nothing on sustainability would impact their long term profitability

Source: Research discussion with Asia Pacific SP

Regional nuances

Market situations can have an impact on how driven, engaged and educated general employees are about sustainability practices within their facilities. The size of the SP footprint (e.g. are you operating in a relatively small country or do you have infrastructure spread across a large region like USA) also has an impact on the carbon footprint of their facilities. Equally, regional nuances around IT trends such as cloudification has an impact on sustainability practices.

Best and next practices

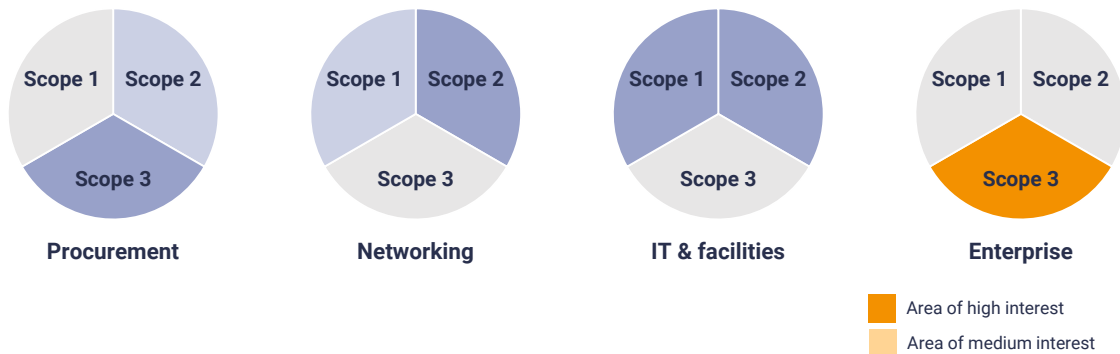
There are three key areas that will continue to develop within IT and facilities and define best practice:

- **Evaluating green cloud practices:** There is some evidence that increasingly cloudified IT and network workloads will enable SPs to reduce their carbon footprint e.g. by reducing the amount of underutilised appliances they are running in favour of common, off-the-shelf hardware which can be used to run a variety of workloads. However, SPs need to ensure that cloud-native applications are designed in an efficient manner since every additional line of code requires additional power to run it and that the hardware running the code is optimised. The experience with network function virtualisation was that initial deployments were less efficient, but this gap has been reduced and since reversed through new release cycles. SPs will increasingly ensure they are implementing and then evolving energy efficient software design.
- **Designing sustainable data centres:** Data centres are going to become increasingly shared resources between IT and networks. This means that local planning and national regulations need to be at the forefront of SPs' data centre strategies, particularly as we see an increase in smaller, more distributed data centre environments to support edge workloads.
- **Moving non-latency sensitive workloads to regions with greener electricity:** Less latency-critical workloads, such as some billing functions, can be run in datacentres (or clouds) that are most easily able to run on electricity generated from renewable sources. As SPs virtualise, we expect to see more SPs shifting workloads to regions with greener power. This is particularly relevant for SPs in markets where access to green energy varies by region, such as in USA.

Enterprise products and services

Leaders within SP enterprise divisions are trying to win business from their enterprise customers. Increasingly, especially with large corporate companies and those in the public sector, enterprises are requesting CSR information from all their suppliers, which includes the SPs providing their connectivity and other technology solutions.

Scope 1, 2 and 3: where are enterprise teams focused



Enterprise strategists and product managers are primarily focused on scope 3 emissions. This is because most of the emissions involved in the delivery of managed services to enterprises falls into scope 3. Also, for customers' on-premise devices, much of the power will be sourced (and paid for) by the customer and so technically is not part of SPs' scope 2 emissions.

Current priorities

Enterprise teams we spoke to in our interview programme had a few key priorities:

- Figuring out how to provide enterprises with the CSR data they are requesting:** A lack of standardisation means that no two enterprises are asking for the same data in the same format. SPs, therefore, must respond on a per request basis. Ensuring that they have access to the information needed to respond, at the right level of granularity, is a key concern for SPs. Increasingly, SPs will look to standardise and automate this process so as to reduce the burden on the commercial teams.
- Working with partners to ensure they have the data required:** Where SPs are in part reselling other technology solutions to their enterprise customers, the enterprise teams need to work closely with their partners to provide sustainability information to the end customer. Increasingly, this includes information relating to the circular economy, such as the provenance of input materials, re-use, recycling and packaging.
- Identifying opportunities to establish themselves as sustainability strategic partners:** SPs believe that helping enterprises deliver on their own sustainability agenda may be a chance to build a higher value relationship. Some SPs are productising energy management solutions, while others are using sustainability more indirectly as an opportunity to open lines of dialogue that might lead to additional sales.

Regional nuances

SPs operating in markets with a strong market influence towards sustainability (see Figure 9) will already have enterprises asking for CSR information on RFPs. They, therefore, are likely to be particularly engaged with reporting and CSR data transparency. Those in markets with a less strong market influence may not yet be prioritising these efforts – since their customers are not yet requesting it of them.

Best and next practices

There are three key areas that will continue to develop within enterprise product strategy and that define best practice:

- **Automated product level reporting on sustainability KPIs:** As SPs increase the granularity of their enterprise reporting (e.g. from just energy usage to embedded carbon) and increase the standardisation of the reporting, they should be able to provide information to enterprises on a proactive rather than reactive basis. This could take the form of an automatic report of the carbon impact of their products provided to the enterprise alongside their monthly bill.
- **Evaluating and implementing eco-design and associated labelling for enterprise products:** SPs (alongside partners if they are reselling a partner solution) can evaluate new and existing products to ensure that they have been designed in a way that minimises their carbon impact. This can be as simple as reducing the packaging a product is sent in or as complex as rewriting code to ensure it requires as little energy as possible to run.
- **Embracing the circular economy and the new business models that may come with this:** Some SPs today have committed to collecting and recycling certain enterprise products when they reach end of life. We expect to see efforts around providing refurbished equipment to enterprises and ensuring equipment is recycled or reused at the end to increase. This also extends to requiring a greater proportion of equipment inputs to be certified as sustainable or recycled. This may lead to SPs developing new commercial agreements with their customers, such as offering an “as-a-service” business model.

Key recommendations and conclusion

Where SPs are pursuing bold net-zero targets, different individuals within an SP will have different priorities in how they incorporate those targets alongside existing objectives. This has been discussed in the previous sections. It's also true that every SP is at a different stage in their sustainability journey and operating in different market conditions.

Despite this, there are some general recommendations, that can be drawn at an industry level. We believe SPs should:

1. **Ensure collaboration between all the key teams discussed in this report:** To deliver on their carbon emissions commitments, SPs will need to see change across all areas of their business. Collaborating and sharing best practices between teams can accelerate this, e.g. enterprise teams can share RFP best practice that they observe from their enterprise customers with their own procurement teams.
2. **Develop internal engagement with key champions like CSR teams and senior management:** Consistent and formal backing of sustainability initiatives by both CSR teams and senior board members is critical. As well as collaborating with each other, all teams discussed in this report should work with these stakeholders to secure financial and strategic buy in.
3. **Incentivise hitting sustainability targets, particularly for middle management:** In order to gain this critical company-wide commitment, SPs will need to ensure sustainability targets (and associated incentives for hitting them) are prevalent across the organisation. In particular, these targets need to be in place for middle management decision makers across IT and networks who otherwise may prioritise their pre-existing targets around performance and cost.
4. **Build a reporting system, particularly for scope 3 emissions, that is granular and robust:** SPs must figure out how to effectively track the impact of initiatives on scope 3 emissions, like their circular economy efforts. Without the ability to track progress, e.g. the avoided carbon of using recycled materials, driving these efforts will be difficult.
5. **Work with third party specialists for skills and neutrality:** We are already seeing many SPs doing this – in particular working with third parties to create carbon reporting and disclosure policies and also to evaluate products with eco-design principles. As well as bringing experience and skills, these third parties can lend confidence to reported outcomes.
6. **Collaborate with others to drive industry level change:** SPs can achieve significant sustainability improvements by themselves. However, more can be done with collaboration with their suppliers. And in many cases it will be whole industry wide initiatives (led by bodies like the GSMA and JAC) that will enable the standardisation and scale that is required.

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