

GSMA™



Climate Transition Planning Guidance for Telecommunication Companies

October 2025





The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry, and society thrive.

Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach.

This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at [gsma.com](https://www.gsma.com)

The International Telecommunication Union (ITU) is the United Nations agency for digital technologies, driving innovation for people and the planet with 194 Member States and a membership of over 1,000 companies, universities, civil society, and international and regional organizations.

Established in 1865, ITU coordinates the global use of the radio spectrum and satellite orbits, establishes international technology standards, drives universal connectivity and digital services, and is helping to make sure everyone benefits from sustainable digital transformation, including the most remote communities.

From artificial intelligence (AI) to quantum, from satellites and submarine cables to advanced mobile and wireless broadband networks, ITU is committed to connecting the world and beyond. Learn more at [itu.int](https://www.itu.int)



ITU and GSMA collaborate under the Green Digital Action (GDA) initiative, which brings together countries, companies, and organizations to ensure that digital transformation and environmental sustainability advance hand in hand. This report supports the GDA call to action for companies to set science-based targets and publish transition plans outlining how their decarbonization pathways and net-zero targets will be achieved. Learn more at [itu.int/initiatives/green-digital-action/](https://www.itu.int/initiatives/green-digital-action/)

The Carbon Trust is a global climate consultancy driven by the mission to accelerate the move to a decarbonised future. We have been climate pioneers for more than 20 years, partnering with businesses, governments and financial institutions to drive positive climate action.

From strategic planning and target setting to activation and communication, we turn ambition into impact. To date, our 400 experts have helped set 200+ science-based targets and guided 3,000+ organisations and cities across five continents on their route to net zero.

For more information, please visit the Carbon Trust website at [carbontrust.com](https://www.carbontrust.com)

Follow the Carbon Trust on Twitter: [@thecarbontrust](https://twitter.com/thecarbontrust)

Contents

Foreword	4
<hr/>	
Introduction	5
Objectives of the Guidance	6
Scope of the Guidance	6
How to use this Guidance document	7
<hr/>	
Why Develop a Climate Transition Plan?	8
Business case for climate transition planning	9
Responding to climate-related risks and opportunities	15
<hr/>	
What to Disclose in a Climate Transition Plan	19
Foundations	20
Implementation Strategy	27
Engagement Strategy	35
Metrics and Targets	39
Governance	47
<hr/>	
How to Develop a Climate Transition Plan	53
Climate Transition Plan Development Process	54

Foreword

As connectivity now underpins nearly every facet of our global economy, the need to transition to climate-resilient net zero networks has never been more urgent.

Recent years have shown the staggering costs of climate inaction – lives lost, livelihoods upended and hundreds of billions of dollars of damages that have slowed economic progress worldwide.

Against this backdrop, climate transition planning becomes much more than a roadmap to net zero, it is a proactive strategy for companies to future-proof their business models against the growing risks of climate change.

By integrating climate considerations into their core business strategies, companies are not just taking climate action, they are reducing operational costs, unlocking new opportunities for innovation, and building confidence among investors and stakeholders.

At the GSMA, we recognise that effective climate action requires both ambition and accountability.

So this guide has been developed to continue our efforts to support our members in developing robust climate transition plans.

These plans provide the foundation for measurable progress: they demonstrate how targets will be achieved, what investments are required, and how risks and opportunities are managed. For financial stakeholders, regulators, and communities alike, transition plans offer transparency and confidence in our sector's pathway to net zero.

As the Chief Financial Officer of the GSMA, I am acutely aware that climate action is not only an environmental imperative, but also a financial one. Sound transition planning protects long-term value, strengthens resilience, and unlocks opportunities for sustainable growth. It ensures that our industry can continue to thrive while contributing positively to the societies we serve.

This guidance invites our members to embrace climate transition planning not merely as a compliance exercise, but as a defining strategy for long-term sustainability and competitive strength.



Louise Easterbrook

Louise Easterbrook
Chief Financial Officer, GSMAé

Acknowledgments

This guidance has been developed by the GSMA with the ITU and Carbon Trust.

The GSMA and the ITU would like to thank the following organisations who contributed their time, expertise and valuable insights to shape this guidance: A1, América Móvil, Axian, Axiata Group Berhad, Bell, CDP, CK Hutchison, e&, e& PPF, Ericsson, GFANZ Secretariat, Globe Telecom, Jazz, Proximus, Tele2, Telefónica, Telia, Vodafone, Zain



Introduction

Climate mitigation and adaptation is of strategic importance to companies in the telecommunications sector. Driving down reliance on fossil fuels and addressing climate-related risks and opportunities are essential to being competitive, resilient, and providing quality of service and innovative solutions to customers. Telecommunications are an area of critical infrastructure on which the wider economy relies.

Climate transition planning is the process by which companies can systematically and coherently communicate climate-related issues and lay out the necessary solutions that will align their whole organisation to achieving company climate targets in a demonstrable and auditable way. Increasingly, the development and disclosure of climate transition plans is expected by investors, governments, and other key stakeholders.

This guidance supports telecommunication companies to understand the key requirements of a climate transition plan so that they may effectively undertake the process and derive maximum benefit from it. Central to this guidance is a framework for operators to develop robust and meaningful climate transition plans to drive implementation of their net zero strategy within their organisation, as well as inform external stakeholders, and influence wider systemic change.

Objectives of the Guidance

1. Present the business rationale for creating a climate transition plan, detailing the benefits associated with integrating climate strategy into wider business strategy.
2. Provide guidance on how to interpret the Transition Plan Taskforce (TPT) Framework for the telecommunication industry and what should be considered when developing each element and signposting to other useful resources.
3. Provide guidance on the process for creating a climate transition plan and best practice to generate value out of a transition plan.

Scope of the Guidance

The scope includes the typical operations of mobile and fixed network operations including telecommunication data centres that have become a core element of the industry. The International Financial Reporting Standards (IFRS) S2 for Climate-related Disclosures¹ identifies Telecommunication Services as a sub-sector of the Technology and Communications sector. The IFRS definition includes cable and satellite services alongside mobile and fixed telecommunication services, however, this guidance does not extend to these services as they are not typical services provided by telecommunication network operators.

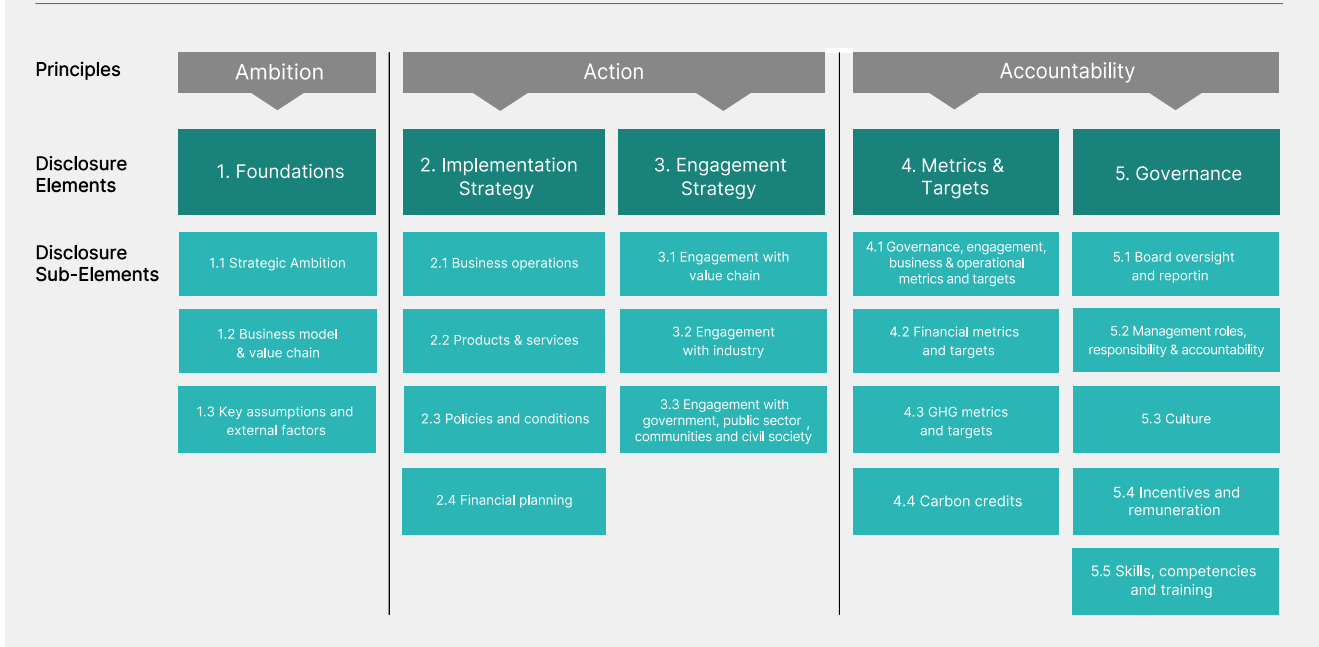
This guidance is primarily intended for mobile and fixed network operators in the telecommunication industry. It also serves as a useful reference for the telecommunication supply chain as well as other key industry stakeholders such as policy makers and investors.

This guidance follows the Transition Plan Taskforce (TPT) Disclosure Framework as shown below in Figure 1. It is a standalone framework that the IFRS has taken governance of, along with their incorporation of the Taskforce on Climate-related Financial Disclosures (TCFD) recommendations into its IFRS S1 and S2 standards, as approved by International Sustainability Standards Board (ISSB)². As such it is most likely to remain globally applicable and consistent.

¹ [S2 Climate-related Disclosures | IFRS](#)

² [ISSB delivers further harmonisation of the sustainability disclosure landscape as it embarks on new work plan | IFRS](#)

Figure 1 The Transition Plan Taskforce Disclosure Framework



How to use this Guidance document

This document offers practical guidance for mobile network operators to develop a credible climate transition plan. It provides recommendations and considerations for the different elements included in a climate transition plan and where to find further information and resources. Guidance is then provided to connect the separate climate transition plan elements into a coherent programme and how to embed these initiatives into the organisation.

This guidance provides recommendations about the climate transition planning process as a whole, and the content to be disclosed across key elements. Where available, more detailed help on how to develop those elements of disclosure are provided in external links throughout the document, referencing standardised methodologies whenever possible to support credible disclosures. This guidance is divided into three chapters:

- 1. Why Develop a Climate Transition Plan.**
This chapter provides the business rationale for creating a climate transition plan, with an overview of the necessary key elements.
- 2. What to Disclose in a Climate Transition Plan.**
This chapter supports users to interpret each sub-element of the TPT Disclosure Framework by making recommendations that organisations should, or may consider disclosing.
- 3. Interoperability of this guidance with other disclosure frameworks** has been supported by cross-referencing within each sub-element the related reporting requirements of the European Sustainability Reporting Standards (ESRS, under the EU’s Corporate Sustainability Reporting Directive, CSRD), IFRS S2, CDP, and the Science-Based Targets Initiative (SBTi)
- 4. How to Develop a Climate Transition Plan.**
This chapter describes the process for transition planning and best practices.



Why Develop a Climate Transition Plan?

Business case for climate transition planning

The purpose of a climate transition plan is to demonstrate the organisation has a robust plan to deliver emissions reductions and ultimately reach net zero. The plan is created as a response to the climate-related risks and opportunities affecting the organisation. A credible plan will help to build investor confidence, which can support access to sustainable financing. Network operators have found that showcasing their activities, and the realised benefits of investment, in a comprehensive plan, has led to more investment and engagement, both internally and externally.

A climate transition plan demonstrates an organisation is a trusted partner for others in the net zero transition, providing a competitive edge and building credibility for sustainability claims and targets. It drives innovation to support increasing customer demand for products and services that are aligned with tackling climate change.

Meeting compliance obligations, such as CSRD, requires resource. A transition plan delivers strategic and operational benefits from compliance, by connecting climate initiatives in a systematic programme.

Climate-related disasters have caused over \$3.6 trillion in damage between 2000 and 2024³. The plan should build resilience through an understanding of material climate-related risks for the organisation, and ensure that organisations can avoid the costs of inaction – which can equally help build the case for action.

Reducing emissions is often a co-benefit of reducing resource use and dependence on expensive and price-volatile raw materials. Climate transition planning can systematically identify and drive operational efficiencies across organisations. Conducting cost-benefit analysis of efficiency measures through a climate lens can uncover new opportunities to generate short and longer-term savings, including avoiding exposure to future costs.

Collaboration and partnership can achieve better outcomes at lower cost and are necessary in areas where the industry needs to move together to achieve net zero. A climate transition plan helps identify where information, skills or knowledge sit outside of the organisation. While engaging with suppliers, offers an opportunity to collaborate more closely on decarbonisation activities and reducing climate risks, which is vital for Scope 3 emissions reductions.

Figure 2 The Benefits of Climate Transition Planning



³ [The Cost of Inaction: A CEO Guide to Navigating Climate Risk](#) | World Economic Forum

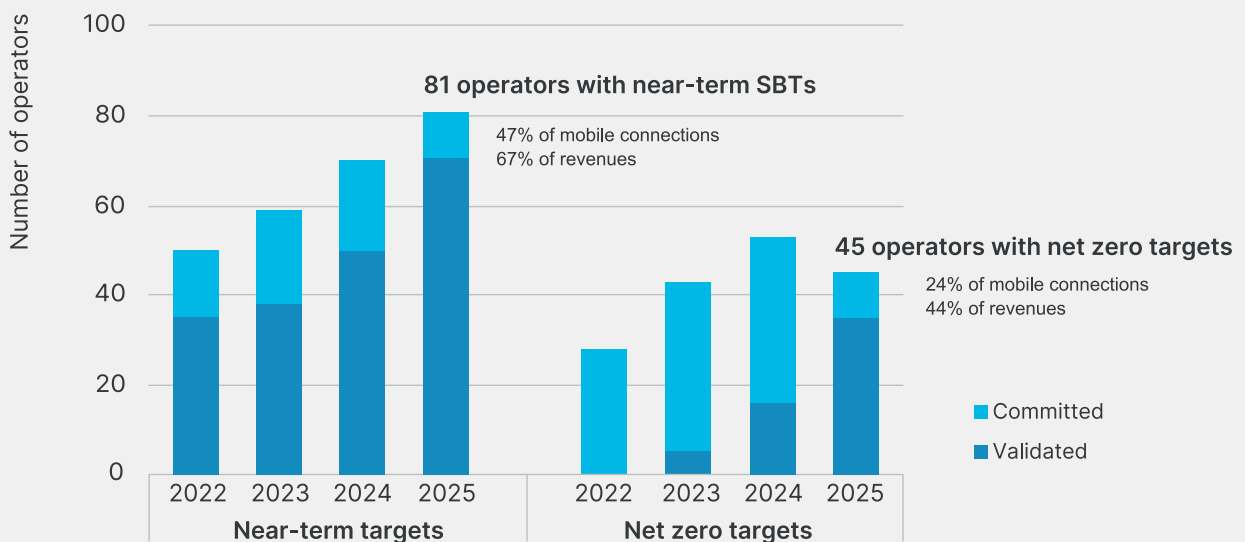
Current climate action in telecommunication companies

Telecommunication companies are continuing to increase their climate ambition and action towards reaching net zero by 2050, however, concerted effort is needed to build and maintain momentum. There are now 79 operators in the GSMA Climate Action Taskforce, across over 150 countries and territories, representing 80% of mobile connections globally. Encouragingly, this trajectory has also been seen in the number of network operators setting carbon reduction targets aligned to the SBTi. This number reached 81 operators, accounting for 47% of mobile connections, 71 of which have been validated by SBTi (see Figure 3).

Telecommunication companies are continuing to actively reduce their operational emissions, and the industry has seen progress towards reaching its goal of net zero by 2050. Shifts in renewable energy purchasing and regional grid decarbonisation accounted for a large share of the emissions reductions of own operations.



Figure 3 Mobile operators' near-term science-based targets and net zero targets



Note: 2022 net zero targets are "Race to Zero" targets. 2025 data as of April 2025. Previous years' data are as of January of those years.

Source: GSMA analysis based on SBTi

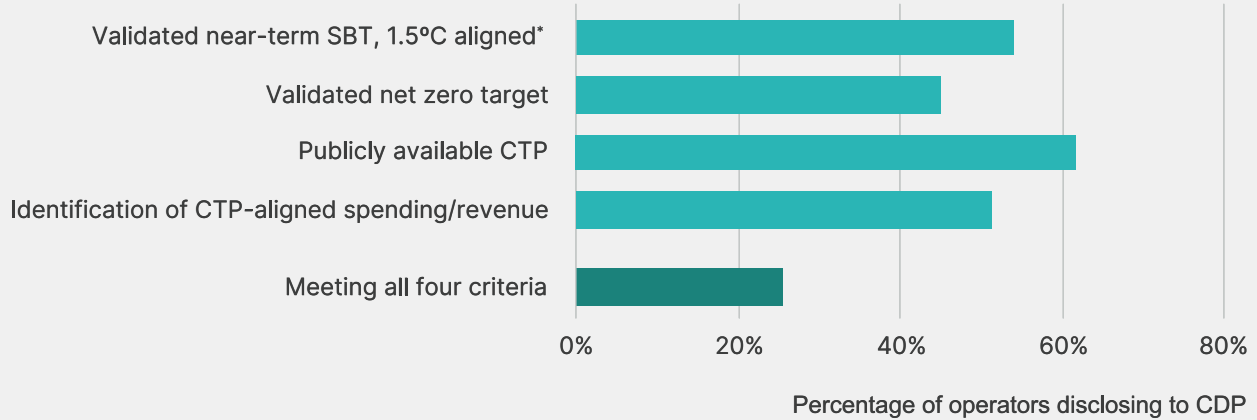
Operational emissions of the industry – combined Scope 1 and 2 (market-based) emissions – fell by 8% between 2019 and 2023, while the number of mobile connections globally rose 8.5% and mobile data traffic quadrupled. Positively, this represents a decoupling of operational emissions and growth in network connectivity.

These figures reflect a promising trajectory of decarbonisation for the industry; however, in order for telecommunication companies to reach the 45% reduction target by 2030, total emissions must continuously reduce by an average of 7% a year. There is significant work to reduce value chain (scope 3) emissions, which accounts for 75% of a network operator’s total emissions. While the industry is making clear progress towards its net zero goal and some operators are on track to meet their targets, many are not.

There is notable variation in the maturity of climate transition planning across the telecommunication industry, and the aim of this guidance is to improve quality and consistency of practice. Telecommunication companies are not alone in needing to improve the state of transition planning – CDP’s Corporate Health Check Report 2025 identifies that 55% of companies globally have not disclosed a climate transition plan⁴.

Based on disclosures to CDP in 2024, around one-quarter of operators met four minimum criteria that can be used to determine the credibility of a climate transition plan (see Figure 4).

Figure 4 Operators meeting key criteria of a credible climate transition plan



*Notes: The criteria for near-term SBTs includes coverage of all three scopes. The criteria for validated net zero targets include a requirement to cover the entire organisation and a net zero target by 2050 or sooner. According to the CDP Technical Note for 2024, the criteria for credible transition plans include a possible 47 indicators, nine direct and 38 supporting. A selection of crucial, direct indicators is analysed here.

Source: GSMA analysis of latest CDP disclosures

“A climate transition plan is a time-bound action plan that clearly outlines how an organization will pivot its existing assets, operations, and entire business model towards a trajectory that aligns with the latest and most ambitious climate science recommendations.”

CDP 2021⁵

⁴ Corporate Health Check 2025 | CDP

⁵ CDP Climate Transition Plan: Discussion Paper

Key elements of a credible climate transition plan

Organisations must consider three inter-related aspects within their transition plans: decarbonising the organisation; addressing climate risks and opportunities; and contributing to an economy-wide transition. A credible climate transition plan shows how the organisation's ambition will be delivered in practice – from strategy through to mobilisation of the required resources. While a full transition plan may be developed in stages – and will require regular revision – it should address all elements of the TPT Framework. In addition, the CDP's Reporting on Climate Transition Plans: Technical Note⁶ provides fundamental principles that should guide the preparation of a credible climate transition plan.

A climate transition plan should demonstrate the organisation's response to climate related-risks and opportunities from the short (1-3 years), medium (3-10 years), and long term (10+ years). Where a net zero target has been set, the long-term timeframe can align with this.



Aligned with best practice

- Aligned with industry best practice and standards.
- Targets are informed by climate science aligned to limiting global warming to 1.5°C⁷.
- Underpinned by robust scenario analysis.



Strong governance

- Board and executive accountability and commitment to drive implementation.
- Defined and quantifiable monitoring mechanisms with regular progress tracking.



Holistic and comprehensive

- Covers a GHG inventory across all scopes, no material exclusions.
- Addresses climate risks and opportunities.
- Identifies assumptions and external factors for the plan.



Forward looking

- Forward-looking and aligned with long-term goals.
- Includes a clear commitment at the highest corporate level to regularly review and update.



Clear implementation pathway

- Explains how climate objectives will be achieved, not just what they are.
- Timebound to specify when actions will be implemented.
- Contains verifiable and quantifiable KPIs that are tracked regularly and supported by auditable assessment methodologies.



Integrated into business & financial planning

- Integrates the plan into business planning, aligning with strategy and operations.
- Links decarbonisation and financial planning, showing how the transition will be funded and its financial impact.

⁶ Reporting on Climate Transition Plans: Technical Note | CDP

⁷ Under the EU's CSDDD the transition plan must ensure that the company's business model and strategy are compatible with the Paris Agreement's goal of limiting global warming to 1.5°C.

Focus areas for decarbonisation

Identifying GHG reduction opportunities within operations and value chains is reliant on understanding hot spots and 'hard-to-abate' emissions sources, before defining how these should be addressed in the short-, medium-, and long-term. It is necessary to consider geographical contexts, such as carbon intensity of the electricity grid or availability of electricity grid power, to ensure the right emissions sources are prioritised in carbon reduction plans.

Figure 5 shows the mobile industry emissions broken down by scope. Typical hot spots for network operators are electricity usage from operation of their networks, and Scope 3 emissions from embodied carbon from purchased goods (making up around 40% of Scope 3 emissions), and emissions from the use of sold products, such as handsets and routers⁸.

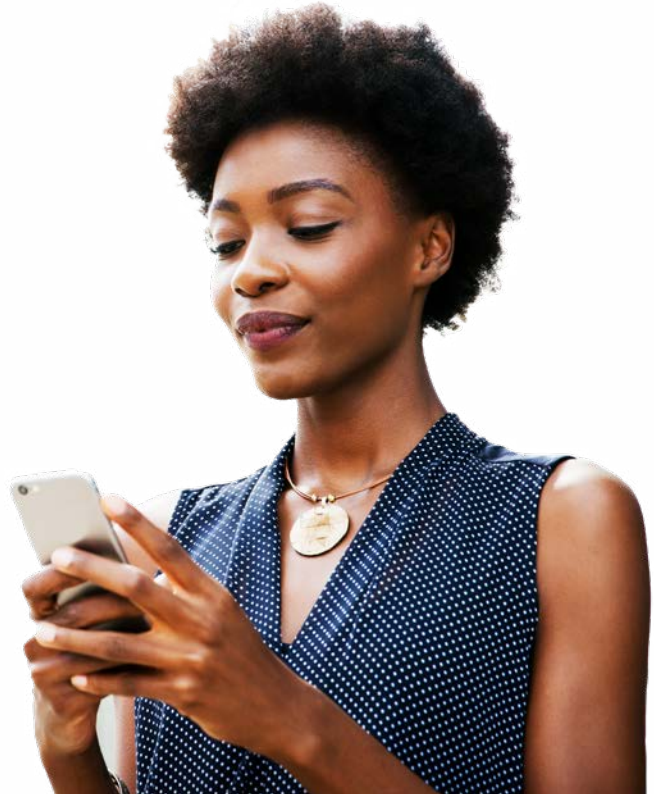
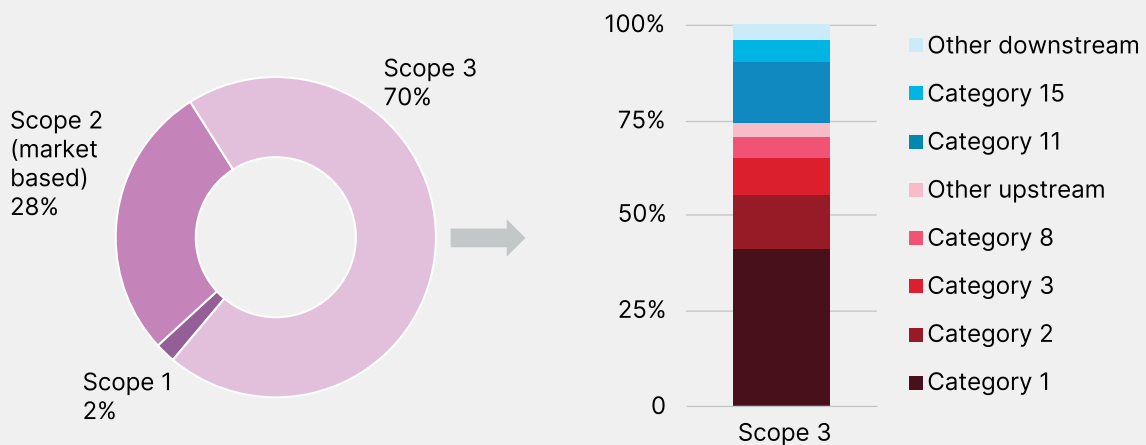


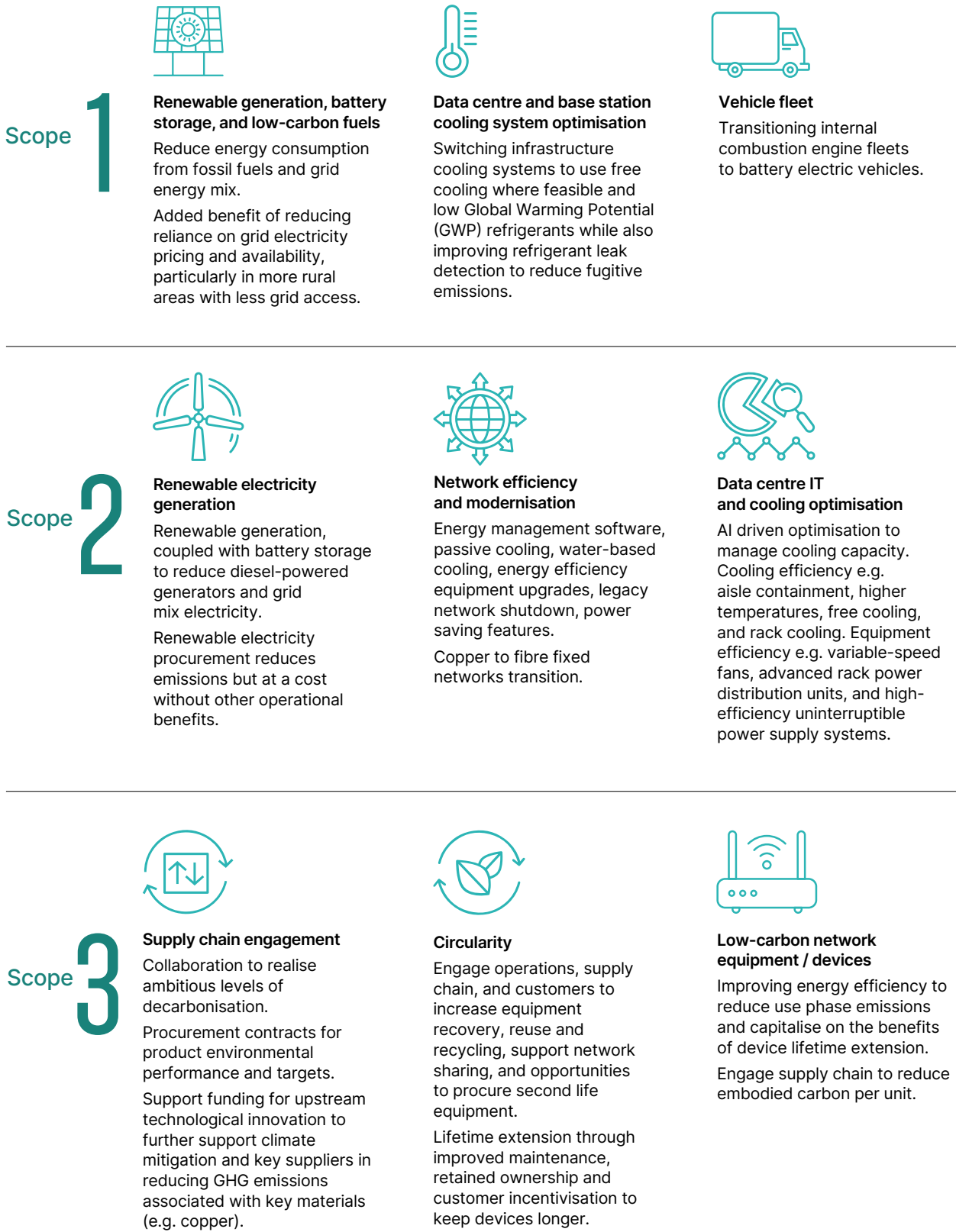
Figure 5 Mobile industry emissions by scope and category for 2023



Source: GSMA (2025), [Mobile Net Zero 2025: State of the Industry on Climate Action](#)

⁸ [Achieving Climate Targets](#) | GSMA

Figure 6 Typical decarbonisation levers for the telecommunication industry



Responding to climate-related risks and opportunities

Climate-related natural disasters and adverse weather events are increasing in frequency and severity in recent years⁹. Subsequent damages are also increasing, with the World Economic Forum (WEF) predicting possible global losses of up to \$610bn by 2035¹⁰. Businesses that fail to adapt risk losing up to 7% of annual earnings by 2035, with the energy, utilities, and telecommunications sectors being the most vulnerable¹¹.

Transition planning should be the mechanism through which both climate-related risks and decarbonisation are addressed in a coherent and joined-up manner. Network operators should therefore approach mitigation and adaptation as complementary, and identify synergies and dependencies between them through holistic risk management. For example, adopting efficient closed-loop cooling systems cuts electricity use and emissions, while enhancing resilience to extreme heat and water stress.

Figure 7 below and Figure 8 highlight the key physical and transition risks relevant for the telecommunication industry.



Climate resilience for organisations

Climate resilience involves the capacity to manage climate-related risks and benefit from climate-related opportunities, including both its strategic resilience and its operational resilience to climate-related changes, developments, and uncertainties. (Adapted from IFRS S2 Appendix A.)

Figure 7 Key physical risks for the telecommunication industry



Urban flooding:

A complex risk for telecommunications infrastructure due to the high risk of damage to physical assets, particularly to fibre optic installations, as well as the impact on service delivery and difficulty in repairing outages due to transport and electricity disruptions.



Temperature variability:

Affects the performance and reliability of equipment. Overheating of IT equipment and critical infrastructure. Increased cooling demand, higher cost of heat-resistant materials, service disruption, maintenance costs.



Sea level rise:

Has the potential to affect facilities and infrastructure. Coastal erosion, flooding and damage may require relocation or an investment in protective measures.



Extreme weather events:

Such as hurricanes, floods and heatwaves have the potential to cause damage to power or telecommunication infrastructure resulting in service outages and repairs.

⁹ AR6 Climate Change 2022: Impacts, Adaptation and Vulnerability | IPCC

¹⁰ Business on the Edge 2024 | WEF

¹¹ With climate risks set to slash earnings, what can CEOs do? | WEF

Figure 8 Key transition risks for the telecommunication industry



Technological innovation:

Global acceleration of technological innovation to meet sustainability challenges in the telecommunications sector. Requires investment in R&D, new products, sustainable business models.



Regulatory changes:

Compliance can require significant investment. Failure to comply can result in fines, legal challenges, as well as unwanted reputational damage.



Market shifts:

Changing consumer preferences and market dynamics.



Energy costs:

Energy price and market volatility.

Adaptation levers

Network operators should consider which current and future adaptation levers will be required to cope with the physical and transition risks of achieving net zero. Adaptation levers are proactive measures that reduce exposure to these physical risks. Given the critical nature of network infrastructure, adapting to climate-related physical risks (both acute and chronic) and ensuring resilience against future scenarios is particularly important. The risk exposure will be highly dependent on geography, and it is therefore essential that operators have adaptation plans and

models that address local and regional risks, which include ensuring the availability of resources to safely restore services quickly. The investment case for increased resilience should also consider interdependencies with carbon reduction, such as, renewable electricity generation, battery storage, and energy efficiency.

Some adaptation levers will require collaboration with local communities and governments – for example, to improve flood defences, manage coastal erosion, or improve stormwater management. For key physical risks, climate transition plans should identify key stakeholders and define an engagement strategy to achieve adaptation actions.



Acute vs. Chronic physical risk

Acute physical risks are short-term, event-driven hazards like floods or wildfires, while chronic physical risks are long-term shifts in climate patterns, such as rising sea levels or persistent heat waves.

Common adaptation levers for the telecommunication industry are listed below:^{12,13,14}

- **Location of sites and site design** – locating sites in areas of lower risks to hazardous events, and adapting building designs to be more withstanding of extreme conditions.
- **Technology and equipment** – investing in equipment, hardware, batteries, etc, which are more resilient to extreme temperatures and adverse environments.
- **Network adaptation** – real-time monitoring of conditions that may cause service disruptions. Diversifying connectivity options in areas of high physical risk (e.g. satellite communications).
- **Supplier collaboration** – localising supplier base can minimise the risk of global transport disruptions e.g. due to climatic events or geopolitical tensions. Working with suppliers to help them become more climate resilient will reduce supply risk.
- **Policy and regulatory engagement** – collaborating with industry bodies and governments to support climate adaptation policies and funding. Better and more transparent disclosures raise industry standards and accelerate industry-wide resilience building¹⁵.
- **Digital resilience tools** – developing solutions that allow for better communication and coordination of community response to physical events.
- **Safety and training** – climate risk and safety training for employees (especially for field workers and those working in site operations).

Climate-related opportunities

The net zero transition provides new opportunities for reducing business costs, capitalising on technological advancements, and exploring new revenue streams that the telecommunications sector is well positioned to capitalise on. These include:

- Resilience and avoidance of future costs.
- Cost reduction from energy efficiency and network optimisation.
- New revenue streams from circularity, low-carbon and sustainable products and services, technology supporting climate adaptation (e.g. early warning systems).
- Using and/or producing renewable energy can lower operational costs and in cases where net metering is possible, provide the opportunity to sell excess electricity¹⁶.
- Competitive differentiation and brand reputation. According to a study by the Capgemini Research Institute, 69% say they owe their innovation acceleration pace to sustainability, while 54% say that they have lost market share to a competitor with more sustainable products, and 44% experienced reputational damage from failing to act sustainably¹⁷.

¹² [Climate Adaptation Research and Innovation Framework](#) | GOV.UK

¹³ [Resilience to climate change in the telecoms sector](#) | Ofcom

¹⁴ [Resilient telecommunications infrastructure: A practitioner's guide](#) | The World Bank

¹⁵ For further reading on growing and effective methods for engagement see: [Meeting Nature Goals: Landscape and Jurisdictional Approaches](#) | CDP

¹⁶ Some electricity grids peak-production times can result in low or negative pricing – any opportunity assessment should carefully analyse the energy forecast and local grid financial mechanisms.

¹⁷ [Driving Business Value Through Sustainability](#) | Capgemini Research Institute 2025

Contributing to an economy-wide transition

As a critical infrastructure provider, the telecommunication industry can play a central role in supporting the economy-wide transition. Beyond decarbonising its own network infrastructure, the sector can also enable climate mitigation and adaptation across industries, by providing the connectivity essential for digital and technology-based solutions to function effectively. While such climate-focused use cases likely represent a minority of current network activity, they highlight a significant opportunity and should become a growing area of strategic focus.

Enabling economy-wide mitigation

Telecommunication companies are a vital component of many ICT-related emissions reduction technologies. Organisations can quantify the impact of solutions they provide through avoided emissions case studies^{18,19} and contribute to research identifying the benefits of low-/zero-carbon solutions. The power sector is an example where telecommunication infrastructure is a core part of the sector's net zero transition strategy by enabling smart grid technologies²⁰. These technologies can reduce emissions through grid optimisation and load handling by AI, advanced demand response technologies, and improved integration of intermittent renewables and distributed storage with predictive analytics²¹.

Scope 1, 2 and 3 Greenhouse Gas Protocol (GHGP) aligned assessments do not cover the wider (the second and higher order) effects of GHG emissions of ICT organisations (e.g. consequences of the use of sold products, enabling effects/avoided emissions). To give credibility to assertions of support for the economy-wide transition,

companies can choose to develop case studies based on reasonable scenarios, which identify the main consequences. Guidance to assess second order effects is contained in ITU-T Recommendation L.1480²².

Enabling economy-wide adaptation

Adaptation can also be enabled by many ICT technologies. This is often through monitoring, resource optimisation, and early warning systems. For example, the agriculture sector can reduce the impact of drought risks through water monitoring and optimisation or prediction and detection of heat variability.

Predictive capabilities of AI and machine-learning powered applications are revolutionising the way farmers detect weather crises, disease outbreak and pest infestations²³. For example, farmers can upload images of their crops via a mobile application and the AI system compares the image with a vast database of plant diseases, pest damage, and nutrient deficiencies, to suggest effective interventions²⁴.

Early warning systems can also play a critical role in saving lives and protecting infrastructure from hazardous weather events. Providing 24 hours' notice of an incoming hazardous event results in a 30% reduction of ensuing damage²⁵.

¹⁸ [Avoided emissions Implementation hub](#) | WBCSD

¹⁹ [Case Studies](#) | European Green Digital Coalition

²⁰ [Determining and Unlocking Untapped Demand-Side Management Potential in South Africa: Demand Response at the Grid Edge](#) | National Renewable Energy Laboratory (NREL)

²¹ [The Role of Mobile Operators in Smart Meter Adoption in India](#) | Mobile for Development

²² [ITU-T L.1480: Enabling the Net Zero transition: Assessing how the use of information and communication technology solutions impact greenhouse the gas emissions of other sectors](#) | ITU

²³ [What is the role of digitalisation for a sustainable agri-food system?](#) | BASE

²⁴ [Harnessing The Power Of Digital Technologies For Climate Adaptation](#) | AVPN

²⁵ [Saving lives through mobile-based early warning systems](#) | GSMA Mobile for Development



What to Disclose in a Climate Transition Plan

This chapter provides additional guidance on how to apply the TPT Disclosure Framework to the telecommunication industry. It should be read alongside the main TPT Disclosure Framework, which outlines disclosure recommendations across five elements and their sub-elements.

The five main elements are:

1. Foundations
2. Implementation Strategy
3. Engagement Strategy
4. Metrics and Targets
5. Governance

The guidance in this chapter includes suggested content for climate transition plans and it distinguishes between what organisations should consider disclosing, and what they may consider referencing or aligning with, such as relevant external guidance, best practices, or standards that can strengthen the transition plan.

Operators should use their discretion to determine which parts of the guidance apply to them e.g. an

operator who does not sell mobile devices is not expected to report on ‘percentage of devices following circular economy principles’.

For each sub-element, an interoperability table is provided indicating related disclosure requirements from IFRS S2, ESRS, CDP and, where relevant, information from SBTi can be found.

Creating a credible transition plan that includes all elements will likely take organisations between one to three years to achieve. Therefore, at the start of each element section, a roadmap has been provided to illustrate how to develop a transition plan. This roadmap is general guidance, it does not represent what should be or is feasible for all organisations, and does not account for variations such as maturity, size, or geography.

This guidance is not exhaustive, and organisations should disclose other information and consider alternative resources as needed.

1. Foundations

Foundations development roadmap

Year 1	Year 2	Year 3
<p>Establish data collection and measurement, and identify possible actions.</p> <p>Defined emissions targets for near- and long-term across all scopes.</p> <p>Climate risks and opportunities analysis based on an initial screening.</p> <p>Business model and value chain content and key assumptions and external factors should be disclosed (these will evolve annually).</p>	<p>Climate risk and opportunities analysis based on an initial scenario analysis.</p> <p>Initial assessment of social and other environmental impacts.</p> <p>Business model and value chain content and key assumptions and external factors should be disclosed (these will evolve annually).</p>	<p>Climate risk opportunities analysis based on a full scenario analysis.</p> <p>Full assessment of social and other environmental impacts.</p> <p>Business model and value chain content and key assumptions and external factors should be disclosed (these will evolve annually).</p>

1. Foundations

1.1 Strategic Ambition

An organisation shall disclose the Strategic Ambition of its transition plan. This should include its main goals and priorities for supporting a low-GHG emissions, climate-resilient economy. It should also explain how it will achieve these goals in a way that captures opportunities, avoids negative impacts on people and society, and protects the natural environment.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Transition plan ambition and emissions reduction targets

Objectives and priorities for reducing Scope 1, 2 and 3 GHG emissions, including:

- Absolute emissions reduction targets for both short- and long-term timeframes, reported separately for Scope 1, 2 and 3.
- Breakdown by country or region, where applicable or where target timelines vary significantly between markets.
- Whether the target, and the methodology for setting the target, have been validated by the SBTi, referring to the Corporate Net-Zero Standard²⁶ for guidance, or another third party.

Resilience, and responding to climate-related risks and opportunities

Objectives and priorities for improving resilience to and responding to climate-related risks and opportunities, including:

- The material climate-related physical and transition risks and opportunities, based on their financial impact and the organisation's ability to adapt to these risks across its operations and value chain.
- The climate scenarios used to assess and identify physical and transition climate-related risks.
- The nature, magnitude, likelihood and timing of the risks and opportunities.
- The response strategy to manage the climate-related risks and to realise opportunities.

²⁶ [Corporate net-zero standard](#) | SBTi

Supporting the transition to a low carbon economy

- Objectives and priorities to support a transition to a low-GHG emissions, climate-resilient economy, including:
 - Solutions that enable other sectors to reduce their GHG emissions, such as enabling smart grids and Internet of Things (IoT) applications.
 - Solutions that support climate adaptation and resilience, such as early warning systems and climate risk monitoring tools.

Just transition and social and environmental impacts

- If the organisation has made an initial or appropriate assessment to whether the transition plan could cause significant social or environmental impacts and dependencies on key stakeholders, and whether it follows just transition principles. Examples relevant to the telecommunication sector includes:
 - Avoiding/minimising the transfer of transition costs to customers, especially low-income and rural customers.
 - Displacement of suppliers/sub-contractors involved in carbon intensive services i.e. fuel delivery and diesel genset maintenance.
 - Digital exclusion due to decommissioning of legacy networks e.g. 2G.
 - The reduced demand for new equipment or devices from circular economy initiatives in its business operations and value chain, potentially impacting jobs in local assembly, logistics, or supply chain services.
 - Impact of increased growth and the development of high-capacity data centres on local water resources and electricity grids.
- Trade-offs, synergies or co-benefits identified between objectives and priorities, including:
 - Balancing network expansion with emissions reduction goals, taking into account both environmental and climate impacts, as well as the benefits of enhanced connectivity and digitalisation.
 - The effects of respecting just transition principles, including the origin of these principles (regulatory, corporate, social action groups, etc.)



When disclosing, an organisation may consider:

- Referring to the GSMA's Climate Action Handbook²⁷, which outlines strategies and actions for setting climate targets, reducing carbon emissions, promoting sustainable practices, and leveraging mobile technology to support environmental goals.
- Referring to the International Telecommunication Union (ITU) standard ITU-T L.1470²⁸ and ITU-T L.1471²⁹, which provide guidance on how to set emissions reduction targets in line with the Paris Agreement and net zero.
- Aligning commitments to the following external voluntary initiatives, including:
 - Zero emissions electricity procurement such as RE100 and the United Nations 24/7 Carbon Free Energy (CFE) compact.
 - Sustainable IT Pledge³⁰.
- When defining its responses to climate-related risks and opportunities, to align to Critical National Infrastructure (CNI) or National Emergency Telecommunication Plan (NETP)³¹. If applicable, to ensure the resilience and the continuous functioning of communication services during climate-related disruptions.
- Referring to the International Telecommunication Union (ITU) standard ITU-T L.1501³², which provides guidance on how countries can utilise the ICT sector to adapt to the effects of climate change.
- When explaining trade-offs, synergies, or benefits between expanding the network and reducing emissions, referring to the ITU and the World Benchmarking Alliance (WBA) Greening Digital Companies reports³³.

1.1 Strategic Ambition – Interoperability	IFRS	ESRS	CDP	SBTi
Transition plan ambition		14, 38	5.2	
Emissions reduction targets	14.a, 27, 33	16, 30, 31, 33, 34.b, 34.e, 79.e, 79.f	2.1, 7.53, 7.54	C19-27, R6
Resilience and responding to climate-related risks and opportunities	9.c, 10.d	39, 46, 47, 48, 53.c	2.1, 2.2, 5.1	
Supporting the transition to a low carbon economy			12.6	
Just transition and social environmental impacts		43	2.2	

²⁷ [Climate Action Handbook](#) | GSMA

²⁸ [ITU-T L.1470: Greenhouse gas emissions trajectories for the information and communication technology sector compatible with the UNFCCC Paris Agreement](#) | ITU

²⁹ [ITU-T L.1471: Guidance and criteria for information and communication technology organizations on setting Net Zero targets and strategies](#) | ITU

³⁰ [Sustainable IT pledge](#)

³¹ [National Emergency Telecommunication Plan](#) | ITU

³² [ITU-T L.1501: Best practices on how countries can utilize ICTs to adapt to the effects of climate change](#) | ITU

³³ [Greening Digital Companies](#) | ITU

1. Foundations

1.2 Business model and value chain

Organisations shall disclose how their Strategic Ambition will impact their business model and value chain. This element is intended to provide a high-level overview of key shifts in an organisation’s strategic direction, which should be discussed in greater detail in the Implementation Strategy and Engagement Strategy elements.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- A high-level overview of changes to the business model and value chain, including:
 - Circular economy initiatives, such as designing products for longer life cycles, implementing take-back programmes for end-of-life equipment, and promoting infrastructure sharing.
 - The adoption of next generation network technologies.
 - Data centre operations and services, particularly in response to growing demand from the AI sector.

1.2. Business model and value chain – Interoperability	IFRS	ESRS	CDP
Business model and value chain	13.a-b, 14.a	16.h, 19, 48.a-b, 48.c, AR1	5.2, 5.3.1



1. Foundations

1.3 Key assumptions and external factors

An organisation shall disclose key assumptions and external factors on which it relies to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- The key assumptions and external factors the organisation relies on, and how these may affect its ability to achieve its Strategic Ambition, at regional or global level, including:

Physical risks, impacts and opportunities

- Projected levels of global warming in the short-, medium-, and long-term used to estimate expected impacts of climate change on the business and value chain.
- The physical impacts of climate change and how they are expected to affect different areas.

External and value chain factors

- Grid decarbonisation scenarios and grid expansion plans.
- Availability of mechanisms to procure renewable energy in different countries or regions.
- The cost and pace of technological advances, including improvements in equipment efficiency and the development of emerging low- or zero-carbon technologies.
- Access to recycled materials and low-carbon products.
- The speed at which suppliers decarbonise and adjust product design.
- Quality and availability of data received from across the value chain.
- Ongoing requirements to maintain legacy infrastructure and the pace of transition away from it.

Government policies and regulations

- Government policies and regulations, such as current or anticipated subsidies for research and development, and measures to support climate adaptation or social justice obligations and their effects.



When disclosing, an organisation may consider:

- Referring to internationally recognised scenarios including the International Energy Agency’s (IEA’s) World Energy Outlook³⁴ for decarbonisation trajectories of the global economy and relevant economies. In addition, an organisation may refer to regional or national government sectoral pathways or roadmaps.
- Referring to S&P Global’s Clean Energy Technology Market Insights³⁵ for renewable energy procurement mechanisms market-insights across different regions.
- The Technology Readiness Levels (TRL) used by IEA. An organisation may consider delineating between its use of Prototype (TRL 4-6), Demonstration (TRL 7-8), Early Adoption (TRL 9-10), and Mature (TRL 11) technologies. Broadly, mature technologies are those that are available and economically viable today, while less mature technologies are those which may not be available and/or are economically unviable.
- To establish an assumption on the speed at which suppliers decarbonise their emissions, operations and products, organisations may consider the reduction commitments of their supply chain, for example through SBTi targets.

1.3 Key assumptions and external factors – Interoperability	IFRS	ESRS	CDP	SBTi
Physical risks, impacts and opportunities	9.c, 14.a		2.1, 3.1.1, 3.5, 3.6.1, 5.1, 5.3	
External and value chain factors		34.e, AR7.a,		C35
Government policies and regulations		AR13.c	3.5.4, 5.2	

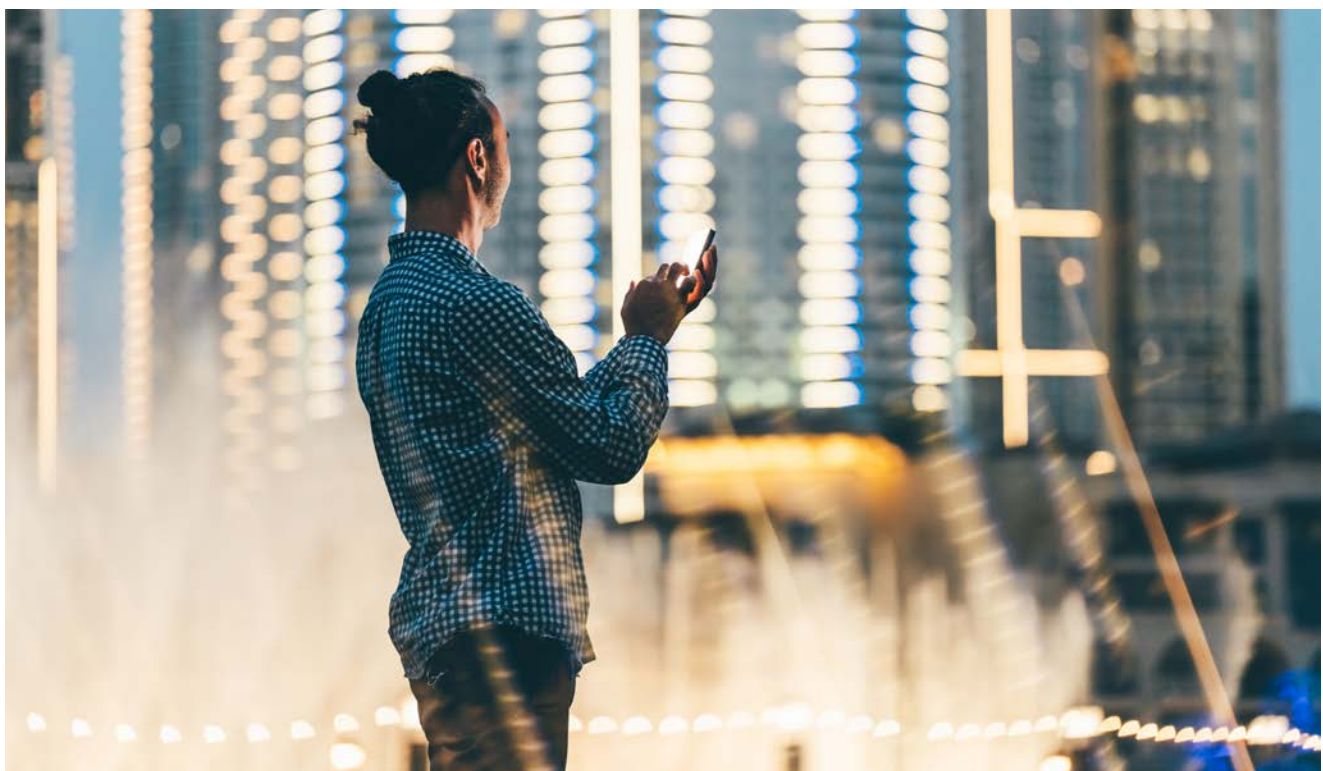
³⁴ World Energy Outlook | IEA

³⁵ Clean Technology Market Insights | S&P Global

2. Implementation Strategy

Implementation strategy development roadmap

	Year 1	Year 2	Year 3
2.1-2.3	<p>Operational and products and services strategies for a 3-5 year timeframe.</p> <p>3+ year strategy include levers under consideration such as enabling actions being taken (e.g. improved footprinting).</p> <p>Strategy for adaptation levers may be limited to “win-win” low-cost levers.</p>	<p>Operational and products and services strategies for a 5 year timeframe.</p> <p>5+ year strategy include levers under consideration such as enabling actions being taken (e.g. improved footprinting).</p> <p>Identification of adaptation levers across all time horizons and detailed 3-5 year strategy.</p>	<p>Operational and products and services strategies for a 5-10 year timeframe.</p> <p>10+ year strategy include levers under consideration such as enabling actions being taken (e.g. R&D investment).</p> <p>Identification of adaptation levers across all time horizons and detailed 5-10 year strategy.</p>
2.4	<p>Initial CAPEX and OPEX requirements of levers should be carried out and reviewed at senior level.</p> <p>Planned expenditure and financial performance assessment may be under development and not disclosed.</p>	<p>Quantification developed to include CAPEX, OPEX, and financial performance in the near-term and used to prioritise levers.</p> <p>Integration into business financial planning.</p> <p>Planned expenditure and financial performance assessment may be under development and not disclosed.</p>	<p>Quantification developed to include CAPEX, OPEX, value-at-stake, and financial performance in the near/ medium-term and used to prioritise levers.</p> <p>Integrated into the business’ approved financial plan.</p> <p>Disclosure of planned expenditure and financial performance assessment.</p>



2. Implementation Strategy

2.1 Business operations

An organisation shall disclose a roadmap of the short-, medium- and long-term actions it is taking, and planning to take, in its operations and value chain to achieve the Strategic Ambition of its transition plan. This relates both to emission reduction, as well as adaptation and resilience actions.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Operational energy improvement

- Information about any short-, medium-, and long-term actions to improve energy efficiency in its business operations.
- Information about any short-, medium-, and long-term actions to increase renewable energy adoption in its business operations. This includes both on-site and off-site renewable energy.
- Information about any short-, medium-, and long-term actions to phase out or replace backup energy systems and other stationary combustion sources with low- or zero-emission alternatives.

Operational and value chain emissions reduction

- Information about any short-, medium-, and long-term actions to phase out other GHG emissions sources, including:
 - Phasing out the use of high GWP F-gases.
 - Transitioning to a lower-emission or zero-emission vehicle fleet.
- Information about any short-, medium-, and long-term actions to reduce emissions within its value chain other than from products and services (e.g. low carbon transport, circularity initiatives, low-carbon/green manufacturing of equipment, network sharing, etc).

- Information about current and anticipated changes related to facilities and physical assets, including:
 - Plans to improve the resilience of its own infrastructure and assets, to climate-related physical risks, including both acute and chronic risks. Infrastructure and assets that should be covered include data centres, base stations, cabling (above and underground), and landing stations.
 - Development of strategies to ensure service continuity during climate-related disruptions.
 - Plans to respond and adapt to climate-related physical risks within its value chain (e.g. equipment and component manufacturers, TowerCo infrastructure).
 - Plans for products and services that support customers mitigation and adaptation activities.

Managing and mitigating climate-related transition risks

- Information about plans to manage material climate-related transition risks, including:
 - Policy and regulatory changes such as from carbon pricing or taxation, introduction of energy efficiency or other operational standards, or GHG emission reporting and compliance standards.
 - Market shifts, such as changes in demand for low-carbon products and services (e.g. green data centres).
 - Technological risk and advances, such as increased energy consumption from high-capacity data centres.
 - Reputational concerns, such as greenwashing accusations and increased scrutiny from stakeholders regarding the use of carbon-intensive operations and services.
- Information about plans to realise climate-related opportunities, such as benefitting from reduced energy costs due to cheaper renewable energy, improving energy efficiency, and expanding low-carbon products and services to meet market demand.

When disclosing, an organisation may consider:

- Referring to the GSMA Achieving Climate Targets³⁶ guidance, which outlines best practices for decarbonising operations and supply chains.
- Formally adopting internationally recognised standards such as ISO 50001³⁷, or align its energy management practices to its requirements to strengthen governance, demonstrate credible progress, and support measurable energy reductions over time.
- Referring to the Internet Services Providers' Association (ISPA) and Independent Networks Cooperative Association's (INCA) Fourth Adaptation Reporting Power (ARP4) report: Climate adaptation in the telecommunications sector³⁸, or ITU Resilient pathways: The adaptation of the ICT sector to climate change³⁹.

2.1 Business operations – Interoperability	IFRS	ESRS	CDP
Operational energy improvement	14.a.i	16.d, 16.h	
Operational and value chain emissions reduction	13.a-b	29.b, 34.f, 48.a-b, 68.a-d	5.11, 5.2, 7.55
Managing and mitigating climate-related transition risks	14.a.ii	29.a, AR30.a	5.3.1, 5.3.2

³⁶ [Achieving Climate Targets guide](#) | GSMA

³⁷ [ISO 50001](#) | ISO

³⁸ [Fourth Adaptation Reporting Power \(ARP4\) report: Climate Adaptation in the telecoms sector](#) | ISPA, INCA

³⁹ [Resilient pathways; the adaptation of the ICT sector to climate change](#) | ITU

2. Implementation Strategy

2.2 Products and services

An organisation shall disclose its short-, medium-, and long-term actions to change its products and services portfolio to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Product adaptations, actions and transition

- Information about any current and anticipated actions, including timelines, to reduce embedded carbon and reduce the carbon emissions associated with its products and services, such as for:
 - Mobile, fixed and enterprise network services
 - Data centres services
 - Devices
 - Customer Premise Equipment (CPE)

Low-carbon products and services

- How an organisation defines what is considered low carbon or green products or services, referencing any taxonomies, labelling, or standards that it uses. Accompanied by an exact description of the action and specifying the measurement methodology on which the claim is based.
- How an organisation is implementing and complying with national or regional extended producer responsibility requirements.
- Avoided emissions assessments related to products/solutions that enable mitigation in other sectors or organisations, following a robust methodology. Case studies should be based on implemented use cases and, where possible, quantification should be made across all goods and services to avoid cherry-picking.



Infrastructure

When considering infrastructure, organisations should consider including information about:

- Network and data centre equipment
- Construction and installation activities such as site works and trenching
- Concrete and steel construction materials
- Maintenance of infrastructure

When disclosing, an organisation may consider:

- Quantifying and disclosing Product Carbon Footprints or Life Cycle Assessments for key products or services.
- Referring to the GSMA’s Strategy Paper for Circular Economy: Mobile Devices⁴⁰, and Rethinking Mobile Phones: The business case for circularity⁴¹.
- Referring and aligning to ITU standards such as:
 - ITU-T L.1020 – Circular economy: Guide for operators and suppliers on approaches to migrate towards circular ICT goods and networks⁴².
 - ITU-T L.1470 series – Energy efficiency metrics and methodologies for mobile networks, as well as equipment life extension.
 - ITU-T L.1030 – Requirements for end-of-life management of ICT equipment⁴³.
 - Referring to the International Telecommunication Union (ITU) standard ITU-T L.1480⁴⁴, which provides guidance on how to assess the avoided emissions impacts of ICT on other sectors. The impact of the mobile industry on wider economy decarbonisation is also illustrated in GSMA The Enablement Effect 2021 report for four other industries⁴⁵.
- The introduction of climate-friendly labelling for devices such as Eco Rating⁴⁶, Global Ecolabelling Network⁴⁷, R2 (Responsible Recycling)⁴⁸ or e-Stewards⁴⁹.
- Referring to the Ellen MacArthur Foundation’s Circular Consumer Electronics: An initial exploration⁵⁰, as well as artificial intelligence and the circular economy: AI as a tool to accelerate the transition⁵¹.

2.2 Products and services – Interoperability	IFRS	ESRS	CDP
Product adaptations, actions and transition	14.a.ii	16.b, 29.b, 34.f, AR3.c, AR8.b, AR30.a	5.2, 5.3.1
Low-carbon products and services		16.d-e, 40.e, 69.b	7.74

⁴⁰ Strategy Paper for Circular Economy: Mobile Devices | GSMA
⁴¹ Rethinking Mobile Phones: The business case for circularity | GSMA
⁴² ITU-T L.1020 : Circular economy: Guide for operators and suppliers on approaches to migrate towards circular ICT goods and networks | ITU
⁴³ ITU-T L.1030 : E-waste management framework for countries | ITU
⁴⁴ ITU-T L.1480 : Enabling the Net Zero transition: Assessing how the use of information and communication technology solutions impact greenhouse gas emissions of other sectors. |
⁴⁵ The Enablement Effect 2021 | GSMA
⁴⁶ Eco Rating
⁴⁷ Global Ecolabelling Network
⁴⁸ R2 Responsible Recycling
⁴⁹ e-Stewards
⁵⁰ Circular Consumer Electronics: An Initial Exploration | Ellen MacArthur Foundation
⁵¹ Artificial intelligence and the circular economy | Ellen MacArthur Foundation

2. Implementation Strategy

2.3 Policies and conditions

An organisation shall disclose information about any policies and conditions that it uses or plans to use to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

External policies and value chain

- External policies and conditions in place related to:
 - Access to renewable electricity, either through grid decarbonisation, self-generation, market instruments, or government policies, to phase out GHG-intensive assets.
 - The decarbonisation of equipment manufacturing or supplier operations.
 - The extent to which emissions reduction relies on technology development, such as the availability of low-carbon alternatives, to diesel generation, or low-carbon transportation of goods.
- Policies and conditions for sourcing renewable electricity, prioritising new generation, e.g. on-site generation, through to power-purchase agreements, or Renewable Energy Certificates (RECs) in order of priority.
- Policies and conditions to reduce water consumption and optimise cooling-water use in data centres and other facilities, with a focus on reducing freshwater withdrawals in water-stressed regions.
- Procurement policies that take climate considerations into account, such as sourcing goods and services from suppliers that provide low-carbon equipment (e.g. energy-efficient servers and network hardware), using recycled materials, or having science-based emissions reduction targets.

Internal policies

- Internal policies and conditions that it uses to achieve its Strategic Ambition, such as:
 - Policies and conditions to optimise energy consumption and drive continual improvements in energy efficiency across network operations, particularly in data centres and base stations.
 - Policies embedding climate-risk assessments into site selection and business continuity planning, as well as mandating design standards to safeguard network assets against extreme weather and long-term climate shifts.

2.3 Policies and conditions – Interoperability	IFRS	ESRS	CDP
External policies and value chain			5.11.6
Internal policies	13.a-b, 14.a	22, 24, 25, 65.a	4.6.1, 5.2

2. Implementation Strategy

2.4 Financial planning

An organisation shall disclose information about how its transition plan affects its financial position, performance, and cash flow over the short-, medium-, and long-term, including how it intends to fund the activities needed to achieve its Strategic Ambition.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Capital investments

- Planned capital investments to decarbonise operations, including:
 - Retrofitting network infrastructure with more energy-efficient equipment (e.g. low-energy base stations, efficient cooling-systems for data centres).
 - Installing on-site renewable energy generation (e.g. solar installations at tower sites, data centres).
 - Replacing fossil fuel energy back-up systems.

Operational expenditure implications

- Expected operational expenditure implications, including:
 - Changes to energy procurement costs through sourcing renewable energy, e.g. through on-site installations, Power Purchase Agreements (PPAs), RECs, etc.
 - Long-term savings from renewable energy assets and investing in energy efficiency.

Financial strategy and planning

- Effects of new or adapted business models on revenues and cash flows, including:
 - Circular economy initiatives (e.g. adoption of device refurbishment and resale programmes).
 - The adoption of next generation network technologies.
 - Growth of new services enabling climate adaptation (e.g. analytics and early warning systems) or mitigation (e.g. smart grid demand management and renewables integration).
- Financial allocations towards increasing the physical resilience of network infrastructure, including:
 - Investments in network resiliency (e.g. floodproofing, water efficiencies).
 - The relocation of assets away from high-risk locations.
 - Inclusion of physical climate risks and related costs in Business Continuity Planning (BCP) and insurance coverage assessments.

- Planned use of sustainable finance instruments, such as green bonds, sustainability-linked loans, or transition bonds, and alignment to green finance taxonomies.
- Planned use of internal carbon pricing.
- Plans for actions aimed at customers to help reduce their own emissions, as a result of the use of telecommunication products and services.
- Key assumptions underpinning financial projections, such as:
 - Future electricity price trajectories.
 - Carbon pricing scenarios.
 - Expected customer uptake of low-carbon products and services.

When disclosing, an organisation may consider:

- Referring to the Accounting for Sustainability's An introduction to aligning transition planning and financial planning⁵², which outlines the approaches organisations can take, and how it supports decision-making, stakeholder confidence, and compliance with emerging disclosure requirements.
- Referring to the Accounting for Sustainability's Essential Guide Series⁵³, which provides a suite of practical guides (e.g. on Capex, risk, decision-making, investor engagement) showing how to integrate sustainability into finance and accounting, particularly its Strategic Planning, Budgeting and Forecasting guide.
- International Capital Market Association member Green Bond Principles for guidance on structuring credible green-bond issuances, transparent use-of-proceeds frameworks and performance-linked Key Performance Indicators (KPIs).

2.4 Financial planning – Interoperability	IFRS	ESRS	CDP
Financial strategy and planning	16.d, 17, 18.a-b, 19.a-b, 21.a-c	48.d-e	5.3.2, 5.4.1
Capital investments	16.c, 16.e, 16.h	16.c, 16.e, 16.h	7.55.3
Operational expenditure implications			5.4.2

⁵² An introduction to aligning transition planning and financial planning | A4S

⁵³ Essential Guide Series | A4S

3. Engagement Strategy

Engagement strategy development roadmap

Year 1	Year 2	Year 3
<p>Feasibility study and initial engagement strategy for supply chain and planned/active industry initiatives.</p> <p>Identification of public sector engagement carried out internally and may not be disclosed.</p>	<p>Updated engagement strategy including agreed supply chain targets, supply chain initiatives, and joint industry programmes.</p> <p>Development of public sector engagement may not be disclosed.</p>	<p>Long-term engagement strategy across supply chain, industry and public sector.</p>



3. Engagement Strategy

3.1 Engagement with value chain

An organisation shall disclose any engagement with its value chain (both upstream and downstream) to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- Engagement activities with network equipment (e.g. radio units, routers) and handset original-equipment manufacturers on emissions reduction targets and activities, energy efficiency specifications and product circularity requirements.
- Engagement with service providers, such as data centre operators, fibre network partners and tower companies to integrate renewable energy, improve energy efficiency of sites (e.g. power usage effectiveness in data centres) and the implementation of low- or zero-carbon back-up energy systems (e.g. battery energy storage systems).
- Engagement with key infrastructure partners to develop resilience plans to ensure continued service during climate-related disruptions, and how climate-risk factors are being considered when choosing sites or upgrading new and existing assets.

When disclosing, an organisation may consider:

- Referring to the GSMA Strategy Paper for Circular Economy: Mobile Devices⁵⁴, Rethinking Mobile Phones: The business case for circularity⁵⁵ and Achieving Climate Targets⁵⁶ guidance, which cover value chain engagement.
- Referring to the Accounting for Sustainability's Essential Guide to Incentivizing Action Along the Value Chain⁵⁷, which provides guidance to map value chains, identify stakeholders, assess risks and opportunities, and understand the right levers to use to support action.
- Aligning engagement with device manufacturers and network equipment suppliers with internationally recognised standards that support circular economy principles, including:
 - ITU-T L.1020 – Circular economy: Guide for operators and suppliers on approaches to migrate towards circular ICT goods and networks.
 - ITU-T L.1030 – Requirements for end-of-life management of ICT equipment.
 - ITU-T L.1470 series – Energy efficiency metrics and methodologies for mobile networks as well as equipment life extension.

3.1 Engagement with value chain – Interoperability	IFRS	ESRS	CDP
Value chain engagement	14.a.iii	24, 45.a	5.11, 5.2

⁵⁴ Strategy Paper for Circular Economy: Mobile Devices | GSMA
⁵⁵ Rethinking Mobile Phones: The business case for circularity | GSMA
⁵⁶ Achieving Climate Targets Guide | GSMA
⁵⁷ Essential Guide to Incentivizing Action Along the Value Chain | A4S

3. Engagement Strategy

3.2 Engagement with industry

An organisation shall disclose any engagement with industry organisations and initiatives to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- Membership in industry climate initiatives, organisations, trade associations and forums such as the GSMA, Joint Alliance for CSR (JAC), European Green Digital Coalition (EGDC), or similar.
- Engagement activities aimed at advancing technology development to address hard-to-decarbonise areas, or support emerging low- or zero-carbon energy solutions (e.g. green hydrogen/fuel cells, small modular reactors).
- Engagement activities focused on industry-wide coordination to support scope 3 emissions reductions, green manufacturing and circular economy initiatives, including shared initiatives, targets and frameworks for increasing device longevity, device takeback, refurbishment, recycling, and material recovery.
- Collaborative infrastructure initiatives, including active and passive infrastructure sharing and co-investment models in shared green energy supply (e.g. renewable microgrids at tower sites).
- Collaboration with industry peers to improve climate resilience by jointly developing best practices and coordinated responses to physical climate risks.

When disclosing, an organisation may consider:

- Engagement activities and participation in initiatives, forums, organisations, and trade associations such as:
 - GSMA Climate Action Taskforce
 - International Telecommunication Union (ITU) (e.g. standard setting groups)
 - Joint Alliance for Corporate Social Responsibility (CSR)
 - Responsible Business Alliance (RBA)
 - ICT for Sustainability (ICT4S)
 - Exponential Roadmap Initiative (ERI)

3.2 Engagement with industry – Interoperability	IFRS	ESRS	CDP
Industry engagement	14.a.iii	24, 45.a	4.10, 4.11.2, 5.2

3. Engagement Strategy

3.3 Engagement with government, public sector, and civil society

An organisation shall disclose information about any direct or indirect engagement with governments, regulators, public sector bodies, communities, and civil society to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing engagement activities in relation to:

- Grid decarbonisation.
- Grid expansion, reliability and resilience improvements.
- Renewable energy procurement mechanisms, including supporting the development of enabling policies and streamlined permitting processes.
- Climate resilient infrastructure development by local and regional councils, such as enhancing stormwater management systems, flood defences, water security measures and alternative water supply solutions.
- Phasing out legacy infrastructure and technologies e.g. 2G.

When disclosing, an organisation may consider:

- Referring to GSMA Climate Policy⁵⁸, which sets out mobile industry policy positions on key climate topics such as energy efficiency, renewables and supply chain engagement.
- Collaborating with government bodies responsible for national infrastructure resilience and critical infrastructure planning, as well as involvement in the development and implementation of National Emergency Telecommunication Plans (NEPT), to strengthen the resilience and ability of telecommunication networks to remain operational and secure during climate-related disasters.
- Referring to The Global Standard on Responsible Climate Lobbying⁵⁹, which provides a framework to ensure companies' lobbying and political engagement activities are in line with the goal of restricting global temperature rise to 1.5°C above pre-industrial levels.

3.3 Engagement with government, public sector, and civil society – Interoperability	IFRS	ESRS	CDP
Government, public sector, and civil society engagement	14.a.iii	24, 45.a	4.11.1

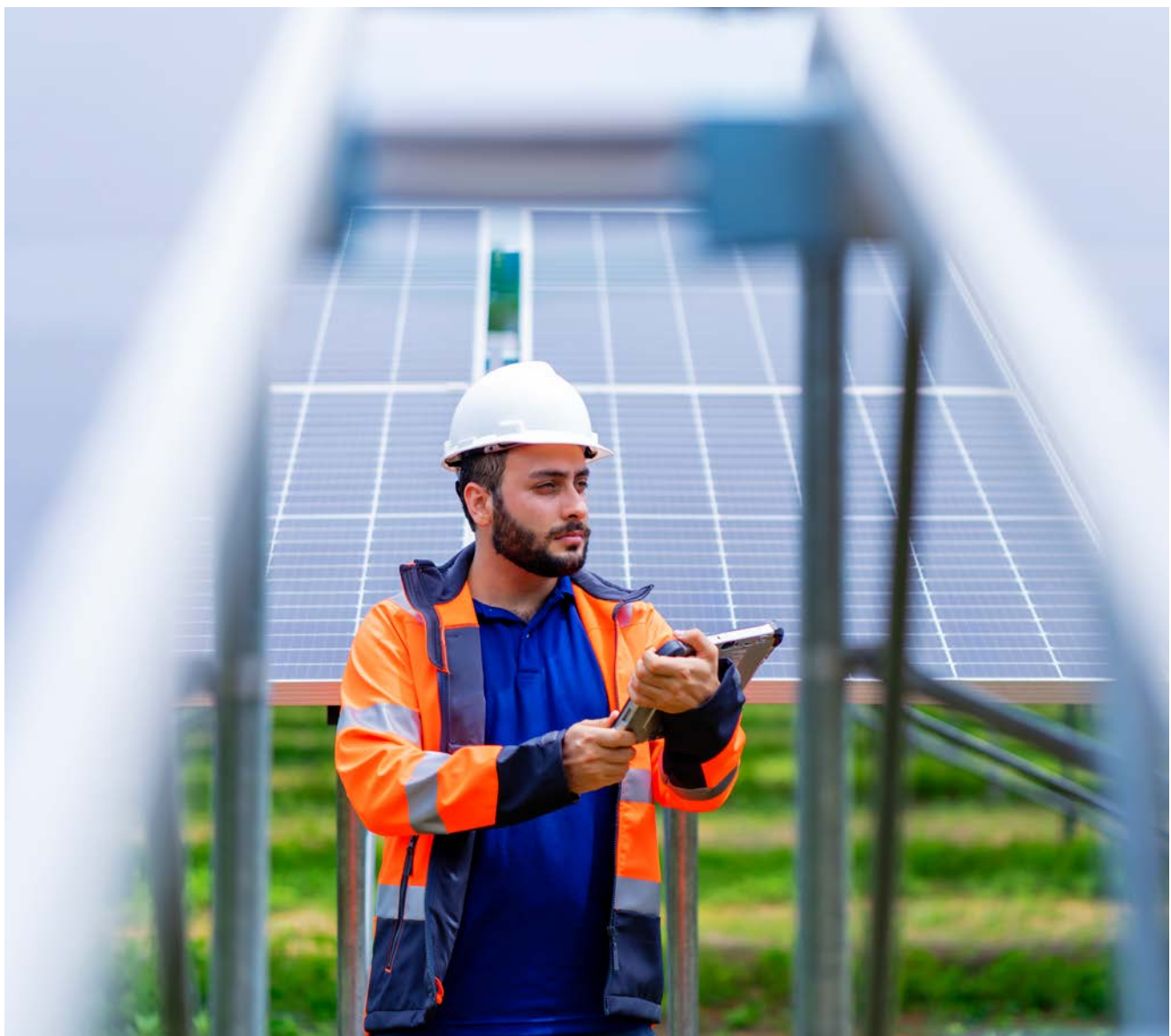
⁵⁸ [Climate Policy | GSMA](#)

⁵⁹ [Responsible Climate Lobbying: The Global Standard](#)

4. Metrics and Targets

Metrics and targets development roadmap

Year 1	Year 2	Year 3
<p>Financial metrics and targets may be under development and not disclosed.</p> <p>All other metrics and targets should be disclosed (these will evolve over time).</p> <p>The reference methodologies to be used for each metric should be made public.</p>	<p>Financial metrics and targets may be under development and not disclosed.</p> <p>All other metrics and targets should be disclosed (these will evolve over time).</p>	<p>All metrics and targets should be disclosed.</p> <p>Measures taken to ensure that the use of these metrics is compatible with reference methodologies should be publicised.</p>



4. Metrics and Targets

4.1 Governance, engagement, business and operational metrics and targets

An organisation shall disclose key business and operational, engagement, and governance metrics it uses to track and drive progress towards the Strategic Ambition of its transition plan, and report on these metrics at least annually.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Business, operational and value chain metrics

- Information about business and operational metrics and targets, including:
 - Total energy consumed, disaggregated by country/region and activities.
 - Percentage of energy sourced from renewable energy, broken down by source – e.g. onsite renewables; PPAs; and green tariffs backed by renewable energy certificates (RECs), etc.
 - Average energy intensity (e.g. Power Usage Effectiveness) and, where applicable, water intensity (e.g. Water Usage Effectiveness) of data centres.
 - Average energy intensity metrics of network operations (i.e. base stations, transmission equipment) and offices.
 - Percentage of locations with low/zero carbon backup power alternatives.
 - Percentage of electric or zero-emission vehicles within the organisation's fleet.
 - Percentage of F-gasses that have low GWP.
 - Percentage of recycled materials used in sold products.
 - Percentage of reused products sold.
- Waste end-of-life management (e.g. percentage of waste that is reused, recycled, sent to landfill, incinerated, or subjected to energy recovery).
- Percentage of products and services specified for the decarbonisation of customer-related emissions in support of the wider economy transition.



Metrics

Relevant metrics should be determined on a case-by-case basis, with the GSMA's ESG Metrics for Mobile offering a useful guide to determine minimum environmental indicators to report on.

Information about metrics and targets related to its value chain, including:

- Supplier engagement commitments (e.g. percentage of suppliers that have set climate-related targets).
- Use of renewable electricity in leased network assets / by TowerCo partners.
- Procurement from sustainable suppliers:
 - Percentage of suppliers using a minimum threshold of renewable energy (e.g. percentage of suppliers using at least 50% renewable energy in their operations).
 - Percentage of network equipment following circular economy principles.
- Sustainable products and services:
 - Percentage of devices made with renewable electricity.
 - Percentage of devices following circular economy principles.
 - Percentage of devices achieving zero waste to landfill.



Procurement from sustainable suppliers

Percentage metrics may benefit by weighting according to emissions or financial value.

Risk and adaptation metrics

- Climate-related risk and adaptation metrics, such as:
 - Number of critical infrastructure sites assessed and upgraded for climate resilience.
 - The proportion of assets exposed to climate hazards in a defined climate scenario.
 - System average interruption duration, frequency, and customer average interruption duration.
 - Number of climate-related risks included in the company's risk register.

Governance metrics

- Information about governance and engagement metrics and targets, including:
 - Executive compensation (e.g. link to executive bonus achieving climate targets).
 - Climate-related policy implementation and review (e.g. frequency of reviews and updates).
 - Climate-related responsibility and leadership (e.g. board and senior management representation).

When disclosing, an organisation may consider:

- Referring to the GSMA ESG Metrics for Mobile⁶⁰ for additional sector specific guidance on material metrics and KPIs.
- Aligning to:
 - ITU standards e.g. ITU-T L.1470 series – Energy efficiency metrics and methodologies for mobile networks as well as equipment life extension.
 - The Global Reporting Initiative (GRI) global standards for sustainability impacts and the GRI Telecommunications Sector Supplement⁶¹.
 - The Sustainability Accounting Standards Board (SASB) Sustainability Accounting Standard for Telecommunication Services⁶².

4.1 Governance, engagement, business and operational metrics and targets – Interoperability	IFRS	ESRS	CDP
Business, operational and value chain metrics	33.a-g, 34.a-b, 35	22.d	7.52, 7.54.1
Risk and adaptation metrics	27	75	7.54.2
Governance metrics	33.h	26.a, 77.b	
Overarching metric and target setting disclosure requirements	34.a-c	76, 77.a, 80.a-f, 80.i-j	

⁶⁰ ESG metrics for mobile | GSMA

⁶¹ Telecommunications Sector Supplement | GRI

⁶² Sustainability Accounting Standard for the Telecommunication Services Industry | SASB

4. Metrics and Targets

4.2 Financial metrics and targets

An organisation shall disclose information about any financial metrics and targets that it uses to drive and monitor progress towards the Strategic Ambition of its transition plan, and report against these on at least an annual basis.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Capital and operational expenditure metrics and targets

- Capital and operational expenditure metrics and targets for the near- (current business cycle), mid- and long-term, including:
 - Projected Capex directed to investment in low-carbon technologies/carbon reduction measures.
 - Percentage of Capex directed to low carbon technologies/carbon reduction measures.
 - Changes in Opex due to investment in low-carbon technologies/carbon reduction measures.
 - Percentage of Capex aligned with a recognised regional or country-specific green taxonomy.

- Revenues from low- or zero-carbon products or services.
- Revenues from products and services designed, supplied, and marketed with a view to decarbonising their customer’s operations.

Carbon pricing

- Information about internal carbon prices applied to investment or operational decisions, the shadow carbon price used, or the proportion of emissions it targets within the value chain.
- Proportion of financing linked to green bonds or sustainability-linked instruments.
- Climate-related financial risk exposure (e.g. estimated financial impact of physical and transition risks), including:
 - Estimated financial impact due to exposure to acute/chronic climate risks.
 - Expected impact on Opex and Capex from resilience upgrades or climate adaptation investments.

4.2 Financial metrics and targets – Interoperability	IFRS	ESRS	CDP
Capital and operational expenditure metrics and targets	27, 35	75	5.4.1, 7.54.2
Carbon pricing		62, 63.c	5.10.1
Overarching metric setting disclosure requirements	33.a-h, 34.a-d	22.d, 26.a, 30, 76, 77.a-b, 80.a-f, 80.i-j	

4. Metrics and Targets

4.3 GHG metrics and targets

An organisation shall disclose the GHG emissions metrics it uses to track and drive progress towards the Strategic Ambition of its transition plan, and report on these metrics at least annually.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

Target reporting metrics and progress

- The GHG emissions base year.

Scope 1 and 2 metrics

- Absolute/intensity GHG emissions metrics and targets for Scope 1 and 2 separately, disaggregated by country or region where applicable, and disaggregated by activity (e.g. data centres, base stations, fleet and offices, where applicable).
- Location-based and market-based Scope 2 emissions.

Scope 3 metrics

- Absolute/intensity GHG emissions for Scope 3, this includes:
 - Scope 3 Category 1 (purchased goods and services).
 - Scope 3 Category 2 (capital goods).
 - Scope 3 Category 3 (fuel and energy-related activities).
 - Scope 3 Category 4 (upstream transport and distribution).
 - Scope 3 Category 11 (use of sold products).
 - Scope 3 Category 15 (investments).
- For each of the GHG Protocol categories above, whether the metrics have been validated by a third party, e.g. assured or verified by the SBTi.
- Progress and track record against GHG emissions targets.

When disclosing, an organisation may consider:

- The International Telecommunication Union (ITU) standards ITU-T L.1470; ITU-T L.1471; and ITU-T L.1420, which provide guidance on setting emissions reduction targets and how to assess energy consumption and greenhouse gas emissions for ICT organisations respectively.
- Disclosing Product Carbon Footprints or Life Cycle Assessments for key products or services. This should include collaboration with suppliers and other value chain partners to gather GHG emissions data across all life cycle stages, including raw material extraction, production, distribution, use, and end-of-life disposal or recycling.
- Referring to the GSMA Scope 3 Guidance for Telecommunications Operators⁶³, which harmonises methods for telecom operators to assess and report Scope 3 GHG emissions, enhancing coverage and transparency. This builds on ITU-T L.1410⁶⁴, which provides guidance on how to carry out environmental life-cycle assessments of telecommunication goods, networks and services.

4.3 GHG metrics and targets – Interoperability	IFRS	ESRS	CDP	SBTi
Target reporting metrics and progress	27, 29.a, 33.a, 35	16.a, 22.d, 26.a, 30, 32, 33, 34, 80, AR39	1.4, 1.5, 6.1, 7.13.1	C29
Scope 1 and 2 metrics	29.a.i.1-2	34.b, 48.a, 49, 50, 52, 54, 75, 76, 77	7.3, 7.6, 7.7, 7.22	
Scope 3 metrics	29.a.i.3	48.a, 51, 52, 54, 75, 76, 77, AR46, AR57	7.8	

⁶³ Scope 3 Guidance for Telecommunication Operators | GSMA

⁶⁴ ITU-T L.1410: Methodology for environmental life cycle assessments of information and communication technology goods, networks and services | ITU

4. Metrics and Targets

4.4 Carbon credits

An organisation shall disclose information about how it uses or plans to use carbon credits to achieve the Strategic Ambition of its transition plan, and report on the use of carbon credits on at least an annual basis.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider:

- An approach to carbon credits which does not act as a substitute for direct emissions reductions.
- Pursuing durable, high quality carbon credits, which directly finance mitigation projects, or conservation of carbon in natural ecosystems.
- Referring to the Corporate Net Zero Standard from SBTi.
- Referring to the TPT Disclosure Framework.

4.4 Carbon Credits – Interoperability	IFRS	ESRS	CDP
Carbon credits	13.a-b, 14.a	56.b, 59.a-b, 60, 61.c, AR 62.b-c, AR 63.a-b	7.54.3, 7.79.1, 13.1.1

5. Governance

Governance development roadmap

Every year

All governance areas should be disclosed.

Governance including oversight, roles and responsibilities, and accountability should be fully developed.

Incentives, remuneration, skills, competencies, and training should be disclosed but will evolve over time.



5. Governance

5.1 Board oversight and reporting

An organisation shall disclose information about the governance body(s), which can include a board, committee, or equivalent body charged with governance, or individual(s) responsible for oversight of the transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- How their board oversees the transition plan, the frequency and nature of discussions, and how information is reported to the board, including:
 - Describing how the board is engaged in overseeing the transition plan, particularly in areas such as network infrastructure upgrades, energy efficiency initiatives, renewable energy adoption, phasing out of carbon intensive back-up power systems, and supply chain sustainability.
 - Explaining the mechanisms in place for reporting progress on transition-related goals to the board, including KPIs related to emissions reductions, renewable energy adoption, and circular economy practices.
 - Describing how the board assesses and manages climate-related risks, including physical risks to infrastructure and transition risks related to regulatory changes and market shifts.

When disclosing, an organisation may consider:

- Referring to the TCFD Good Practice Handbook⁶⁵, which provides guidance and best practices for organisations regarding governance and strategy development, amongst other themes.
- Referring to the TCFD Knowledge Hub⁶⁶, which provides guidance, resources and further information regarding governance of climate-related risks and opportunities.
- Referring to the WEF’s How to Set Up Effective Climate Governance on Corporate Boards Guiding Principles and Questions⁶⁷, which provides a structured framework for corporate boards to effectively oversee climate-related risks and opportunities.
- Referring to A4S Essential Guide to Engaging the Board and Executive Management⁶⁸, which provides practical strategies to effectively engage boards and executive management in integrating sustainability into core business decisions, utilising regular board activities.

5.1 Board oversight and reporting – Interoperability	IFRS	ESRS	CDP
Board oversight and reporting	5, 6.a, 29.g, 34.b	16.i, 22.a-b, 22.d, 23.a-b, 26.a-c	4.1.2, 4.2

⁶⁵ [Good practice handbook](#) | TCFD

⁶⁶ [TCFD Knowledge Hub](#)

⁶⁷ [How to Set Up Effective Climate Governance on Corporate Boards Guiding Principles and Questions](#) | WEF

⁶⁸ [Essential Guide to Engaging the Board and Executive Management](#) | A4S

5. Governance

5.2 Management roles, responsibility, and accountability

An organisation shall disclose information about management’s role in the governance processes, controls, and procedures used to monitor, manage, and oversee the transition plan, as well as how it is embedded within the organisation’s wider control, review, and accountability mechanisms.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- How each executive is responsible for implementing various aspects of the transition plan.
- The formation of cross-functional teams, not limited to including members from engineering, operations, procurement, and sustainability departments to ensure integrated implementation of the transition plan.
- How performance is evaluated against transition plan objectives and how accountability is maintained across different levels of the organisation.

5.2 Management roles, responsibility, and accountability – Interoperability	IFRS	ESRS	CDP
Management roles, responsibility, and accountability	5, 6.b	16.i, 22.a, 22.c, 22.d, 34, 36.a-f, AR 11	4.3, 5.2



5. Governance

5.3 Culture

An organisation shall disclose information about how it aligns or plans to align its culture with the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- Information about how the organisation’s values are aligned to and support the implementation of the transition plan.
- Information about plans to promote a transition-aligned culture, behaviour and ways of working.

When disclosing, an organisation may consider:

- Referring to the Accounting for Sustainability’s Essential Guide to Finance Culture⁶⁹ to help finance teams understand and improve their culture to better support sustainability goals with tools to assess and shift behaviours, and real-world examples.
- Referencing or linking to related disclosures made under other parts of this element, such as:
 - How the board oversees efforts to build a transition-aligned culture (see 5.1).
 - How management responsibilities are structured to embed transition goals across departments (see 5.2).
 - How culture and behaviour change are incentivised through performance and remuneration structures (see 5.4).

5.3 Culture – Interoperability	IFRS	ESRS
Culture	5, 6.a, 29.g, 34.b	7, 9, AR 1.a-d

⁶⁹ [Finance culture](#) | A4S

5. Governance

5.4 Incentives and remuneration

An organisation shall disclose information about how it aligns or plans to align its incentive and remuneration structures with the Strategic Ambition of its transition plan.



When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- How executive compensation is linked to achieving sustainability targets, such as emissions reduction, energy efficiency improvements, and progress in circular economy initiatives.

When disclosing, an organisation may consider:

- Referring to the Climate Governance Initiative Executive Compensation Guidebook for Climate Transition: 2023 Addendum, and original Guidebook⁷⁰.

5.4 Incentives and remuneration – Interoperability	IFRS	ESRS	CDP
Incentives and remuneration	5, 6.a, 29.g, 34.b	13, 27, 29.a-e, AR 7	4.5

⁷⁰ Executive Compensation Guidebook for Climate Transition | Climate Governance Initiative (CGI)

5. Governance

5.5 Skills, competencies and training

An organisation shall disclose information about actions it is taking or plans to take to assess, maintain, and build the appropriate skills, competencies, and knowledge across the organisation in order to achieve the Strategic Ambition of its transition plan.

When applying the TPT Disclosure Framework for the Telecommunication Service Industry, an organisation should consider disclosing:

- How the organisation has assessed the skills and knowledge needed to successfully implement its transition plan, such as mapping key competencies and conducting skills-gap assessments. This should cover both board or executive-level capabilities and those of the wider workforce.
- The actions the organisation plans to take to address any identified gaps, such as recruitment, internal upskilling, or targeted training programmes, such as training of leadership and/or management on greenhouse gas accounting and climate risk, or energy management for specialised staff roles.

When disclosing, an organisation may consider:

- Referring to the Climate Governance Hub⁷¹, which offers resources to help corporate boards integrate climate considerations into their governance practices.
- Referring to the Ceres report Lead From the Top: Building Sustainability Competence on Corporate Boards⁷², which provides guidance for corporate boards to enhance their oversight of sustainability risks and opportunities, and emphasises the need for directors to possess the necessary skills and experience to effectively oversee material environmental and social issues.

5.5 Skills, competencies, and training – Interoperability	IFRS	ESRS	CDP
Skills, competencies, and training	5, 6.a, 29.g, 34.b	19, 20.c, 23.a-b, 81, AR 5	4.2, 4.4

⁷¹ [Climate Governance Hub](#) | CGI

⁷² [Lead From the Top: Building Sustainability Competence on Corporate Boards](#) | Ceres

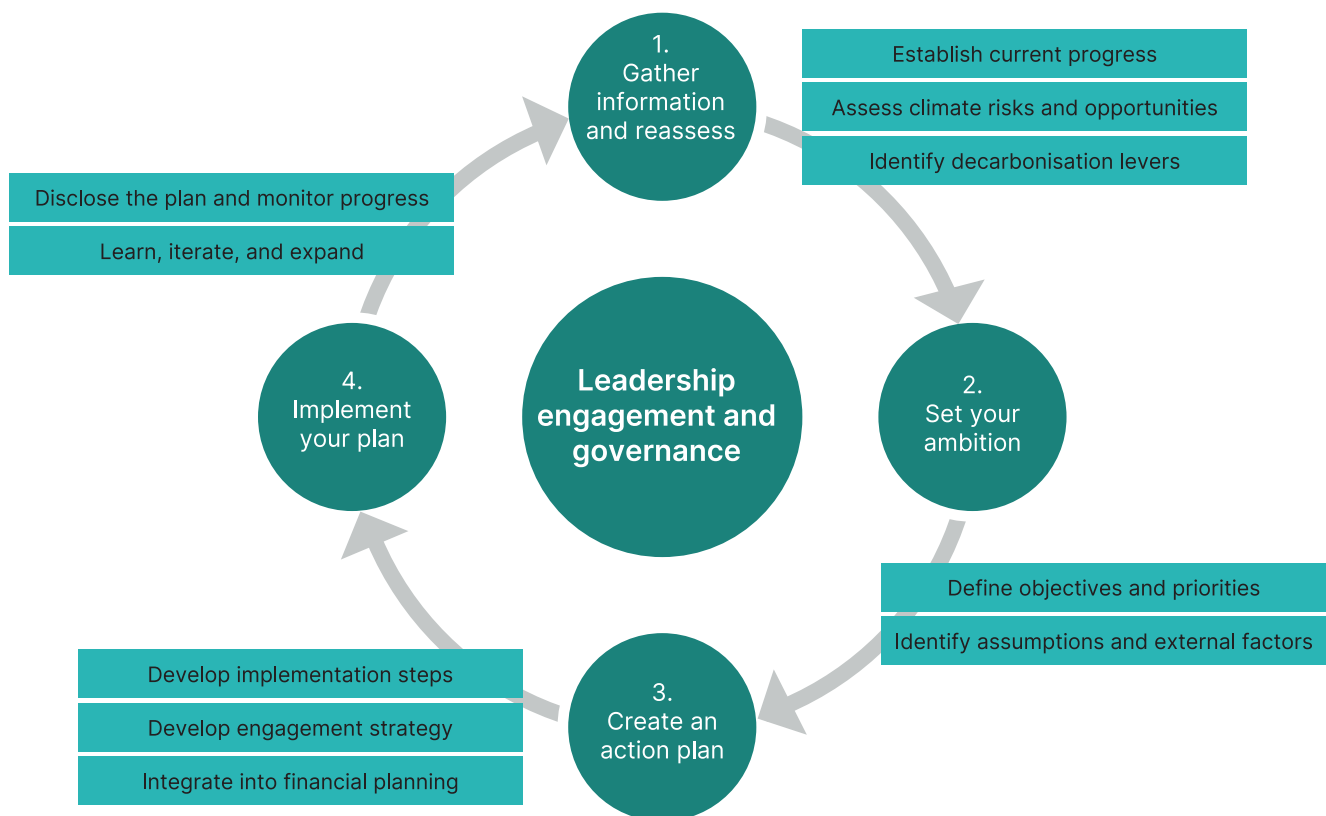


How to Develop a Climate Transition Plan

Climate Transition Plan Development Process

This section outlines a typical process for developing a transition plan, which is based on and should be used alongside the TPT Transition Planning Cycle guidance⁷³. Here there are additional practical perspectives on key planning activities.

Some of the following steps may need to be carried out as preparatory work. For example, it might be necessary to gather information and carry out an initial assessment to prepare for engaging other teams or senior leadership to gain buy-in to develop a CTP.



Leadership engagement and governance

Identify why it is important to create a climate transition plan for your organisation and what it should achieve. This will help establish the level of detail required, and helps generate buy-in from internal stakeholders. Chapter 1 provides useful information on building the business case, which can support this activity.

Identify a sponsor in the executive team. This is crucial to the success of climate transition planning and often this will be the CSO (Chief Sustainability Officer), or a leader supporting and prioritising the climate agenda. Their role is to own the plan at the executive level and coach the team in what should be communicated to the executive team and board throughout the process. It may also be suitable to have a member of the board as a sponsor, typically in an advisory role.

⁷³ TPT Transition Planning Cycle

Gain agreement from the executive team and board to develop a climate transition plan. It is important to gain an understanding of what the executive team and board will require in order to sign-off the climate transition plan for public disclosure. For example, it is common that the first iteration of a climate transition plan does not include detail on all financial planning elements as this may take longer to develop.

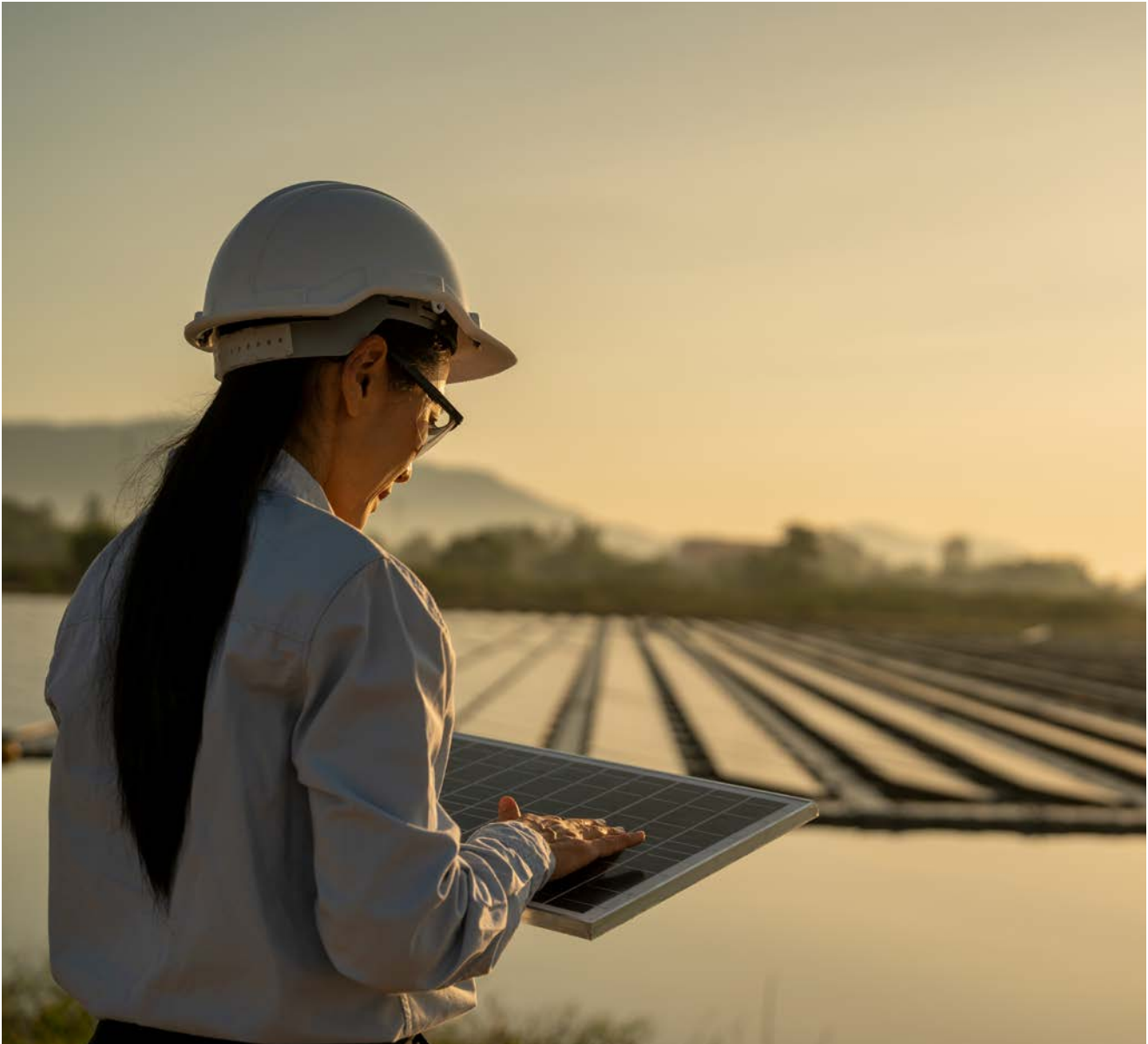
To support embedding the climate transition plan within the organisation, consider how to use existing governance structures to integrate transition planning into corporate strategy and decision-making processes, such as existing environmental steering groups, or executive and board-level sub-committees.

It is also important to map key stakeholders that need to be engaged in the transition planning process. This may be based on the knowledge and capabilities they can bring, or whether they will be responsible or accountable for implementing a particular element of a transition plan. For further guidance see page 8 of the TPT's Transition Planning Cycle guide⁷⁴.

Who should be involved in climate transition planning? The organisation should identify functions that are required to develop and deliver the plan and assign clear roles and responsibilities. The table below suggests typical teams and their potential role in the development process.

Team Role	Relevant Teams	Relevant Development Processes
Development and co-ordination	Sustainability, environment, climate, ESG	As the lead for the climate transition plan, they are involved in all processes in a co-ordinating role across the organisation.
Products and services	Technology, product development, procurement, supply chain	Owners of decarbonisation levers, risk mitigation, and opportunity development. Likely engaged from step 2, increasing responsibility with full ownership from step 4 onwards.
Business operations	Energy management, real estate / facilities / infrastructure management, data centre operations, procurement, supply chain	
Financial planning	Finance, risk, procurement, supply chain, analytics	Support climate-related risks and opportunities assessment, business case reviews, preparation of financial plans and disclosures.
Oversight and sign-off	Senior leadership team, executive team / sub-committee, the board	Support development of strategic ambition, progress and performance monitoring, review and sign-off of strategies, financial plans, business metrics, and disclosures. Oversight of business governance.

⁷⁴ TPT Transition Planning Cycle | ITPN



Assign accountability across the organisation.

The plan should assign ownership for creation and execution of the transition plan activities across the relevant business functions. Similarly, climate targets and objectives should be cascaded down from the organisational level to the teams with operational control. Each owner should have specific responsibilities supported by quantifiable KPIs. Incentive structures should be in place for the executive team and can be extended to middle management and operational staff to drive delivery of specific actions (e.g. energy efficiency, green innovation).

“Better to start now than wait until you feel ready to create a climate transition plan.”

Mobile network operator



Stage 1. Gather information

Establish current progress

As a first step, organisations should identify all climate-related initiatives being undertaken or planned. This can be facilitated through workshops with relevant stakeholders from across business functions. This provides an opportunity to educate the business about the relevance of climate initiatives, and helps generate buy-in. It is also a two-way learning process, enabling a mutual understanding between business functions regarding each other's context and challenges.

Climate initiatives should include measures to decarbonise the organisation and supply chain; assess and manage risks and opportunities; and contribute to an economy-wide transition. For examples, see Chapter 1.

The guidance in Chapter 2 can be used to determine where the work already undertaken is relevant to each sub-element, and what gaps may be present within each sub-element or element.

Identify decarbonisation levers

Organisations should assess all decarbonisation levers that can be applied to their own business operations and supply chain to address emission hotspots across Scopes 1, 2 and 3. The GSMA Achieving Climate Targets⁷⁵ guidance provides examples of decarbonisation levers relevant to the telecom industry.

Assess climate-related risks and opportunities

The climate transition plan should address the organisation's climate-related risks and

opportunities (see Chapter 1 for an overview of common risks and opportunities relevant to the sector). Risks and opportunities should consider both direct and indirect impacts (for example risks to the supply chain or customer markets). Further guidance on identifying, prioritising and responding⁷⁶ to climate risks and opportunities, can be found via the TCFD Knowledge Hub⁷⁷, the GSMA⁷⁸, and other sources^{79, 80, 81}.

Scenario analysis is an important tool to support identification and assessment of climate-related risks and opportunities by examining possible future scenarios and the implications for the organisation. For further guidance on scenario analysis refer to:

- [TCFD – The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities](#)
- [TCFD – Guidance on Scenario Analysis for Non-Financial Companies](#)
- [A4S –TCFD Climate Scenario Analysis: A guide for finance teams on frequently asked questions](#)

Organisations should ultimately conduct a financial quantification of risks and opportunities. This is both a key input into developing a robust business case for action, as well as providing the information required for external stakeholders.

Organisations will typically begin by conducting a qualitative analysis of risks and opportunities, which is a valid output for a first disclosure. The experience from this process will enable organisations to subsequently develop financial quantification at increasing levels of detail and sophistication (for example, taking into account multiple climate scenarios).

⁷⁵ [Achieving Climate Targets](#) | GSMA

⁷⁶ [Climate change adaptation guidance: Clarifying three modes of planning and implementation](#) | ScienceDirect

⁷⁷ [Risk Management](#) | TCFD

⁷⁸ [The Role of Digital and Mobile Enabled Solutions in Addressing Climate Change](#) | GSMA

⁷⁹ [Understanding physical climate risks and opportunities](#) | IIGCC

⁸⁰ [Adaptation Working Group, Building Climate-ready Transition Plans: Including adaptation and resilience for comprehensive transition planning approaches. A primer for preparers](#) | TPT

⁸¹ [ISO 14091:2021 – Adaptation to climate change – Guidelines on vulnerability, impacts and risk assessment](#) | ISO



Stage 2. Set your ambition

Define objectives and priorities

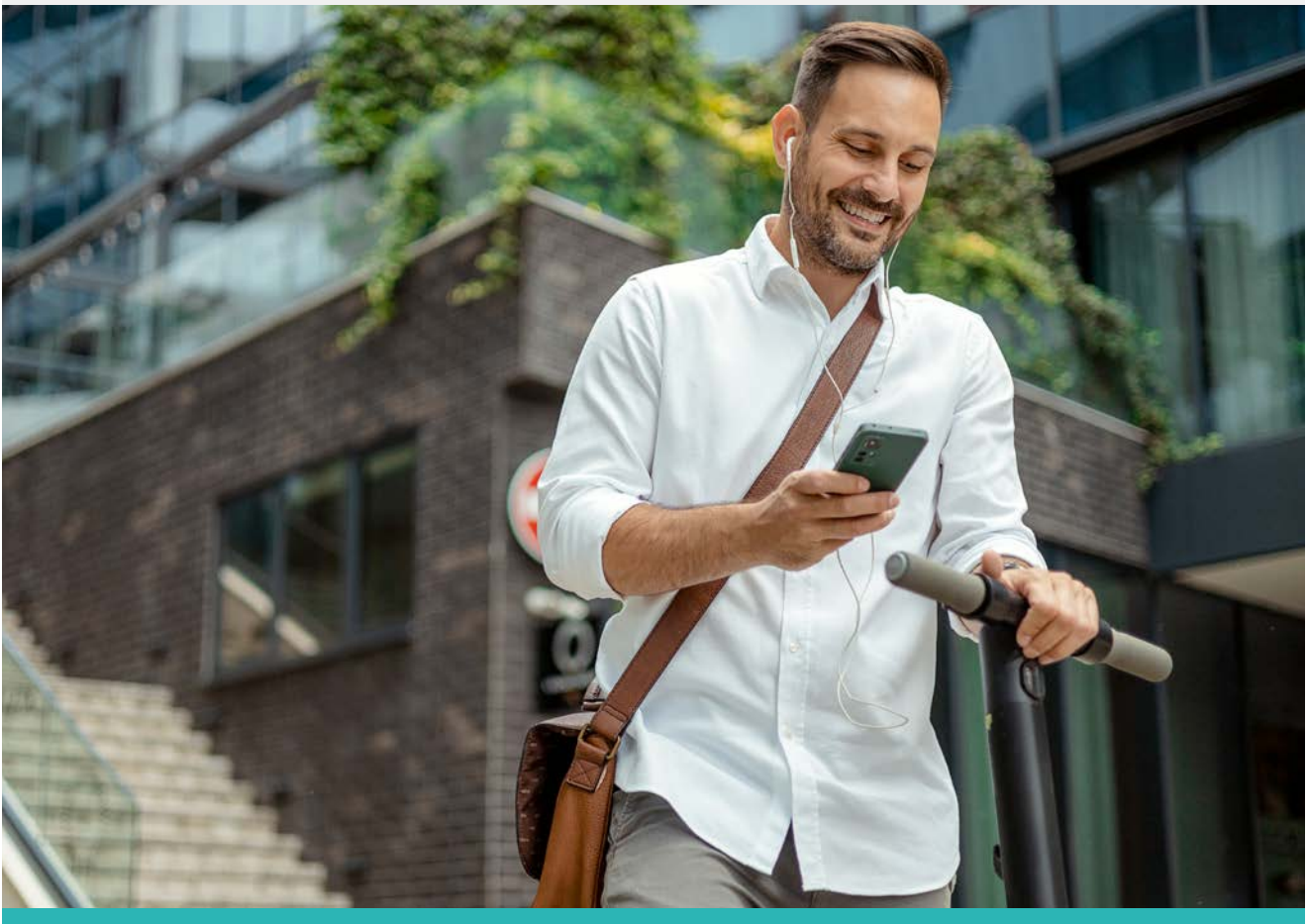
Organisations typically define decarbonisation targets according to SBTi, which sets requirements for climate targets to be considered as science-based via the Corporate Net-Zero Standard Criteria⁸². The GSMA Climate Action Toolkit provides further guidance for telecommunication operators on Setting Climate Targets⁸³.

Setting / reviewing climate objectives requires discussion with internal stakeholders throughout the organisation and will need to be signed off by the board. Business functions with ownership and responsibility for implementing the plan need to be engaged to ensure that objectives are realistic and supported across the organisation.

Identify assumptions and external factors

A credible transition plan communicates key assumptions, dependencies, and external factors that impact the achievability of targets and objectives. These should be clearly identified and disclosed in the transition plan.

For example, the viability of decarbonisation levers may depend on external factors, such as readiness of a future technology, or policy changes – particularly for medium- and long-term levers. Common external factors and assumptions relevant to the telecommunication sector can be found in Chapter 2, section 1.3.



⁸² [Corporate Net-Zero Standard Criteria](#) | SBTi
⁸³ [Setting Climate Targets](#) | GSMA



Stage 3. Create an action plan

Develop implementation steps

Having identified decarbonisation levers as well as measures to address climate-related risks and opportunities, organisations will need to prioritise, plan and sequence their implementation. The following enables this to be done effectively:

- Conducting a cost/benefit analysis for each measure.
- Comparing relative impact of each measure, ranking by magnitude of positive impact and 'bang for buck'.
- Identifying interdependencies between specific levers and measures.

When conducting cost/benefit analyses, organisations should consider how key variables may change over time. For example: reducing technology-cost curves or future policy measures, such as carbon pricing.

Other factors that should be considered in implementation planning include:

- Organisational capacity to deal with change.
- Ability to raise and deploy finance (including internal budgeting constraints and the external financial market environment).

The above highlights the importance of integrating transition planning into financial planning, which is covered below.

Integrate into financial planning

Integration into financial planning has two aspects: decision-making for the financial resources required to implement the transition plan, and the implications of the transition plan for financial performance over the short-, medium-, and long-term.

Decision-making for resource allocation should be based on the business case for each lever and integrated into existing strategic and financial governance structures. This activity occurs in tandem with developing implementation steps. The business case for each lever should estimate the emissions savings and investment costs to determine the cost/tCO₂e benefit.

An initial assessment can be carried out using orders of magnitude to prioritise levers, before iteratively improving assessments as further data on implementation costs and impact are gathered. Analytical tools such as marginal abatement cost curves, as shown in Figure 9 (page 61), are useful to prioritise levers.

Due to the uncertainty of long-term forecasting, it is expected that detailed analyses, including quantification, will be limited to the short- and medium-term. However, it is important to understand an organisation's long-term strategy to reduce emissions, and particularly the dependencies that their strategy relies on, such as technology, regulation, or supply chains. Over time, further detail can be added to medium- and long-term decarbonisation levers.

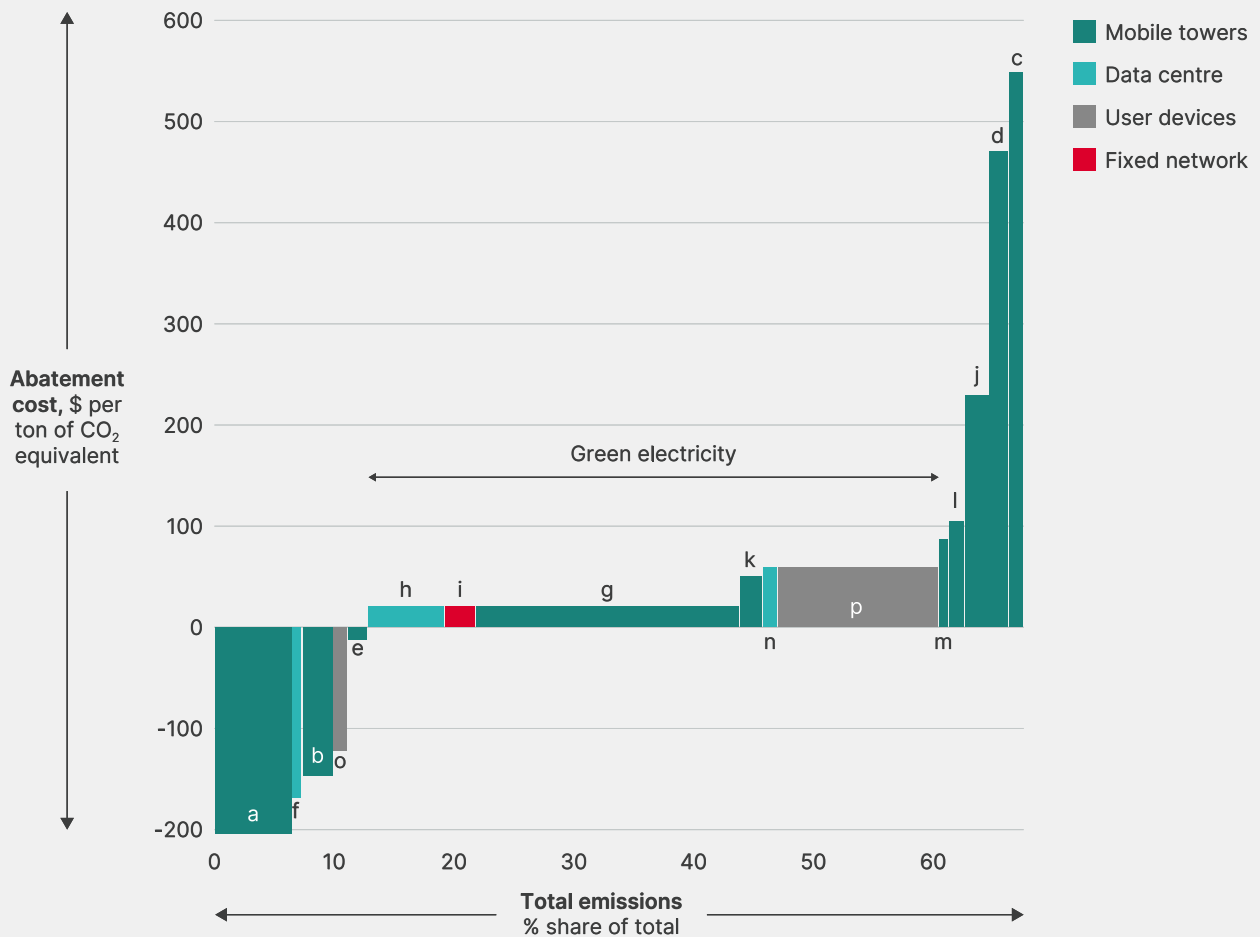
Similarly, the effects of each lever on identified risks and opportunities should be assessed and quantified where feasible. Page 28 of the TPT Transition Planning Cycle guide⁸⁴ contains helpful guidance on prioritising adaptation levers without detailed economic analysis. It is important to assess both mitigation and adaptation effects, as some levers can support both (e.g. energy-efficiency reduces emissions and exposure to electricity price volatility), whereas others have trade-offs (e.g. construction of flood defences generate additional emissions).

A robust business case should also include the cost of inaction to understand where a 'do-nothing' scenario can result in additional costs due to "cost of inaction" or "cost of delay", including the impact of internal carbon pricing. Levers that are expected to be implemented in the medium- or long-term may have higher levels of uncertainty associated with quantification of benefits and impacts, and analysis may not be feasible until further information is available.



⁸⁴ [TPT Transition Planning Cycle](#) | ITPN

Figure 9 | Illustrative marginal abatement cost curve for a typical integrated telecom⁸⁵



Infrastructure sharing

a. Active infrastructure sharing¹

Energy and design efficiency

- b. Efficient site design for mobile tower
- c. Radio access network (RAN) centralisation
- d. Switching off of 2G and 3G and reframing to 5G
- e. Dynamic power consumption control (during low-traffic times)
- f. Using AI to optimise data centre base temperature

Green electricity²

- g. For mobile-tower operation
- h. For data centre operation
- i. For fixed-network operation

Green material and circularity

- j. Steel produced using direct reduced iron (DRI) in an electric arc furnace (EAF) on green hydrogen and green electricity
- k. Steel produced using EAF with green electricity
- l. Steel produced from scrap steel
- m. Cement produced using clinker with carbon capture and storage (CCS)
- n. Servers built using green electricity
- o. Sell refurbished phones
- p. Sell phones manufactured with green electricity

Note: illustrated levers can drive abatement for up to 70% of total emissions.

¹ Highly dependent on network investment life cycle

² Green-energy procurement highly dependent on availability of green-power source.

Source: McKinsey Catalyst Zero; McKinsey analysis

⁸⁵ Telecom emissions: Tackling the big challenges | McKinsey



Stage 4. Implement your plan

Disclose the Climate Transition Plan

The Climate Transition Plan should be reported as a standalone document that is periodically updated, either when there are significant changes to the business or, at the latest, every three years. Additionally, annual general-purpose financial reports and sustainability disclosures should include material information about the organisation's transition plan and report performance against key metrics and targets defined in the plan.

Learn, iterate and expand

Climate transition planning is an iterative process that needs to remain dynamic and responsive to changing information and circumstances, while acting as a 'North Star' for the organisation. Organisations should capture learnings, course-correct where needed, and continuously improve and refine the Transition Plan. The full Transition Plan may be reviewed on a regular basis or to address material changes to the business (e.g. acquisitions/divestments) or strategy.



Abbreviations and acronyms

CDP	Carbon Disclosure Project
CSO	Chief Sustainability Officer
CSRD	Corporate Sustainability Reporting Directive
ESG	Environmental Social Governance
ESRS	European Sustainability Reporting Standards
F-gases	Fluorinated gases
GHG	Greenhouse Gases
GRI	Global Reporting Initiative
GWP	Global Warming Potential
ICT	Information and Communication Technology
IEA	International Energy Agency
IFRS	International Financial Reporting Standards
IPCC	International Panel on Climate Change
ISO	International Organization for Standardization
ISSB	International Sustainability Standards Board
ITU	International Telecommunication Union
KPI	Key Performance Indicators
PPA	Power Purchase Agreement
REC	Renewable Energy Certificate
SBTi	Science Based Targets initiative
TCFD	Task Force on Climate-related Financial Disclosures
tCO₂e	Tonne of Carbon Dioxide equivalent
TPT	Transition Plan Taskforce

Disclaimers

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of ITU, or GSMA concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The ideas and opinions expressed in this publication are those of the authors; they do not necessarily reflect those of ITU or GSMA nor of their respective Members. The reference to specific companies, products or services does not imply that they are endorsed or recommended by ITU or GSMA in preference to others of a similar

nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by ITU and GSMA to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied and is provided expressly on a non-reliance basis. The responsibility for the interpretation and use of the material lies with the reader. In no event shall ITU or GSMA be liable in any manner whatsoever arising from the use of this publication.

GSMA™

GSMA Head Office
1 Angel Lane
London
EC4R 3AB
United Kingdom

Copyright © 2025 GSM Association