



advancing
to ► zero



**NET-ZERO CARBON
ROADMAP**



Advancing Asia Sustainably

COMMITTING TO CLIMATE ACTION



The telecommunications industry has a unique role to play in addressing climate action. As a stronghold of digital innovations, its responsibility rests not just in reducing emissions within its own operations and value chain, but in providing solutions that can enable customers and society to achieve its goals.

In 2020, we launched our Advancing to Zero campaign. This marked the beginning of our collective response to the global call for climate action, alongside our continued pursuit of sustainable business growth and development.

As part of this journey, we committed to the Science Based Targets initiative (SBTi) Business Ambition for 1.5°C campaign in 2021. This was an important

step to ensure that the targets and pathways being pursued are aligned to science and will contribute towards limiting temperature rise to below 1.5°C.

Axiata's Net-Zero Carbon Roadmap places our climate action aspirations into the specific context of our operations. It details the specific objectives we have set and the actions we will take to achieve them, as we align on a single trajectory in meeting our net-zero emissions targets by no later than 2050.

This is yet another decisive step in enabling us to fulfil our purpose of Advancing Asia.

Tan Sri Shahril Ridza Ridzuan
Chairman

Our Footprint Countries and Impact Across ASEAN and South Asia



Total GDP contribution
of **USD11.1 billion**



Total capital + operating
investment of **USD5.0 billion**



USD1.7 billion in total
taxes and fees paid



Jobs supported
~700,000



Malaysia

Indonesia

Sri Lanka

Bangladesh

Cambodia

Nepal

Pakistan

Myanmar

Laos

Thailand

Philippines



MOVING TO NET-ZERO



Climate change is among the most pressing issues of our time. In serving the many communities which our digital telco, digital business and infrastructure companies call home, our foremost objective is to mitigate environmental impacts from our operations.



At the same time, we are conscious that climate change and inequality are closely related. As with our values, we believe in catalysing an inclusive all-of-society approach, leveraging on technology and innovation to lead the transition towards a lower carbon economy.

Axiata's Net-Zero Carbon Roadmap outlines three strategic objectives to drive collective action and pave the Group's path towards achieving net-zero carbon emissions by no later than 2050, namely:

- 1. Accelerate Decarbonisation of Our Network Operations** where we aim to reduce our operational network emissions (Scope 1 and 2) by 45% from a 2020 baseline by 2030.
- 2. Accelerate Transformation of Our Value Chain** to reduce value chain emissions (Scope 3) from our indirectly controlled sources.
- 3. Deliver an Inclusive Climate Agenda** by positively enabling climate action through carbon removal first and later, avoidance through technology and digitalisation.

We regard 2022 as our planning year in preparation for all our reduction targets to be presented and officially validated by SBTi in 2023.

Ultimately, this Roadmap is more than an account of the initiatives we have outlined to reach net-zero. Rather, it holds us accountable to our environmental commitments, aligning and embedding our climate ambition with our vision to become The Next Generation Digital Champion.

Dato' Izzaddin Idris

President & Group Chief Executive Officer

Becoming The Next Generation Digital Champion by 2024

Digital Telcos

Transform from Mobile-Centric Telcos to Converged Digital Operators



Digital Businesses

Build Scaled Digital Businesses Leveraging Telco Assets



Infrastructure

Advance From Regional Champion to Global Champion





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Our Response to the Global Call

Climate change is one of today's greatest global challenges, presenting a growing risk to society if not managed adequately.¹

There is an urgent need for a holistic and collaborative approach to limit the global temperature rise to within 1.5°C above pre-industrial levels by 2100. In this context, the mobile and Information Communications Technology (ICT) industry is already playing a leading role, both by driving climate action within the industry and by enabling others outside the industry.²

According to a study by GSMA, the total annual emissions of the mobile sector make up about 0.4% of total global emissions. Compared to the global carbon footprint of mobile networks themselves, the level of avoided emissions

enabled by mobile communications technologies is ten times greater, a tenfold positive impact.³

Accordingly, as one of the leading telecommunications groups in ASEAN and South Asia, we see ourselves as well-positioned to contribute to the transition towards a lower-carbon economy.

Our net-zero commitment, affirmed by our pledge to the SBTi Net-Zero Standard, is our response to this urgent call to act by reducing our carbon footprint and supporting climate mitigation and adaptation efforts.



¹ World Economic Forum, Global Risks Report (2022).

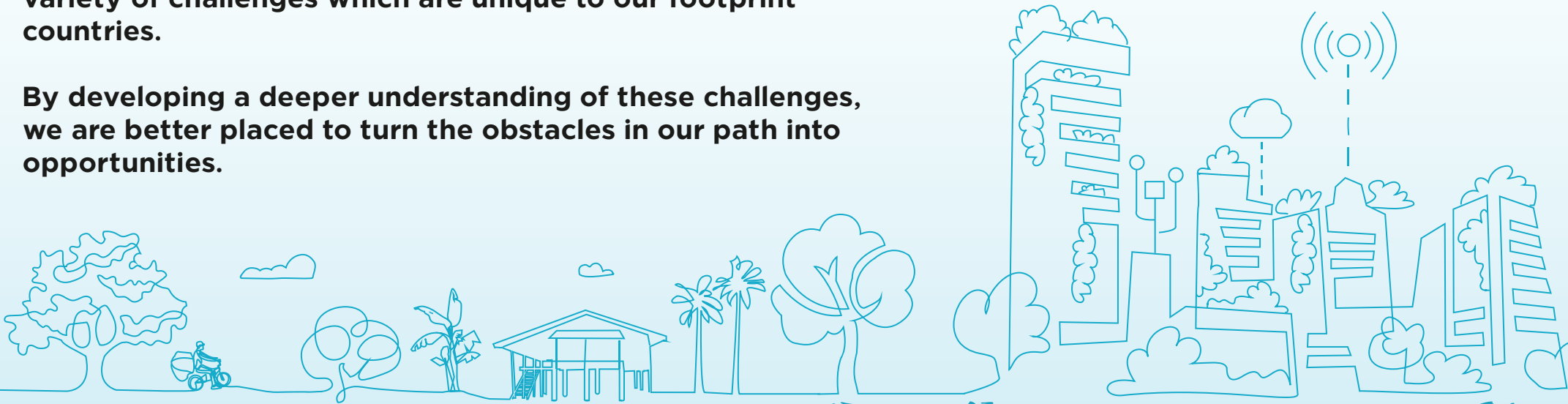
² GSMA and the mobile industry have been recognised by the UN's 'Race to Zero' campaign as one of the sectors first to 'Breakthrough' on net-zero by 2050 targets. For more information, please refer to <https://racetozero.unfccc.int/mobile-sector-breakthrough/>.

³ GSMA, The Enablement Effect: The impact of mobile communications technologies on carbon emission reductions (2019).

Challenges in Reaching Net-Zero Across ASEAN and South Asia

From increasing data demand to varying national and corporate climate targets, the transition to net-zero poses a variety of challenges which are unique to our footprint countries.

By developing a deeper understanding of these challenges, we are better placed to turn the obstacles in our path into opportunities.



CONNECTIVITY CHALLENGES: GROWTH IN DATA DEMAND

Asia Pacific is home to some of the world's biggest users of mobile data, with the same average data usage per smartphone per month as North America.⁴

With many emerging economies located in Asia, data consumption is on an upward trajectory. Furthermore, with 5G adoption increasing regionally,⁵ coupled with demographic shifts and behavioural drivers of increasing data demand, a rise in per-user traffic growth is inevitable.

In addition, complexities in data consumption from spatial and temporal factors drive erratic energy consumption patterns that complicate energy management approaches.⁶

As a result, mobile operators' energy audits and assessments signal a need for improving network energy efficiency. This is especially pertinent given the increasing data requirements to support 5G technology.

Opportunity

- Study the impact of energy efficiency improvements
- Undertake a lifecycle view of costs and investments across the network

⁴ GSMA, The Mobile Economy Asia Pacific 2021 (2021).

⁵ 5G has been launched in Indonesia and will be implemented before end of 2025 in Malaysia, Sri Lanka, Cambodia and Bangladesh.

⁶ Geographical factors such as the coverage of its base stations, behaviour patterns such as what time of day is data consumption highest, distance from base station to end-user, etc.

ENERGY CHALLENGES: FOSSIL FUEL POWER & TRANSITION TO CLEANER ENERGY

Developing economies in Asia Pacific are expected to account for almost two-thirds of global energy demand growth between now and 2040.⁷

For mobile network operators, energy consumption is the largest source of carbon emissions, and is derived predominantly from electricity from the grid which is used to power the network ecosystem.

As we operate primarily in emerging markets which still rely mostly on fossil fuel to generate electricity, a transition to cleaner sources of energy is necessary, as are policies which support this.

In this context, electrification and renewable off-grid solutions will be instrumental for our operations and towers in rural areas, enabling reduced reliance on carbon-intensive diesel and petrol generators.

Opportunity

- Influence legislations and policies that promote renewable energy investments

⁷ International Energy Agency (IEA), Energy Security in ASEAN+6 (2019).

⁸ Bain, Microsoft and Temasek, Southeast Asia's Green Economy 2021 Report: Opportunities on the Road to Net Zero (2021).

⁹ United Nations Environment Programme (UNEP) & UNEP Copenhagen Climate Centre (UNEP-CCC), Emissions Gap Report 2021 (2021).

NET-ZERO CHALLENGES: VARYING COMMITMENTS AMONG COUNTRIES & CORPORATES

ASEAN and South Asia are gaining importance as critical pieces of the global net-zero solution.⁸

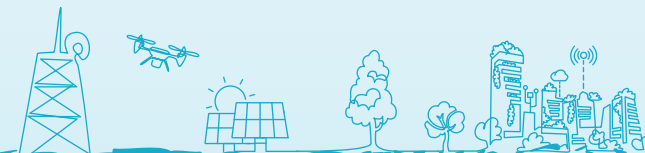
Reports show that new Nationally Determined Contributions (NDCs) as they stand are far from adequate, making it likely that we will hit global warming of about 2.7°C by the end of the century.⁹

Moreover, targets in ASEAN and South Asia vary in timelines to reach net-zero or even carbon neutral status, while disparities also exist between national and corporate climate targets. Corporate targets are relatively more ambitious in terms of their net-zero timelines and goals due to market dynamics and opportunities presented across different countries.

These realities illustrate the need for bolder commitments and action at the country level, and for policies that support the adoption of renewables and investments in transition, towards driving a unified all-of-society net-zero approach.

Opportunity

- Establish platforms to promote partnerships and advocacy of climate actions
- Spur collaborative effort with policy makers, especially regulators



About Our Roadmap



This Roadmap outlines our net-zero carbon goals, baseline carbon emissions profile and the areas in which we are working towards as part of our response to the call for climate action.

We intend for it to communicate to our stakeholders our collective Group-wide approach towards reaching net-zero, serving as a document to build collaborations and engage on current and future solutions.

In the development, monitoring and reporting of our Roadmap and net-zero journey, we align ourselves with and are guided by global standards, frameworks and initiatives such as:

- SBTi Business Ambition Pledge for 1.5°C
- Carbon Disclosure Project (CDP)
- Greenhouse Gas (GHG) Protocol

We will also embark and commence adoption of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Our Approach and Baseline



This Roadmap encompasses strategies that support our ambition to align our targets with the Intergovernmental Panel on Climate Change's (IPCC) call to limit global warming to 1.5°C.¹⁰

The strategic direction presented in this document:

- Adheres to the carbon mitigation hierarchy of avoidance, reduction, replacement and removal
- Contributes to enabling our wider value chain (our industry, partners, suppliers and greater society) to benefit through a climate-positive enablement effect
- Leverages our strengths in digitalisation and connectivity

The baseline in this Roadmap takes into account the emissions from our six Mobile Network Operators (MNOs) and our telecommunications infrastructure company.

As for the strategic direction and initiatives outlined, it covers our MNOs, telecommunications infrastructure company and digital businesses, Boost Holdings and ADA.

¹⁰ A 1.5°C warming limit is the recommended pathway from IPCC, based on their latest Physical Science Basis report of 2021, as well as an encouraged pathway for our industry by the GSMA Guidance for ICT Companies Setting Science Based Targets in 2020.

Our Carbon Emission Baseline

We have selected 2020 as our baseline year.

Scope 1 – Direct Emissions

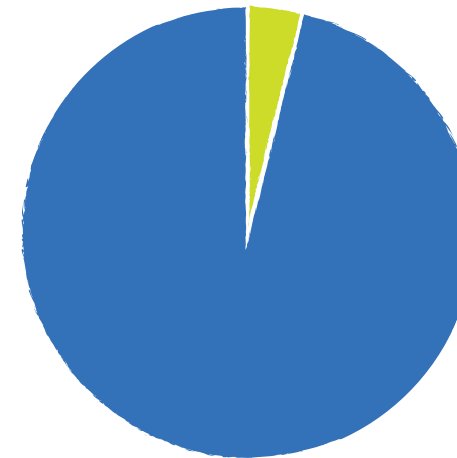
All direct sources of emissions owned or controlled by Axiata. These include fuel consumed (diesel and petrol) to power our back-up generators at network and facilities, and fuel consumed for company-owned vehicles.

Scope 2 – Indirect Emissions

Indirect emission sources from purchased electricity consumed by the network and facilities of Axiata.

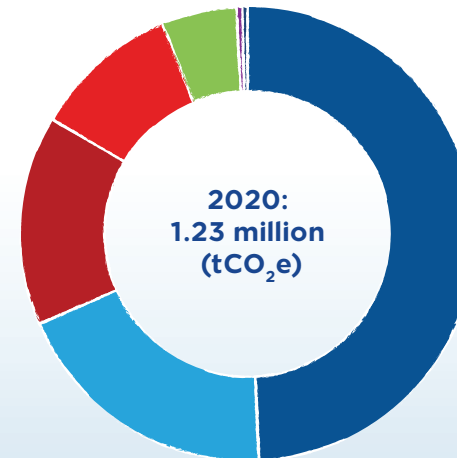
Scope 3 – All Other Indirect Emissions

Emissions that are outside our direct control and which occur across the value chain. We are in the midst of defining our Scope 3 baseline value.



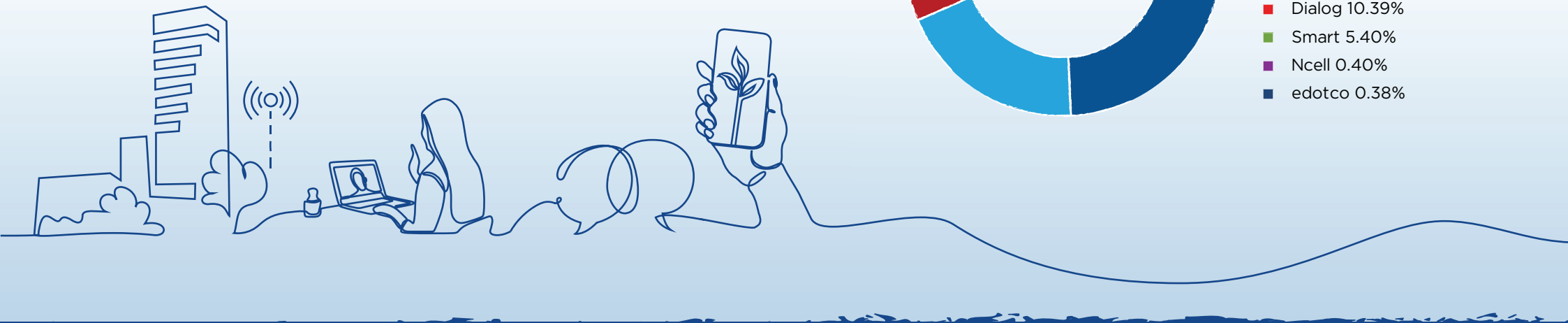
2020 Total Emissions
(tonnes of carbon dioxide equivalent (tCO₂e)) by Scope

- Scope 1:
47,865 tCO₂e (4%)
- Scope 2:
1,183,658 tCO₂e (96%)



2020 Total Carbon Emissions (percentage) by Operating Company (OpCo)

- XL 49.20%
- Celcom 19.33%
- Robi 14.90%
- Dialog 10.39%
- Smart 5.40%
- Ncell 0.40%
- edotco 0.38%



With our approach and 2020 baseline established, we are set to accelerate our actions towards meeting our net-zero ambition.

Our commitment is made with the expectation that ongoing commitments from nations across our regional footprint and within the ICT industry will follow through, and that corporates will continue to step up on their ambitions towards a net-zero future.

In 2021, we focused on verifying our 2020 baseline for Scope 1 and Scope 2 in alignment with the GHG Protocol. The focus in 2022 is to establish the baseline of our Scope 3 emissions, leveraging on recognised methodology for the industry's Scope 3 calculation.

This Roadmap is a live document and our baseline, projections, targets and approaches may be refined, adjusted or restated over time with improved data coverage, evolving scenarios, changing policy and regulatory standards as well as industry and technological developments. We will concurrently address climate risks and opportunities as we embark on our TCFD journey, to guide our execution pathway. We will be transparent about the assumptions used throughout our reporting and modelling as we progress.

Outlook for meeting our goals

Strategies to reduce emissions such as increasing renewable energy, improving energy efficiency and carbon avoidance are critically important, but they will not be enough on their own, according to the World Resource Institute.¹¹ Reaching net-zero status will require technologies that can actively remove CO₂ from the atmosphere as we progress in the future.

We are confident that there will be advancements in technologies, shifts in the regulatory landscape and increasing national-level action to expedite the transition to a low-carbon economy. At the same time, we are certain that there will be a growing area of research and development of carbon removal technologies.

Equally, reaching net-zero requires the involvement of our people. Our rallying call of #ItBeginsWithMe and #ItBeginsWithUs reflects how we, as individuals of Axiata as well as through collective action, can enable purposefulness in progressing sustainable development.



¹¹ World Resource Institute, Carbon Removal, <https://www.wri.org/initiatives/carbon-removal>, (accessed April 2022).

Axiata's Net-Zero Approach



Our Roadmap's strategic approach aligns to a carbon mitigation hierarchy – covering priority areas for carbon reduction across our operational footprint first, followed by value chain emissions.

Concurrently, we will continue to empower positive change to enable carbon avoidance and removal across our region, adopting an inclusive all-of-society approach towards combating climate change and social challenges which leverages digital connectivity and modernisation as key enablers.

Our net-zero carbon pathway encompasses a three-objective strategy covering carbon emissions reduction, removal and avoidance.

We are committed to achieving net-zero carbon emissions no later than 2050 and to reach halfway by 2030 with a near-term target to reduce operational carbon emissions by 45% from a 2020 baseline.

OBJECTIVE ONE: ACCELERATE DECARBONISATION OF OUR NETWORK OPERATIONS

Target
Reduce our operational network emissions (Scope 1 and 2) by 45% from a 2020 baseline by 2030

Approach
Reduce network energy consumption by enhancing energy efficiency

Increase network renewable energy consumption from self-generation or purchased electricity

OBJECTIVE TWO: ACCELERATE TRANSFORMATION OF OUR VALUE CHAIN

Target
Reduce value chain emissions (Scope 3) from our indirectly controlled sources

Approach
Contribute to positive climate impact across our value chain

Include tracking of our suppliers' operational carbon emissions (as our main focus) as we progress

OBJECTIVE THREE: DELIVER AN INCLUSIVE CLIMATE AGENDA

Target
Contribute to positive climate action through carbon removal and enable avoidance through technology and digitalisation

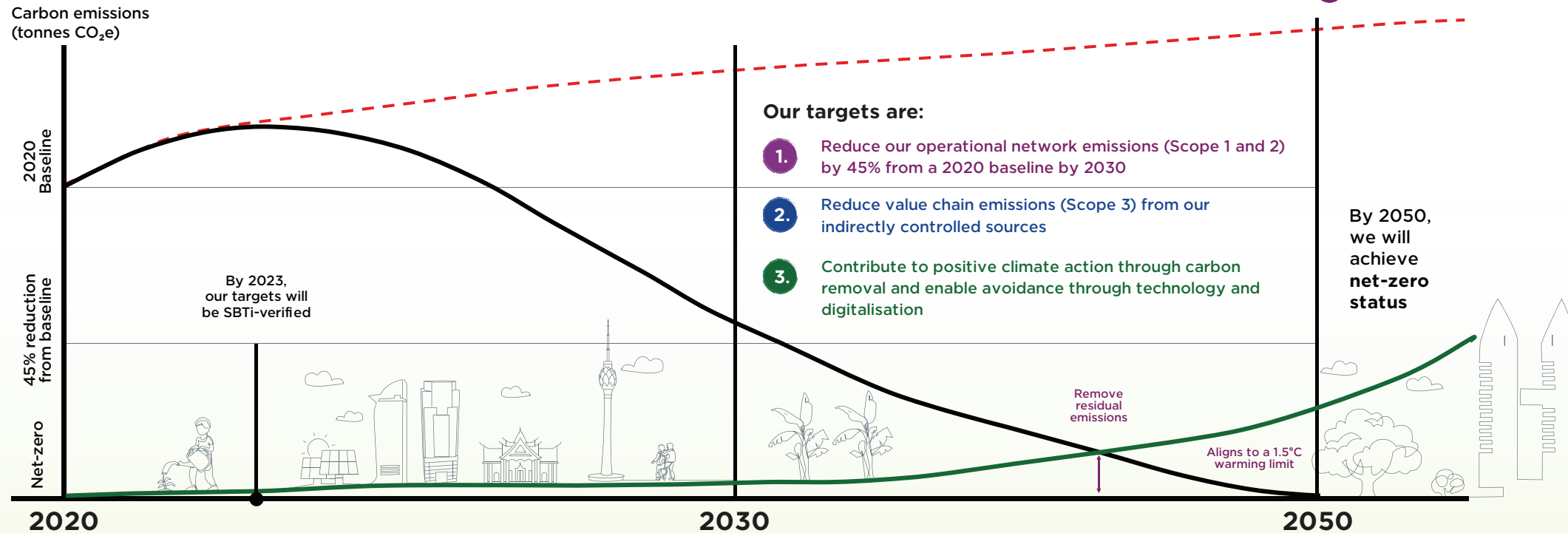
Approach
Remove carbon emissions through natural or technological solutions

Contribute to decarbonisation solutions by enabling efforts across society

Axiata's Net-Zero Approach

We are committed to achieving net-zero emissions no later than 2050, and to reduce operational carbon emissions by 45% from a 2020 baseline by 2030.

advancing to zero



1. ACCELERATE DECARBONISATION OF OUR NETWORK OPERATIONS

Our network operations make up the largest portion of our emissions. We will decarbonise by increasing energy efficiency and renewable energy consumption from self-generation or purchased energy.

Our milestones:

- ✓ Verify 2020 Scope 1 and 2 emissions baseline
- ✓ Set science-based targets for Scope 1 and 2
- 🔄 Increase energy efficiency by 2030
- 🔄 Set OpCo level CO₂ reduction target by end 2022
- 🔄 Increase purchase of renewable energy by 2030

2. ACCELERATE TRANSFORMATION OF OUR VALUE CHAIN

We will contribute to enabling positive climate impact across our value chain, including by assisting our suppliers to reduce their carbon emissions.

Our milestones:

- 🔄 Define Scope 3 baseline and set reduction target by end of 2023

3. DELIVER AN INCLUSIVE CLIMATE AGENDA

We will contribute to decarbonisation efforts across society, leveraging technology and digitalisation to execute carbon removal strategies while encouraging carbon avoidance.

Our milestones:

- 🔄 Increase carbon removal activities by 2030
- 🔄 Quantify the impact of positive climate action



Objective One

ACCELERATE DECARBONISATION OF OUR NETWORK OPERATIONS

Timeline: From 2020

TARGET

Reduce our operational network emissions (Scope 1 and 2) by 45% from a 2020 baseline by 2030

ENHANCING ENERGY EFFICIENCY

Reduce network energy consumption by enhancing energy efficiency

INCREASING USAGE OF RENEWABLE ENERGY

Increase network renewable energy consumption from self-generation or purchased energy

MILESTONES:

- ✓ Verify 2020 Scope 1 and Scope 2 emissions baseline
- ✓ Set science-based targets for Scope 1 and 2
- ✓ Set OpCo level CO₂ reduction target by end 2022
- 🔄 Increase energy efficiency by 2030
- 🔄 Increase purchase of renewable energy by 2030

Objective One: Accelerate Decarbonisation Of Our Network Operations

Operational carbon emissions represent the largest source of emissions in our baseline. In driving reductions, we are applying two approaches in tandem: introducing energy efficiency technologies and increasing adoption of renewable energy.

ENHANCING ENERGY EFFICIENCY

Reduce network energy consumption by enhancing energy efficiency.

Commit to leveraging the latest technologies such as network virtualisation, design optimisation and zero-touch capabilities.

More than 90% of our network costs are spent on energy, consisting mostly of fuel and electricity consumption.¹² The cost pressure this generates has spurred energy efficiency programmes across the mobile industry for many years.

Our response to improving energy efficiency

Network emissions make up the largest proportion of emissions within our operational scope, equivalent to approximately 98% of our total operational emissions. Recognising the impact this has on our carbon footprint, we are actively managing our energy consumption and identifying areas to drive further reduction.

In addition, there is a small proportion of non-network emissions from electricity consumption for buildings, fuel for standby generators, and company-owned or rented vehicles.

¹² GSMA, Mobile Net Zero: State of Industry on Climate Action 2021 (2021).

¹³ See our latest Axiata Sustainability and National Contribution Report for the ways in which our OpCos adopt these energy efficiency initiatives.

Current practices

Over the years, we have adopted best practices for network energy efficiency, taking into account challenges that are prevalent across the energy and technology landscape in our operating markets.¹³

These programmes, as detailed below, have been successful in delivering reductions to our operational emissions.



Electrification

Reducing direct fossil fuel consumption from generators used for back-up at remote and non-connected sites through electrification of these sites or by switching to on-site small scale solar generators.



Tower Site Optimisation

Replacing legacy equipment with better-performing energy-efficient technologies. Any phase-out of energy-intensive hardware equipment must be balanced with dependency of legacy equipment and non-interference with connectivity and reliability.



Data Capabilities

Improving data management through software-driven solutions for better decision-making across our operations, enabling progress based on an understanding of current energy consumption trends.



Artificial Intelligence and IoT

Leveraging innovative 'zero-touch provisioning' with data analytics to monitor energy consumption patterns (distribution and load), thereby cutting down on wastage and preserving unspent power. Currently, tower sleep-mode enabled through IoT and Advanced Metering Infrastructure has already been deployed.



Digital Technology

Automating processes to enable more informed oversight of consumption levels, thereby empowering better decision-making for energy efficiency. We have rolled out and will continue to deploy remote monitoring sensors across tower sites where feasible.



INCREASING USAGE OF RENEWABLE ENERGY

Increase network renewable energy consumption from self-generation or purchased energy.

Commit to increasing the consumption of renewable energy across networks through self-generation on-site solutions, exploring off-site power purchase agreements (PPAs), and by leveraging renewable energy certificates (RECs) as a temporary solution.

Increasing renewable energy generation and consumption at our network sites is essential for our decarbonisation efforts, and we have begun and will continue to explore renewable energy solutions.

However, in the markets we operate, renewable energy availability remains highly dependent on the percentage of renewable energy mix across the grid.

Our assessment of renewable energy opportunities

To understand the feasibility of using renewable energy, a study of solar capacity was internally conducted.¹⁴ The objective of the study was to identify, understand and clarify challenges faced across our operating markets in adopting solar as a source of energy. Through this exercise, we identified the following factors that influence the availability of renewables:

Policy landscape towards renewables and varying nation-level commitments to reach net-zero targets

Market barriers to initiate and execute attractive large-scale renewable projects

Regulations that do not support PPAs or the purchase of RECs

Energy mix to power grid electricity heavily reliant on fossil fuel/coal, resulting in higher emission factors and carbon emissions

Due to these factors, **the energy transition will be neither linear nor instant** as these markets continue to strive for economic growth and socio-economic improvements.

However, policy changes may soon accelerate renewable energy adoption. At the recent Conference of Parties (COP), countries were called upon to update their NDCs, as well as showcase strategies that demonstrate progress towards achieving the Paris Agreement temperature goal, which includes funding for decarbonisation in developing countries.¹⁵

Considering this, we remain positive and will continue to monitor developments across our footprint that can support our net-zero goals.






¹⁴ Solar was assessed first as it is currently considered our region's greatest potential in renewable energy. We are assessing other renewable energy sources in tandem.

¹⁵ United Nations Framework Convention on Climate Change (UNFCCC), More Ambitious Climate Plans Needed Ahead of COP27, <https://unfccc.int/news/more-ambitious-climate-plans-needed-ahead-of-cop272022>, (accessed March 2022).

Current practices

Despite the challenges we have faced, we have continued to explore using on-site renewable solutions to replace diesel generators, and have deployed standalone solar-only and wind-only tower sites in Pakistan, Bangladesh and Cambodia.

Renewable Energy at Our OpCos

| | |
|---|--|
|  | Adopted on-site solar solutions for towers |
|  | Adopted on-site solar solutions for towers |
|  | Adopted on-site solar solutions and exploring large-scale solar PPAs |
|  | Adopted on-site solar solutions and advocating policy to support large-scale solar installations |
|  | Adopted on-site solar solutions as off-grid and grid/hybrid solutions |
|  | Adopted on-site solar and wind solutions |

While waiting for the energy mix in the grid to include more cleaner fuel or renewable options, we will explore a range of approaches, where feasible, such as the following:

On-site renewable energy generation - Increase feasibility and application of on-site renewable technologies to replace back-up diesel generators at tower-sites affected by energy reliability

PPAs - Contribute to understanding market barriers and advocating for changes across our markets, towards increasing its favourability as a mechanism to take ownership of renewable energy projects

RECs - Contribute to assessing feasibility and applicability across our markets, applied only as a temporary solution as we prioritise projects that drive the growth of renewable energy generation in our region

We are hopeful that advancements in technology and the adoption of renewables will translate to faster decarbonisation across the grid and supply chain.



Objective Two

ACCELERATE TRANSFORMATION OF OUR VALUE CHAIN

Timeline: From 2023

TARGET

By the end of 2023, define our Scope 3 baseline and set a reduction target



ENGAGING AND COLLABORATING WITH PARTNERS ACROSS OUR VALUE CHAIN

Increase our suppliers' climate management and carbon performance in their operations



MILESTONES:



Define Scope 3 baseline and set reduction target by the end of 2023





ENGAGING AND COLLABORATING WITH PARTNERS ACROSS OUR VALUE CHAIN

Increase our suppliers' climate management and carbon performance in their operations.

This will be defined by a Scope 3 baseline value and a Scope 3 near-term target.

Based on the GHG Protocol, Scope 3 emissions are emissions outside the direct control of a company and occur across the value chain. As part of efforts to reduce our Scope 3 emissions, we aim to engage and collaborate with our suppliers who we believe make up the majority of our value chain emissions.

Our goal to reduce our carbon footprint goes beyond our operations and cuts across our value chain.

We are currently defining our Scope 3 emissions baseline and target based on relevant categories for our value chain emissions. Our approach to this is outlined below:



ACTION PLAN

Organisational preparedness:

Commence Scope 3 data collection training within all OpCos

Collaborations:

Design and collaborate with GSMA to define Scope 3 methodology

Scope 3 Data Collection

By end 2023:

Scope 3 emissions baseline established

Scope 3 emissions target determined

Advocacy and collaboration within our industry

At GSMA, we represent our operating markets within the Axiata Group. GSMA provides a platform for us to leverage on the sharing of best practices among peers and to collaborate towards contributing to the United Nations Sustainable Development Goals.

Significant initiatives include industry taskforces to drive climate action, where some of the ongoing work includes implementing Scope 3 data collection and target-setting for our industry.

Our response to transforming our value chain

Scope 3 emissions can typically make up more than two-thirds of a telco's total carbon emissions footprint and sometimes more than 90%.¹⁶

We recognise that this is an area we cannot control but can influence.

We aim to influence suppliers' emissions reductions by engaging them, encouraging carbon management and empowering them to seek opportunities and make commitments aligned to science. Through our engagements, we will develop a baseline understanding of their ambitions and opportunities, helping us identify gaps for collaboration.

In supporting our suppliers towards decarbonisation, we will improve our internal processes by:

- Adopting sustainable procurement practices towards incorporating climate and carbon targets into the Environmental, Social and Governance (ESG) criteria we use
- Leveraging carbon databases such as CDP and SBTi to encourage supply chain traceability
- Enabling collaboration and support for others along the supply chain to benefit from the opportunities that a lower-carbon strategy and profile can provide.

Large MNC suppliers in our database may already be on the path to decarbonisation and some have already committed to setting science-based targets. Nevertheless, our efforts will be geared towards working with suppliers of all sizes.

Current practices

Our existing procurement process involves assessing and screening our suppliers for compliance with the Supplier Code of Conduct. Additionally, as part of Supplier Performance Management, suppliers are asked to complete a self-assessment of their sustainable practices including on environmental parameters.

Ultimately, we will work towards establishing better visibility of the environmental performance of our suppliers, in turn supporting our aim to define and manage our Scope 3 emissions. This will be carried out by leveraging on existing processes from Axiata Procurement Centre and our OpCos.¹⁷

¹⁶ Boston Consulting Group (BCG), Putting Sustainability at the Top of the Telco Agenda (2021).

¹⁷ Axiata Procurement Centre is set up to manage the procurement process at Axiata Corporate Centre and drive synergy and cost advantage across the Group by establishing group-wide policies, processes, and guidelines.



Objective Three

DELIVER AN INCLUSIVE CLIMATE AGENDA

Timeline: From 2020

TARGET

Contribute to positive climate action through carbon removal and enable avoidance through technology and digitalisation

INCREASING CARBON REMOVAL ACTIVITIES

Neutralise residual carbon emissions through natural or technological solutions in owned and supported projects¹⁸

ENABLING CARBON AVOIDANCE

Contribute to decarbonisation solutions by enabling efforts across society (reduction and removal)

MILESTONES:



Increase carbon removal activities by 2030



Quantify the impact of positive climate action

¹⁸ Offsets will continue to evolve and we will adhere to guiding principles that have been developed and are in development, as technology improves and our knowledge of natural sink permanence and natural sink accounting increases.



INCREASING CARBON REMOVAL ACTIVITIES

Carbon removal encompasses a wide array of approaches to capture or sequester CO₂ emissions via technological or natural mechanisms.

In developing strategies in this area, we will seek and align with verifiable standards for carbon removal to ensure accurate quantification of carbon removed from the atmosphere.

While strategies to reduce emissions are critically important, they will not be enough on their own to limit global warming. Reaching climate goals requires strategies that actively remove CO₂ from the atmosphere.¹⁹

We view carbon removal as a last resort and not an alternative to reach our net-zero commitment. Nevertheless, and in recognising the potential for carbon removal technologies to develop significantly in the coming years and decades, we will continue to explore the potential of investing in high-quality carbon removal solutions – whether natural or technological – as a long-term strategy.

Our response to carbon removal and nature-based solutions

Currently, we are exploring Nature-based Solutions (NbS) as an option to eliminate residual emissions in the long-term.

NbS such as restoration of forests and mangroves is a key component in addressing climate action for mitigation and adaptation purposes. The benefits of NbS go beyond climate and extend to land degradation and desertification, biodiversity conservation and food security, among others.²⁰

Investments in NbS today can enable the benefits derived from carbon sequestration to be utilised at the latter stage of our net-zero journey as we approach 2050.

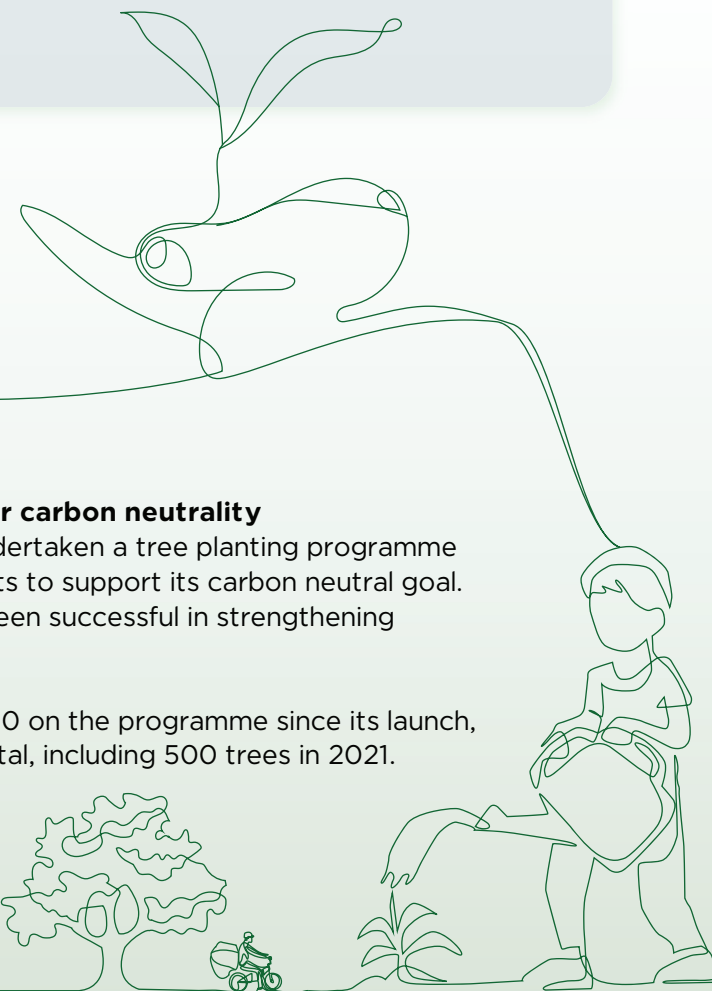
Current practices



edotco – tree planting for carbon neutrality

Since 2018, edotco has undertaken a tree planting programme across its operating markets to support its carbon neutral goal. The programme has also been successful in strengthening employee engagement.

We have spent ~RM907,000 on the programme since its launch, planting 38,500 trees in total, including 500 trees in 2021.



¹⁹ World Resource Institute, Carbon Removal, <https://www.wri.org/initiatives/carbon-removal>, (accessed April 2022).

²⁰ WWF International, Nature-based Solutions for Climate Change (2020).



ENABLING CARBON AVOIDANCE

Through the Enablement Effect, we will seek to encourage carbon avoidance efforts across society. Furthermore, we commit to enabling society, businesses, enterprises and small and medium-sized enterprises (SMEs) by providing products and services that can enable emissions reductions.

As a diversified Group with businesses covering Digital Telcos, Digital Businesses and Infrastructure, we are ideally placed to serve as a catalyst for the decarbonisation of other sectors.



Today, mobile technology connects around two-thirds of the global population. Advancements in technology have also increased connections between machines and 'Things'. These widespread connections provide the mobile telecommunications industry with a unique opportunity to use mobile as a tool for change.

Mobile network-enabled technologies form an important part of the decarbonisation solution, enabling rapid emission reductions while improving quality of life and supporting economic growth.

This can be achieved through increased connectivity, improved efficiency and by impacting behavioural change, thereby driving positive impact across many other sectors of industry and society.

A study conducted by GSMA and Carbon Trust showed that in 2018 alone, the use of mobile technology enabled global emissions reductions almost ten times greater than the global emissions footprint of the mobile industry itself.²¹

²¹ GSMA, The Enablement Effect: The impact of mobile communications technologies on carbon emission reductions (2019).

Enabling carbon avoidance across society and businesses

Axiata is uniquely positioned to connect societies, businesses, enterprises, governments and organisations towards our purpose of Advancing Asia. This effort revolves around championing an inclusive agenda to transform and take action in addressing climate change.

We believe that through mobile network technologies and digitalisation solutions, we can enable various industries to decarbonise, reduce their emissions and be better prepared for the inevitable transition towards a lower-carbon economy.

Across Axiata, our enterprise solutions already enable industries in our region to reduce their environmental impact through digitalisation. This in turn drives resource optimisation and reduced energy consumption,

creating a multiplier effect of climate-positive initiatives and ways of operating that extend beyond our organisation.

With connectivity from our MNOs, enterprise solutions will enable further development beyond connectivity in voice and digital inclusivity. Moreover, smarter and modernised digital solutions by Axiata Enterprise, including 5G and IoT, can accelerate digitalisation and cloudification opportunities across the digital ecosystem.



The enterprise businesses throughout our six Digital Telco operating markets are catering to the needs of around 185,000 enterprises, with plenty of room to capture new growth in digital enablement.

Objective Three: Deliver An Inclusive Climate Agenda

Our response to Advancing Asia for an Inclusive Climate Agenda

With our footprint across ASEAN and South Asia, we have a responsibility to advocate for inclusive climate action that leaves no one behind. As we move forward, we aspire to ensure that all our communities and businesses can transition to a lower-carbon economy.

Solving the climate crisis by limiting global warming to 1.5°C requires transformational action by all – industries, government, regulators and society.

Underlying our carbon reduction efforts, we are pushing for climate action through other means:

Digital inclusion efforts that focus on decreasing the gap of under-connected and underserved communities. This is geared towards enhancing digital societies and ecosystems with efficiencies in resource management and climate-positive alignment.

Climate-centric awareness, engagement and advocacy for a soft-strategy approach, enabling greater opportunities in a widespread momentum towards net-zero.

Policy advocacy across the countries we operate in to encourage positive action, including by enabling incentives and market mechanisms in support of a net-zero economy.

Current Initiatives



Driving climate-positive policies and behaviour for a positive multiplier effect



Collaborative Effort

To meet the regulatory requirements in Bangladesh for RE proportion in operations, Robi empowers suppliers through procurement to adopt renewable energy, with a target RE adoption rate of 10% by 2023 and 20% by 2028.



Beyond Direct Operational Control

Robi incentivises solar uptake amongst its employees to encourage an organisation-wide core value approach and contribute to indirect emissions reductions.

Policy Advocacy for Greater Adoption of Large-Scale Solar Installations

Robi, together with Bangladesh's Sustainable And Renewable Energy Development Authority (SREDA), studied the feasibility of large-scale solar solutions through a long-term action plan to install multiple 5MW solar plants in Bangladesh, thereby enabling better RE accessibility within the country.



Establishing climate-resilient agricultural practices



SARU IoT-based Agri Automation Solution

Dialog provides farmers with the ability to remotely control and monitor greenhouse conditions via smart devices with low-cost automated "smart farming" kits. The effort enables real-time, over-the-air updates which ensure food security in an era of increasing climate volatility.



Uplifting fishing communities through digital inclusion



LAUT NUSANTARA Mobile Application

The Laut Nusantara mobile application enables fishermen to obtain accurate data on the location of fish, ensuring food security. XL, along with the Ministry of Marine Affairs and Fisheries, collaborated to increase usage of the application, educating fishermen in 35 villages in the provinces of Banten, East and West Java to uplift their digital literacy and quality of life.

Governing Climate Action

Climate-related matters have been integrated within and form a key part of our sustainability governance structure.

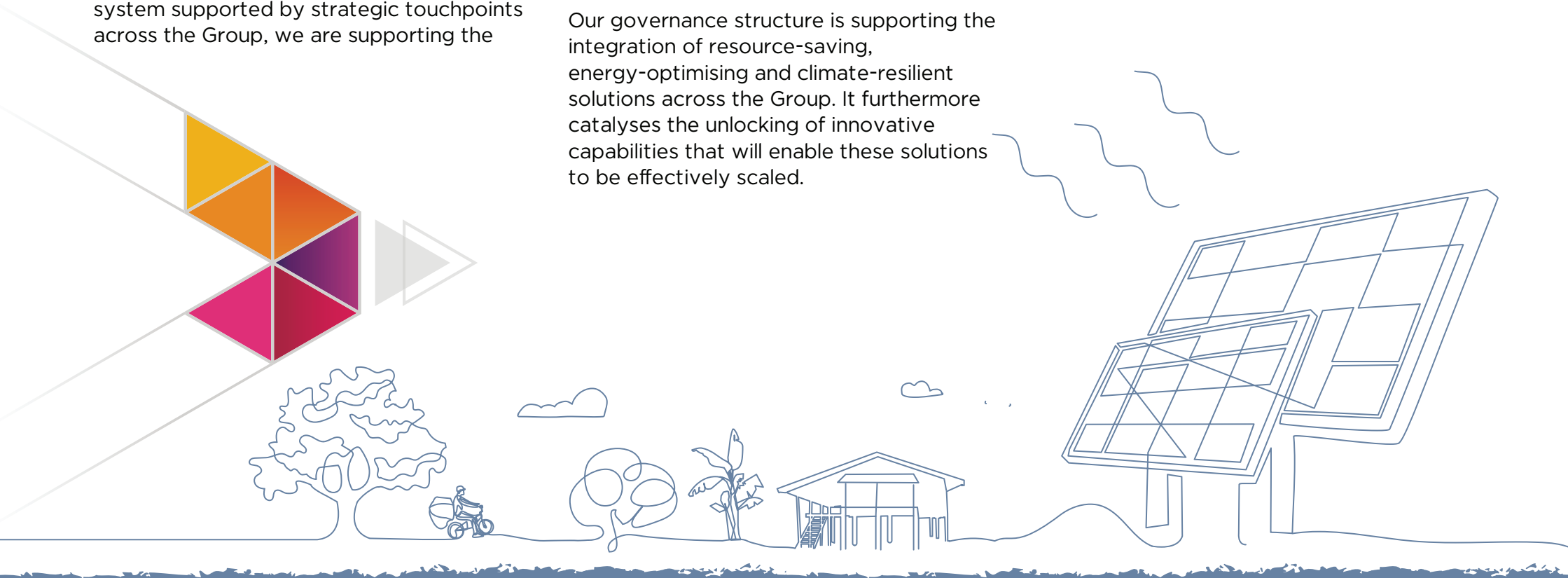
Driven by the Board with a cascading system supported by strategic touchpoints across the Group, we are supporting the

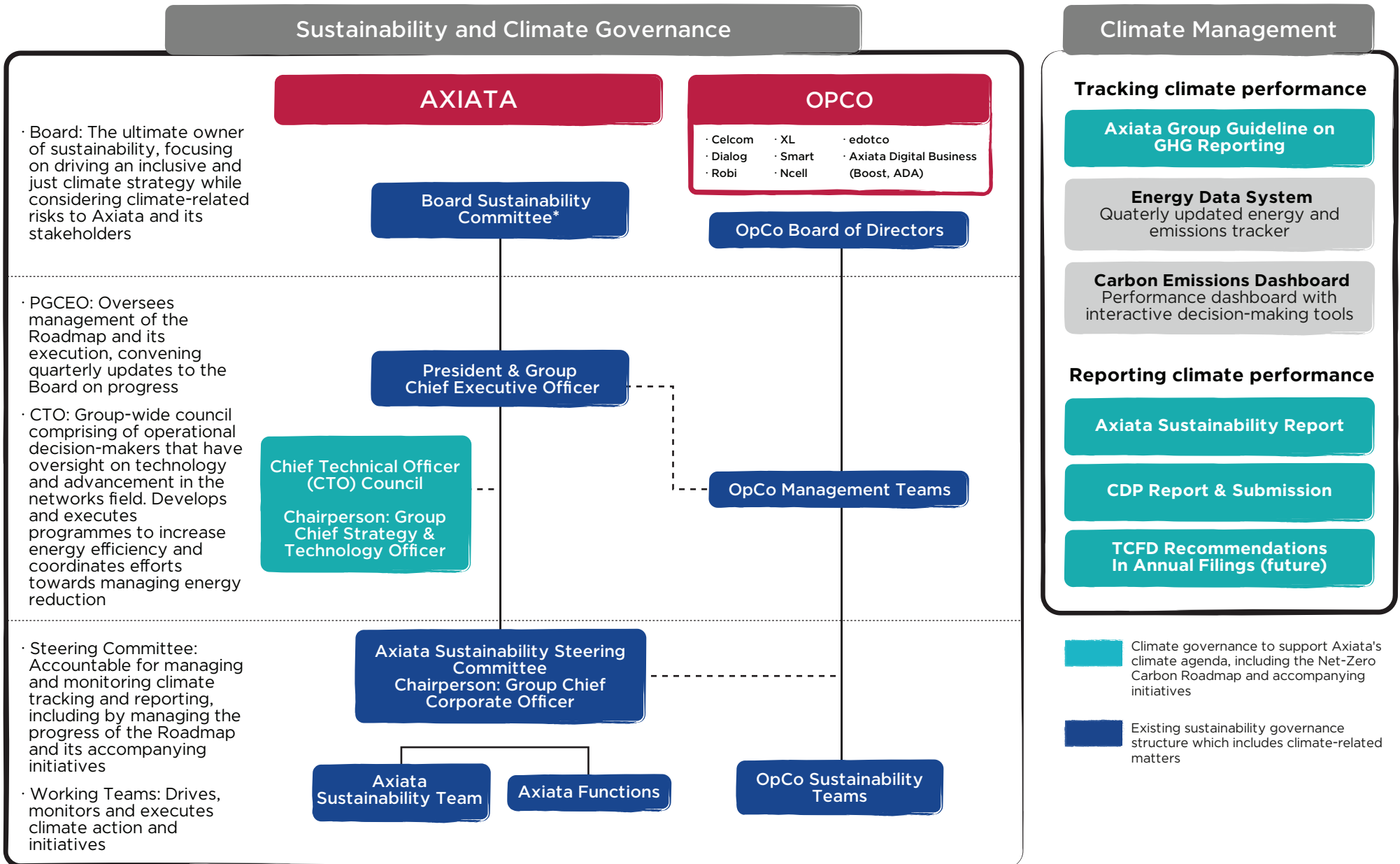
development and execution of our net-zero ambition that will effectively transform every part of our business, whilst adapting to evolving expectations from stakeholders at all levels.

Executing our Roadmap requires a shift in the way we make decisions for sustainable business growth.

Our governance structure is supporting the integration of resource-saving, energy-optimising and climate-resilient solutions across the Group. It furthermore catalyses the unlocking of innovative capabilities that will enable these solutions to be effectively scaled.

On this point, active collaboration amongst multiple Axiata functions across various operating markets will be key to achieving our climate action goals, as this will enable local solutions to be applied across other markets regionally.





* Effective 8 April 2022, a Board Sustainability Committee was established to elevate the responsibilities of the Board Annual Report Committee to provide enhanced oversight on ESG management across Axiata.

** Axiata Chief Technology Officer Council (CTO Council) consists of Chief Technology Officers from each of our subsidiary companies in the Digital Telco stream. With operational targets within Axiata 5.0, there is a combined finance, operations, and procurement effort that runs as a horizontal integration in Axiata.

Glossary

| Acronym/Term | Description |
|--------------------|---|
| BAU | Business-As-Usual model is the model for normal execution of standard functional operations within an organisation. |
| Carbon Removal | Includes technology-based and nature-based solutions (NbS). |
| GHG Protocol | The Greenhouse Gas (GHG) Protocol establishes comprehensive global standardised frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. |
| TCFD | Task Force on Climate-related Financial Disclosures is a guidance framework that helps companies disclose climate-related financial risks to investors, lenders and insurers. TCFD recommendations are focused on governance, strategy, risk management, and metrics and targets. |
| tCO ₂ e | tCO ₂ e stands for tonnes (t) of carbon dioxide (CO ₂) equivalent (e). "Carbon dioxide equivalent" is a standard unit for counting greenhouse gas (GHG) emissions regardless of they are from carbon dioxide or another GHG, such as methane. |
| GSMA | The Global System for Mobile Communications Associations (GSMA) is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. It delivers for its members across three broad pillars: Industry Services and Solutions, Connectivity for Good, and Outreach. |
| IPCC | The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. The IPCC prepares comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place. |
| MNO | Axiata's Mobile Network Operators operate in six different countries across ASEAN and South Asia: Malaysia (Celcom), Indonesia (XL Axiata), Cambodia (Smart), Sri Lanka (Dialog), Bangladesh (Robi) and Nepal (Ncell). |
| OpCo | Axiata's Operating Companies (OpCos) include the key subsidiaries under the Axiata Group across the three business streams: Digital Telco, also known as MNO (Celcom, XL Axiata, Dialog, Robi, Smart, Ncell), Digital Businesses (ADA, Boost Holdings) and Infrastructure (edotco). |
| Digital Businesses | Our Digital Businesses comprise of Boost and ADA. Boost helps grow the digital economy by advancing digital and financial inclusion for micro-SMEs. Our data and Artificial Intelligence company, ADA, designs and executes integrated digital, analytics, marketing and eCommerce solutions, while helping brands drive their digital and data maturity. |

| Acronym/Term | Description |
|---------------------------|--|
| Net-Zero Carbon Emissions | Achieved when emissions of greenhouse gases (GHGs) from human activities to the atmosphere are balanced by anthropogenic removals, meaning withdrawal of GHGs from the atmosphere as a result of deliberate human activities over a specified period. Rigorous net-zero targets carry a promise of strong climate action, limiting warming to 1.5°C, aligned with the Paris Agreement and the SBTi. |
| PPA and VPPA | Power Purchase Agreement (PPA) is a contract for the purchase of power and associated Renewable Energy Certificates (RECs) from a specific renewable energy generator (the seller) to a purchaser of renewable electricity (the buyer). Virtual Power Purchase Agreement (VPPA) is a long-term contract in which the company that intends to develop a renewable project receives financing for said project via a third-party. |
| SBTi | Science Based Targets initiative SBTi encourages organisations to voluntarily set a GHG emissions reduction target that is aligned and consistent with scientific recommendations on climate change. |
| Value Chain Emissions | Emissions from the upstream and downstream activities associated with the operations of the reporting company. For Axiata, it may consist of emissions from across upstream supply chain of goods and services, use of energy to run networks and IT, and downstream use of electricity as customers use their services. |
| REC | Renewable Energy Certificates (RECs) are a market-based instrument which certifies that the bearer owns one megawatt-hour (MWh) of electricity generated from a renewable energy source. Different from offsets, RECs allow an organisation to lower their market-based Scope 2 emissions from purchased electricity according to the SBTi, while offsets can be used to negate or "offset" an organisation's Scope 1, 2 or 3 emissions. |
| NbS | Nature-based Solutions are actions to protect, sustainably manage and restore natural and modified ecosystems, thereby addressing societal challenges effectively and adaptively while simultaneously providing human wellbeing and biodiversity benefits. |



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