Singtel

Our Purpose – Driven Journey

SUSTAINABILITY REPORT 2023

About this report

Singapore Telecommunications Limited (Singtel) reaffirms our commitment to sustainability with this ninth annual Group Sustainability Report (SR2023), published on 27 June 2023. This report provides a summary of the Group's strategies, commitments, initiatives and targets in relation to Environmental, Social and Governance (ESG) topics for our operations in Singapore, where Singtel and our wholly-owned subsidiary NCS are headquartered, and Australia, where our wholly-owned subsidiary Optus is based.

All information, statistics and targets presented correspond to the Group's operations for the financial year 1 April 2022 to 31 March 2023 (FY2023). Group-level figures are expressed in Singapore dollars, using the exchange rate of A$1 to S$0.9399.

No restatements were made from the previous report except scope 2 and 3 related figures for Singtel and Singtel Group in 2022 in the Environmental Performance Indicators section (page 25-26) and gender mix by employee category for Optus and Singtel Group in 2022 in the People Performance Indicators table (page 39).

This report is recommended to be read together with the *Singtel Annual Report 2023*, *Singtel Sustainability* and *SR2023 webpages*, *Singtel Group TCFD Report 2022* and *Optus Sustainability Report 2023*. Together, these provide a more comprehensive view of the Group's sustainability efforts, containing additional corporate sustainability information and annexes like the GRI Index and EY assurance statement.

Reporting standards

This report has been prepared in accordance with the updated Global Reporting Initiative (GRI) Universal Standards 2021. It complies with SGX Listing Rule 711 (A) and (B) and incorporates SGX's enhanced disclosures on climate-related information. A summary of our response to TCFD disclosure recommendations can be found on page 23-24.

This report also contains disclosures recommended by SASB, based on the Telecommunications Services (Industry Standard, Version 2 18-10), and GSMA ESG Metrics for Mobile for the mobile industry.

External assurance

We have engaged Ernst & Young LLP (EY) to provide limited assurance for a selection of our key ESG disclosures. The assurance statement has details on material topics assured, assurance standards used and procedures, methodologies and assumptions. The independent limited assurance statement (page 70-76) can be read *here*.

Internal audit

During the year, Internal Audit conducted a review on the Group's sustainability reporting process to further strengthen our governance framework, internal controls, processes and systems. No material issues were identified through this review.

Feedback

We are fully committed to listening to our stakeholders and welcome comments and feedback on this report to further improve our sustainability performance. Please address all feedback to the Group Chief People and Sustainability Officer at *sustainability@singtel.com*.

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Key Highlights **FY2023**

Climate change and environment

Achieved **A Leadership score** in Supplier Engagement Rating for CDP 2022 and part of the leaderboard for the first time

Ranked **97th** on the Clean200 list by Corporate Knights and As You Sow, the highest ranked Singapore company

A- Leadership score for Climate Change for CDP 2022 for the sixth consecutive year

Completed **4** solar energy generation projects in FY2023, expected to generate 1,700MWh of energy with a total capacity of 1.38MWp

Achieved improvement of GHG emissions intensity of **0.030** tCO_2e/TB from 0.035 tCO_2e/TB

Reduced scope 1 and 2 absolute emissions by **11.31%**

7.28% of energy backed by renewable energy sources

People and future of work

Training investment of **S$21.9 million** in Singapore and Australia

Conducted our first **salient human rights issues assessment** for both our Singapore and Australia operations

Singtel Company Training Committee's MOU with UTES aims to increase our investment to **S$20 million** annually in employee development

Recognised by the 2023 **Bloomberg Gender-Equality Index** for the fifth consecutive year

Your Voice Survey 2022 achieved a record participation rate of **91%**

Group employee engagement score increased by **13%** since 2019

Community impact

Our customers donated **12 million GB** and **1.5 million GB** of data under Optus and GOMO Donate Your Data programmes respectively

Ranked **14th** on the 2023 Digital Inclusion Benchmark by World Benchmarking Alliance, the highest ranked Southeast Asian company

Singtel Group Future Makers programme has funded over **S$5 million** in >80 local and regional social impact start-ups

Singtel Group's Digital Enablement programmes have supported **>840,000** beneficiaries since 2015

Community investment of **S$31.7 million** in Singapore and Australia

Celebrated Singtel Touching Lives Fund's **20th anniversary** and raised **>S$54 million** since 2002

Sustainable value creation

Singapore first country to achieve **nationwide 5G standalone coverage**

Fastest Singtel 5G network in Southeast Asia and Oceania

Successful completion of sustainability-linked financing

Issued a **US$100 million** digital sustainability-linked bond and signed a **S$500 million** sustainability-linked revolving credit facility in Singapore[1]

The first Australian telecommunications company to sign a **A$1.4 billion** sustainability-linked revolving credit facility[2]

1. Through Singtel Group Treasury Pte Ltd; 2. Through Singtel Optus Pty Limited

Message from

Chairman and Group CEO

Our planet continues to warm, raising the risk of more frequent and severe extreme weather events. Access to technology impacts learning, social mobility and employment opportunities. This makes closing the digital divide an even more pressing issue. The emergence of powerful AI-powered apps such as ChatGPT also threatens to marginalise and displace workers who are unprepared.

Against this backdrop, our corporate purpose Empower Every Generation has continued to guide our efforts to create a better world for generations to come.

This ninth Sustainability Report (SR2023), endorsed by our Board and Management, describes our key sustainability efforts towards achieving our five-year 2025 sustainability targets.

Lee Theng Kiat
Chairman

Yuen Kuan Moon
Group CEO

Taking climate action

According to the World Economic Forum Global Risk Report 2023, climate and environmental risks will remain a key focus of the next decade. Unfortunately, these are also the very risks the world is least prepared for, and underscores the importance of incorporating environmental strategy, policies, initiatives and considerations into our operations.

During the year, we reviewed our energy and emission reductions roadmaps, and continued with our energy efficiency programmes such as chiller replacement and control optimisation of our network. We also brought forward our net-zero goal to 2045 from 2050 and updated our 2030 SBTi targets to ensure that we are aligned to the 1.5°C climate scenario as included in the Paris Agreement and keep the world from irreversible climate change. These targets are currently pending validation by SBTi and we will share them when approved.

Climate risk management is a key component of our environmental strategy. Last year, we published the Group's inaugural *Task Force on Climate-related Financial Disclosures (TCFD) Report 2022*, which provided a deeper dive into how we manage climate risk and address the transition to net-zero within our business.

We are building on this effort in preparation for the new International Sustainability Standards Board (ISSB) disclosure requirement, which leverages the TCFD reporting framework. We have started engaging selected business units on applying a scenario-based financial lens on the risks and opportunities in their respective area of operations.

Empowering our people

Engaged employees deliver superior business results, boost customer satisfaction levels and enable a vibrant company culture and workplace. This is why we make engagement a priority for our people. Our distinctive employee value proposition B.I.G. aims to foster a strong sense of Belonging so that our people bring their best selves to work, feel empowered to perform meaningful and Impactful work, and Grow professionally and personally.

We also doubled down on our efforts to build a future-ready workforce. Our three corporate academies - Singtel 8George and NCS Dojo in Singapore, and Optus U in Australia offer employee training under four pillars of Personal Excellence, 5G/Tech Acceleration, Leadership Excellence and Future-Readiness. In Singapore, we have committed to investing S$20 million annually in our people development programmes.

During the year, we launched work-study programmes called Catalyst and Fusion at Singtel and NCS respectively, allowing diploma graduates to work full-time in ICT while pursuing a degree. NCS also offers NUCLEUS, a five-year programme that equips talents with professional training, technical expertise and industry experience in their chosen field of specialisation.

We introduced a five-module e-learning course on the fundamentals of sustainability for our people in Singapore to raise more awareness and deeper understanding of the subject. We believe this is key to arming them with perspectives they need to advance sustainability on corporate and personal fronts.

In addition, we held a full-day sustainability workshop for our top executives and piloted a workshop on inclusive leadership, as well as an interactive learning on workplace diversity and inclusion for over 100 top executives, which will be offered to all people leaders.

In Australia, we continued to expand Optus U with new streams of learning within data and analytics, automation, commercial acumen, cyber security, product management and sustainability, and tripled our Tech Talent Graduate intake with 50 new students across various tech specialities.

Supporting our communities

2022 marked the 20th anniversary of the Singtel Touching Lives Fund, our corporate philanthropy programme, which has raised more than S$54 million to date.

We marked this milestone with Expressions Through Art, Singapore's first art exhibition to feature artworks from all local special education schools. The year also marked the return of our popular Singtel Carnival, Singapore's biggest event dedicated to children with special needs. Our event saw 2,000 students – our biggest turnout yet – enjoying a day playing games and activities organised by 1,900 staff volunteers.

It was also a milestone year as we celebrated ten years of helping children and youth stay safe online with our Optus Digital Thumbprint Programme, which continues to gain momentum. Launched in 2013, our programme has helped equip more than half a million students in Australia with knowledge in cyber security, digital discernment and other topics so they can better navigate the dangers of the internet.

Strengthening governance and driving sustainable value creation

Our commitment to responsible and ethical business practices while providing quality services and solutions forms the bedrock of how we operate our business, guided by our six core values. We also adopt a zero tolerance approach to bribery and corruption of any form, and discrimination and human rights violations across our value chain.

During the year, we conducted a Group-wide salient human rights issues assessment and identified six potential critical areas each for Singtel and Optus, including online safety and supply chain, where both positive and negative human rights impacts can occur. We will focus our efforts on managing these issues in the coming year.

In line with our stewardship role, we will further enhance our efforts around corporate governance, ethics and compliance matters to strengthen the relationship with our stakeholders and their trust in us.

5G is critical infrastructure that can pave the way for the development of transformative applications and experiences which consumers can enjoy and enterprises can leverage to strengthen their business competitiveness. We have successfully made this important technology more pervasive and accessible across our markets – Singapore became the world's first country to be covered by nationwide standalone 5G last July.

The integrity of our customers' information is a top priority and we take it very seriously at all levels of the organisation. Regrettably, in September 2022, Optus suffered a cyber attack which resulted in the exposure of customers' personal information. We are deeply sorry the attack happened. We have learnt a lot from this experience, and have committed to sharing those learnings.

The sustainability journey continues

Our SR2023 is a good mid-point check on our progress towards our 2025 targets. We have made good progress on our goals and more importantly, our efforts have helped bring about positive change to the environment and our communities.

We will strive to do more and make a greater impact in the years ahead. On behalf of the Singtel Board and Management, we thank you for your support.

01 Our Sustainability Approach

As Asia's leading communications technology group, we strive to create sustainable value for all our stakeholders. We aim to attract, develop and retain our talent, connect and enrich the lives of our customers and communities through innovation, and create a positive impact on our environment.

Our programmes and efforts are aligned with the four pillars of our sustainability framework – Climate Change and Environment, People and Future of Work, Community Impact and Sustainable Value Creation – which is guided by our Group purpose, Empower Every Generation (see Figure 1). Our six core values: Cultivate a growth mindset; Operate with integrity; Make customers first; Maximise teamwork; Innovate with a challenger spirit; and Take ownership, which form the mnemonic COMMIT, define who we are, what we stand for, and how we behave.

We want to empower our stakeholders, including employees, suppliers, customers and communities to create sustainable value and an equitable and inclusive future for all. We create a working environment that empowers our people whose daily actions are guided by our core values. For example, we expect our people and workers in our value chain to act responsibly and ethically, as operating with integrity is critical for building and maintaining trust with our stakeholders.

Our wholly-owned subsidiaries NCS and Optus take a similar approach towards managing sustainability. As an information technology company, NCS focuses on embedding sustainability into our business through digital transformation, and offers sustainable technology solutions to government and enterprise customers. This is supported by NCS sustainability framework which has three pillars: Value Our Clients, Grow Our People and Create Our Future (see Figure 2).

Optus' sustainability strategy focuses on shared value with stakeholders, including customers, community and the environment. This is delivered through six sustainability pillars: Climate Action, Circular Economy, Digital Enablement, Sustainable Innovation, Future of Work and Equity and Inclusion (see Figure 3).

Since 2007, Singtel has been a signatory of the United Nations Global Compact (UNGC). Our sustainability framework supports UNGC ten principles and is aligned with the 2030 UN Sustainable Development Goals (SDGs). We are also an active member of GSMA and its various sustainability workstreams.

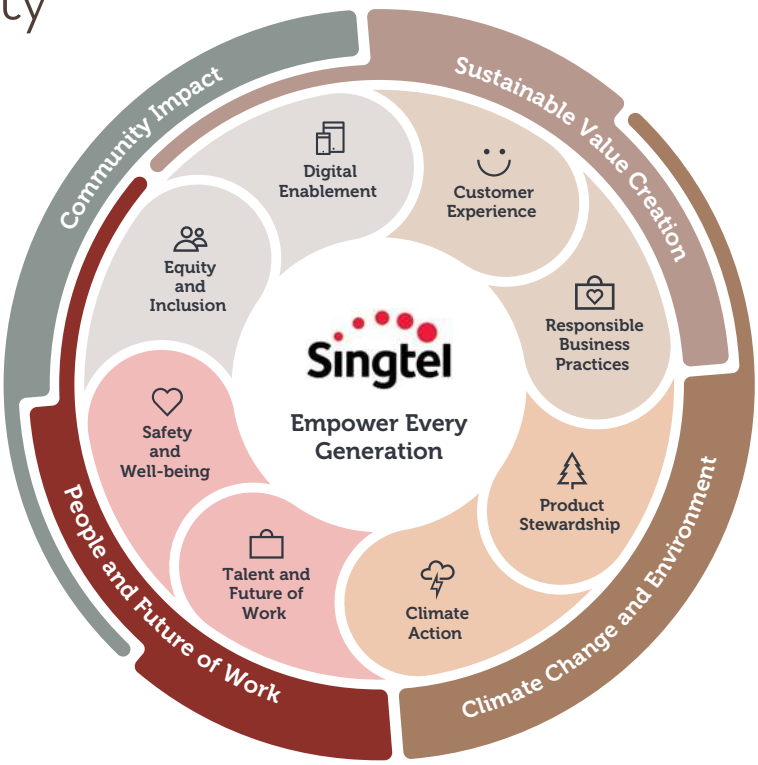


Figure 1: Singtel Group sustainability framework

Stakeholder engagement

Through regular dialogues via various platforms and feedback mechanisms on an extensive range of topics, we engage both internal and external stakeholders to ensure that our business and sustainability strategies, efforts and programmes align with stakeholder interests and needs. For example, we engage our investors regularly to communicate our sustainability goals, plans and progress. At the same time, we get to hear their views on sustainability and the role of environmental, social and governance (ESG) in their investment decisions, as well as their expectations of companies they invest in.

More details of our stakeholder engagement and expectations can be found on our sustainability ***webpage***. We conducted our last formal stakeholder engagement and materiality assessment in 2021 across Singapore and Australia, which identified key material topics that informed our areas of focus for FY2021 to FY2025.

Materiality assessment using GRI 2021 Standards

At the halfway mark of our 2025 sustainability goals, we undertook an abridged interim materiality assessment in line with the new GRI 2021 Standards during the year. An independent external consultant was appointed to help us refresh and reprioritise our material topics. With the new materiality methodology, greater emphasis was placed on the

Figure 2: NCS sustainability framework

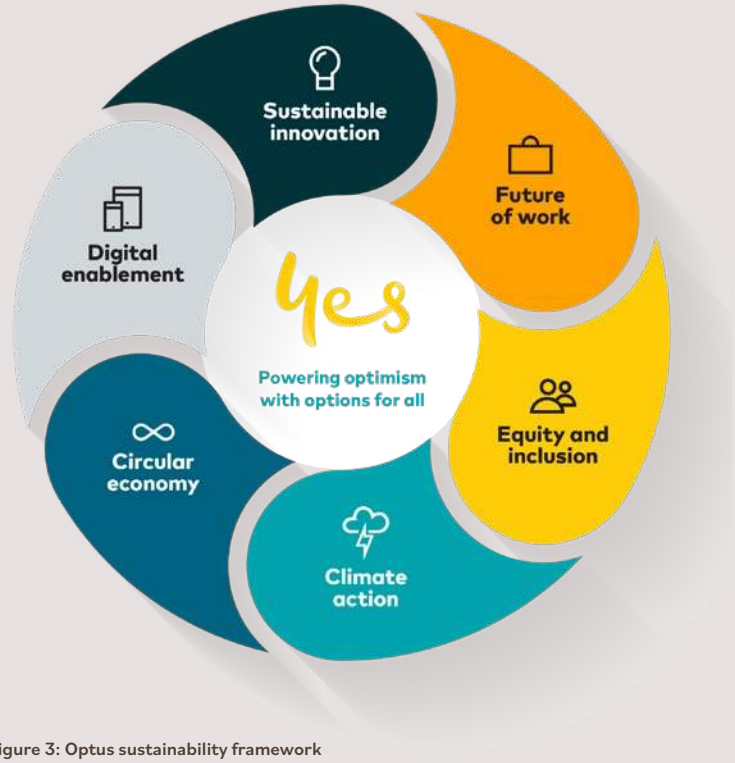


Figure 3: Optus sustainability framework

impact of our business operations in Singapore and Australia on people, environment and economy, including human rights.

In the coming year, we will conduct our formal stakeholder engagement exercise and full materiality review, incorporating double materiality as we prepare to set our next set of mid-term targets.

Materiality assessment process

For the materiality assessment, we performed an internal review of our business activities and relationships, and the ESG issues pertinent to the telecommunications and ICT industries through desktop research and peer benchmarking. This helped us understand the positive, negative, actual and potential impacts that Singtel Group creates. Based on our assessment, we listed the relevant potential and actual impacts of our operations, products and services, as well as major value chain activities. We then assessed the significance of each impact by considering its severity, including the potential for remediation of negative impacts and likelihood of occurrence for potential impacts. We prioritised the impacts according to their significance and derived a list of material topics.

Material topics

After identifying our key material topics, we grouped them under our four sustainability pillars.

Sustainability pillars	Material topics
Climate Change and Environment	• Climate change • Resource management
People and Future of Work	• Diversity, equity, inclusion and belonging • Employee safety and well-being • Talent attraction and development
Community Impact	• Digitally inclusive and empowered communities • Online safety
Sustainable Value Creation	• Sustainable supply chain management • Product and service quality • Ethical and fair business practices • Data and customer privacy

While there are no material changes to our sustainability topics and our underlying strategy and focus, we believe the updated material topics better capture the nuances of the issues we need to focus on.

Sustainability governance at Singtel

Singtel Group is committed to implementing an effective governance structure to ensure that the entire business is aligned to sustainability and creating positive, long-term impact, guided by our Group purpose and sustainability framework. The various committees, including Board committees, oversee different aspects of our sustainability efforts to ensure that our actions are robust and rooted in integrity (see Figure 4).

In compliance with SGX requirement, all our Board of Directors completed mandatory sustainability training, except for a recently appointed Director who will complete training in the coming year. Our Board is also briefed twice a year on ESG-related matters with at least one session per year dedicated to discuss climate issues affecting Singtel Group operations. This is in addition to regular updates on our sustainability strategy, targets and efforts.

Sustainability governance structure

Executing on Singtel Group's sustainability strategy requires oversight from the Board and focus from the leaders across the organisation. Singtel Board is the highest governing body and has ultimate responsibility for the oversight of Singtel's sustainability risks and strategy. The various Board Committees have responsibility for addressing relevant sustainability topics, such as ESG key performance indicators (KPIs) with the Board Executive Resource and Compensation Committee (ERCC), and sustainability-linked financing with the Finance and Investment Committee (FIC). The Singtel Management Committee is the overarching governance body at the management level, supported by various cross-functional steering committees and working groups focused on different material topics.

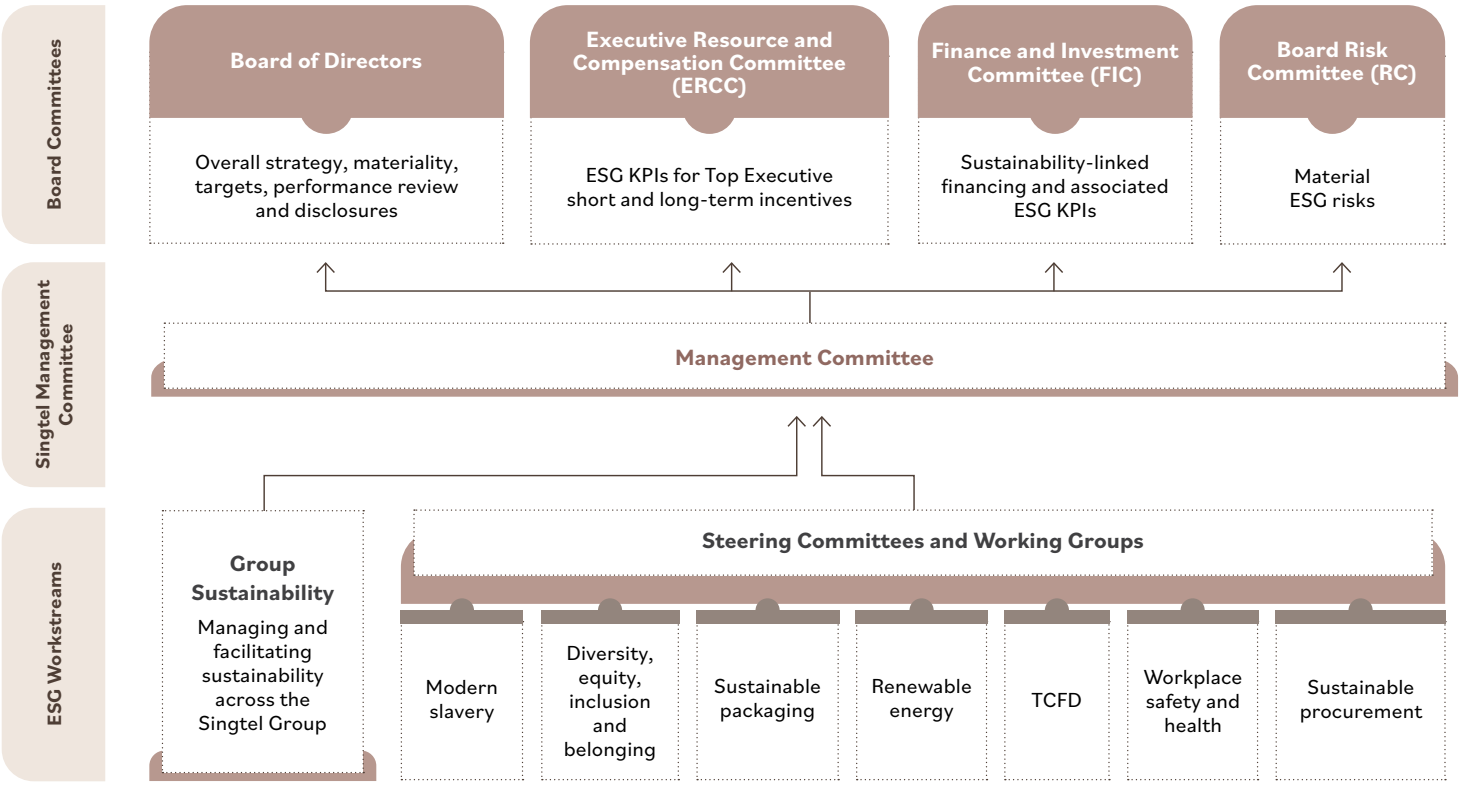
Management of ESG KPIs

We recognise the key role that management plays to ensure the success of ESG initiatives and achieve our targets. Hence we have linked collective and common ESG targets to KPIs and incentive plans of our top executives. This helps us to advance the sustainability agenda and foster greater accountability and ownership across the company.

- 20% of our Top Executive's long-term incentive plan remuneration policies are tied to specific, time-bound KPIs, such as reaching 32% of female employees in management by FY2025.
- ESG targets for our Management Committee's short-term incentive plans represent 10% of their annual balance scorecard performance.
- Management Committee's KPIs are cascaded down to their business units, departments and employees, whose performance bonus and other incentives are tied to their KPIs.

These targets cover key sustainability themes such as climate change and environment, as measured by CDP; reputation and responsible business practices, measured by MSCI; community impact, in terms of our digital inclusion and enablement targets; and talent and people including diversity and talent

Figure 4: Singtel Group sustainability governance structure



retention. However, the focus and weightage may vary for each executive given their different levels of influence and impact on these ESG KPIs.

Ethics and compliance

Singtel Group is committed to upholding the highest standards of integrity, corporate governance and ethics. Our Group purpose and values guide the way we operate and hold ourselves accountable for our business decisions and actions, including full compliance with all applicable laws and regulations.
This is essential to building our corporate reputation and stakeholder trust, while safeguarding the interest of all our stakeholders, including our shareholders, employees, business partners, customers, vendors and creditors.

This commitment is supported by a comprehensive framework that covers strong leadership and corporate culture, robust and effective internal controls and policies, and risk management. Our Internal Audit, Group Risk Management, Legal and Group People and Sustainability functions work closely with our business units to continuously uplift our corporate governance, raise awareness and train our people.

We have enhanced our corporate governance practices by establishing a dedicated anti-bribery and corruption (ABC) compliance function within the Group Risk team, reporting to the Group Chief Corporate Officer and RC. A comprehensive ABC framework has been developed to strengthen the ethical culture of Singtel and mitigate related risk exposures.

We take a zero tolerance approach to all forms of fraud, bribery, corruption and unethical behaviour. We expect our people, from the Board and management to every level of employees, to abide by the Singtel Code of Conduct. Our employees undergo annual mandatory online courses on our Code of Conduct, Fraud Awareness and ABC Policy, and complete a conflict of interests declaration.

We also have a Code of Business Conduct and Ethics for our Board of Directors, and suppliers must observe our Supplier Code of Conduct.

Please refer to the 'Ethical and fair business practices' section on page 52-54 and the Corporate Governance section in our Annual Report for more information about our policies and controls.

Salient human rights issues assessment

The Singtel Group respects and promotes human rights across our operations to create sustainable value and an equitable future for all. The telecommunications sector is exposed to a range of potential human rights impacts, both positive and negative. For example, access to telecommunication services can support children's right to education but also expose them to harmful online content. We pay attention to where vulnerable groups – including children, seniors, migrant workers and persons with disabilities – may be particularly affected.

During the year, we appointed an external human rights consultant to help us conduct our first salient human rights issues assessment together with our key business units in Singapore and Australia.

We have identified six salient human rights issues where the most severe human rights impacts could occur, along with actions to mitigate any risk and gap. Moving forward, we will work closely with our people, business partners, suppliers and other stakeholders, including civil society organisations, to better understand and address these impacts.

1. Support safe and fair work in our supply chains
We have large, diverse and extended supply chains, which may expose workers to labour exploitations, like substandard working conditions, especially migrant workers. We are committed to sustainable supply chain management and engaging our suppliers to set clear expectations for these areas such as respect for workers' human rights.

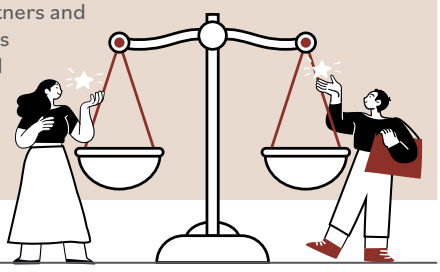
2. Promote user safety, well-being and access to services
As a major enabler of the digital ecosystem through our digital services and products, we recognise that network failure or poor service and product quality can negatively impact the well-being of our customers. We also focus on maximising the positive impact of our services through digital safety and inclusion while taking preventive steps to mitigate the negative impacts on children, youth and other vulnerable users.

3. Safeguard data and privacy of customers and employees
We place utmost importance on safeguarding the right to privacy of our customers and employees. With the increasing prevalence and severity of cyber crime, we seek to uphold the highest standards of data privacy protection and cyber security measures as we develop and expand our digital businesses and services.

4. Protect our environment
The telecommunications value chain can involve a range of potential environmental impacts which negatively affect the well-being of communities, ranging from the build-up of hazardous waste to displacement through land clearing. We endeavour to limit our operation's environmental footprint through initiatives such as close engagement with suppliers and key stakeholders, decarbonising our operations and promoting circularity across our value chain.

5. Provide a safe and equitable workplace
Our employees have the right to a safe and equitable workplace that is free from harassment and discrimination. We actively promote health, safety and equal opportunity at the workplace, and foster a culture of trust, respect and inclusion.

6. Respect the human rights of communities
Our operations and value chain may involve a range of potential human rights impacts that could significantly harm local communities or disrupt their way of life. We will collaborate with our suppliers, business partners and other stakeholders to assess and address these potential human rights impacts on communities.



2025 sustainability targets and progress

Material topic	2025 targets	FY2023 Progress
Climate change and environment		
Climate change	Reduce absolute scope 1 and 2 carbon emissions from 2015 baseline by 25% by 2025 and by 42% by 2030. Reduce scope 3 carbon emissions from 2015 baseline by 30% by 2030. Continue to invest in network adaptation and resilience, while disclosing long-term climate change risks and mitigation in line with the TCFD framework.	Scope 1 and 2 absolute emissions stood at 438,957tCO_2e, a reduction of 11.31% from last year and 20.45% from 2015, in line with our 2025 target trajectory of 25% reduction. Scope 3 emissions reduced year-on-year by 56.20%, driven by a combination of factors. (page 14) Achieved A- rating for CDP Climate rating.* Achieved A rating for CDP Supplier Engagement and listed on the Leaderboard for the first time. These corporate targets are included as sustainability performance targets (SPTs) for our sustainability-linked loans (SLLs) and sustainability-linked bonds (SLBs) under the Olives framework.
People and future of work		
Diversity, equity, inclusion and belonging	32% female employees in management by 2025.	31%*
Employee safety and well-being	Zero fatalities. Well-being score above 80%.	Zero fatalities. (page 40) 79%
Talent attraction and development	Training investment of S$90 million from 2021 to 2025. Attrition of high performers at no more than 60% of normal attrition.	S$21.9 million. (page 40) Cumulative S$57.9 million of training investment since 2021. 56.3% of normal attrition rate in FY2023.*
Sustainable value creation		
Sustainable supply chain management	No major human rights incident in our supply chain.	No major human rights incident in our supply chain.
Product and service quality	Continue to develop new digital business and services to meet customers' changing demand. Continue to uplift customer experience and remain as service provider of choice.	We continue to drive and embed innovation in our consumer, enterprise and digital businesses and operations, with 5G as an enabler for our customers, community and the environment. (page 51-52) We continue to lead in customer experience and maintain our market leadership position. As of March 2023, we were leading the market with our best-in-industry Net Promoter Score in Singapore. (page 51)
Ethical and fair business practices	Uphold the highest standards of responsible business practices with no major controversies that result in regulatory fines, sanctions and/or doubled monthly customer churn rate.	IMDA imposed a S$50,000 fine on Singtel for a breach. (page 52)* Optus was fined A$13.5 million by ACCC for contravention of the Australian Consumer Law. (page 53)*
Data and customer privacy	Uphold the highest standards of customer data privacy protection and cyber security measures in adherence to data protection laws - PDPA in Singapore and Privacy Act and Telecommunications Act in Australia - with zero major incident.	Optus suffered a cyber attack which resulted in the exposure of some customers' personal information. There have also been minor lapses due to IT, process or human errors. We continue to educate our employees, and improve practices and processes to reduce the recurrence of data breaches. (page 55)*

* Related to Top Executive ESG KPIs

Supporting the UN Sustainable Development Goals (SDGs)

We have earlier identified six priority SDGs where we can best contribute and create impact, which are aligned to Singtel Group's key focus areas and programmes. Building a sustainable future for all requires the commitment and effort of all stakeholders in the ecosystem. SDG 17 – Partnerships for the Goals – therefore underpins our sustainability strategy as we seek to collaborate with our stakeholders to create shared value and positive impact.

UN SDGs	Description	Singtel's Group position	Examples of Singtel Group's efforts
	Goal 3: Good health and Well-being Ensure healthy lives and promote well-being for all at all ages	Singtel Group strives to ensure good physical and mental health for our people at the workplace and in our community, including online safety and cyber wellness.	• Monthly well-being activities to empower employees to achieve their health and lifestyle goals. (page 32-33) • Our Optus Digital Thumbprint programme and partnership with TOUCH on Help123 to educate students and parents on staying safe online. (page 48)
	Goal 8: Decent Work and Economic Growth Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Singtel Group is committed to developing our people and the community and creating a vibrant work environment across our global operations that enables individual, business and market success.	• Undertook a salient human rights issues assessment for our Singapore and Australia operations. (page 8) • Strong, collaborative partnership with UTES in Singapore and our Employment Partnership Agreement in Australia create and foster a positive workplace culture. (page 35)
	Goal 9: Industry, Innovation and Infrastructure Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	Singtel Group innovates continuously to bring the best services to our customers and collaborates with change makers to build an effective and sustainable ecosystem.	• Support and empower impact start-ups that leverage technology to address social and environmental issues through Singtel Group Future Makers, our social innovation programme. (page 47) • Achieve nationwide 5G standalone coverage - a global first for Singapore. (page 51)
	Goal 11: Sustainable Cities and Communities Make cities and human settlements inclusive, safe, resilient and sustainable	Singtel Group leverages our ICT competence to develop solutions that improve quality of living and societal inclusion, and focuses on building a resilient network infrastructure.	• Invested over S$30 million in Singapore and Australia to improve energy efficiency, reduce emissions and improve network resilience against physical risks and disasters to continue serving our customers. (page 24) • Invested in nine additional SATCATs to strengthen our disaster response capabilities in Australia. (page 18) • Our mobile wallet Singtel Dash enables migrant workers on any mobile network to remit money overseas easily to loved ones at home. (page 43)
	Goal 12: Responsible Consumption and Production Ensure sustainable consumption and production patterns	Singtel Group actively monitors and improves our resource and waste practices to increase circularity in our business operations and supply chain.	• Submitted our inaugural report on packaging, including 3R plans, as part of National Environment Agency's Mandatory Packaging Reporting requirements. (page 22) • We offer one-for-one take-back service for Singtel branded products for proper disposal at no cost, upon product delivery to customers. (page 21) • Expanded our in-store recycling programme in Australia to include Optus branded modems for recycling, where 95% of materials are recovered and reused. (page 22)
	Goal 13: Climate Action Take urgent action to combat climate change and its impacts	Singtel Group is committed to minimising our environmental footprint in our business operations and value chain to meet our carbon reduction targets.	• In support of GSMA's pathway for the ICT and mobile industry and to progressively achieve our net-zero target by 2045, we centred our efforts on reducing energy use, improving energy efficiency and increasing the proportion of electricity consumption backed by renewable energy sources. (page 15-16) • Completed a comprehensive review of our SBTi target for revalidation. (page 11-12)

02 Climate Change and Environment

Our strategy and commitment

At Singtel, we are committed to reducing our environmental footprint and conducting business responsibly to create long-term value for our stakeholders, including our people, customers and communities. Please refer to Figure 1 for our Singtel Group environmental framework.

The last two Conference of Parties (COP) UN Climate Change Conferences highlighted the need for urgent and aggressive actions from all sectors. Both COPs marked a leap forward in global efforts that address climate emergency and also implement more ambitious mitigation plans. Nearer to home, governments in Singapore and Australia are setting ambitious targets and making bold plans to combat climate change.

Our salient human rights issues assessment has identified that the telecommunications value chain can result in a range of potential environmental and social impacts, with some expected to be more severe and could lead to human rights issues. For example, renewable power purchase agreements could potentially involve environmental impacting activities such as land clearing. We are thus committed to maintaining a clean, healthy and sustainable environment, for both people and nature.

We see an important role for our digital networks and technologies in helping to minimise any negative impact on the environment. We also aim to make a difference beyond our business by enabling our partners and stakeholders to achieve the same.

Decarbonisation efforts to reduce greenhouse gas (GHG) emissions continue to be our focus in tackling climate change. In support of Global System for Mobile Communications Association (GSMA)'s pathway for the ICT and mobile industry and to progressively achieve our net-zero target by 2045, we centre our efforts on reducing energy use, improving energy efficiency and increasing the proportion of electricity consumption backed by renewable energy sources. During the year, we completed Project Zero, an extensive internal exercise with various business units to review and refresh our SBTi targets to align with the Paris Agreement's ambition of a 1.5°C pathway. The refreshed target will be announced in due course when revalidated by SBTi.

Managing resources responsibly is also an important part of our environmental strategy. For Singtel Group, the most material aspects of circular economy and responsible resource management are those related to improving circularity of e-waste and packaging. We continue to optimise resource use and implement initiatives to ensure responsible waste management in our value chain.

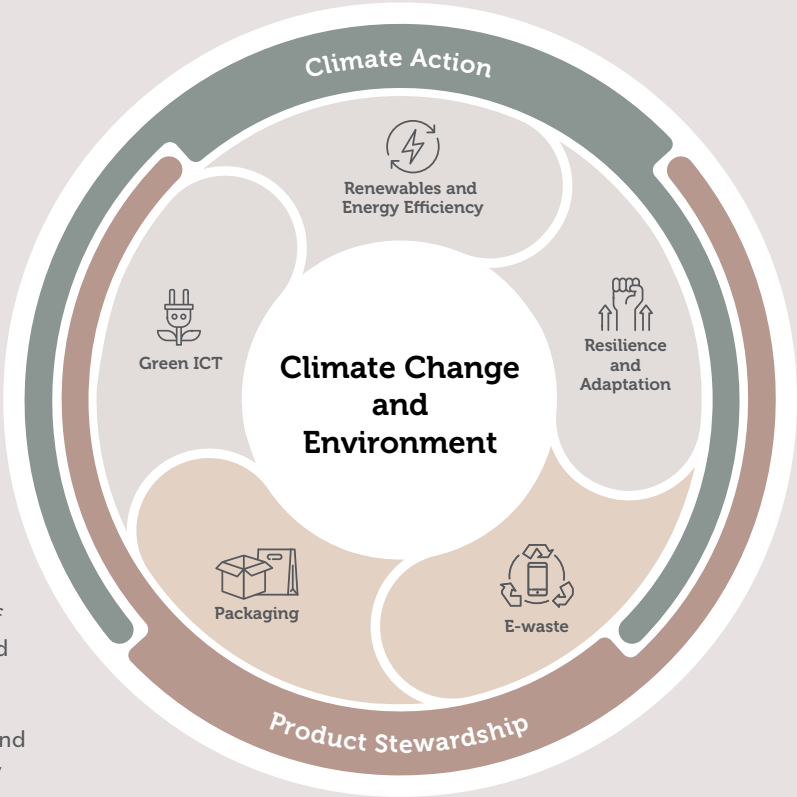


Figure 1: Singtel Group environmental framework

During the year, both Singtel and NCS achieved ISO 14001 Environmental Management System (EMS) certification. As part of this certification, we updated our Singtel Group EMS and Singtel Group Environmental Policy to enhance our ability to identify, assess and manage environmental risks, including environmental compliance and continuous improvements. During the year, there was no environmental legislation related fine or non-monetary sanction, as well as legal action against Singtel or Optus.

In anticipation of extreme weather and climate-related policy changes, we have earlier identified climate change risks and opportunities through conducting TCFD scenario-based assessments. They are taken into consideration as we design, expand and operate our network. We will use the scenario analysis insights to better manage the climate risks within our enterprise risk management system.

CLIMATE CHANGE

To enhance the operational resilience of our business and create more sustainable value for our stakeholders, we integrate climate change considerations throughout our business. In this section, we articulate our intensified efforts to decarbonise our business in accordance with our climate action plan (Figure 2). See Figure 3 for our FY2023 achievements.

Figure 2: Singtel Group climate action plan

01 **Manage GHG emissions in line with 1.5°C ambition of the Paris Agreement to reach net-zero by 2045.**

02 **Link emissions to financing to quantify carbon and drive change in behaviour.**

03 **Address physical risks through network adaptation and advocate for climate action with our stakeholders.**

Figure 3: Singtel Group climate action journey towards net-zero by 2045

FY2018
- Among the first companies globally to endorse the TCFD Framework.
- Singtel Group's science-based emissions targets approved in October 2017, first in Asia ex-Japan.

FY2020
- Only Southeast Asian company among a pioneer group of 28 global companies in July 2019 that committed to keeping global temperature increase within 1.5° C and net-zero by 2050.
- Signed our first renewable energy Power Purchase Agreement (PPA) for our Singapore operations.

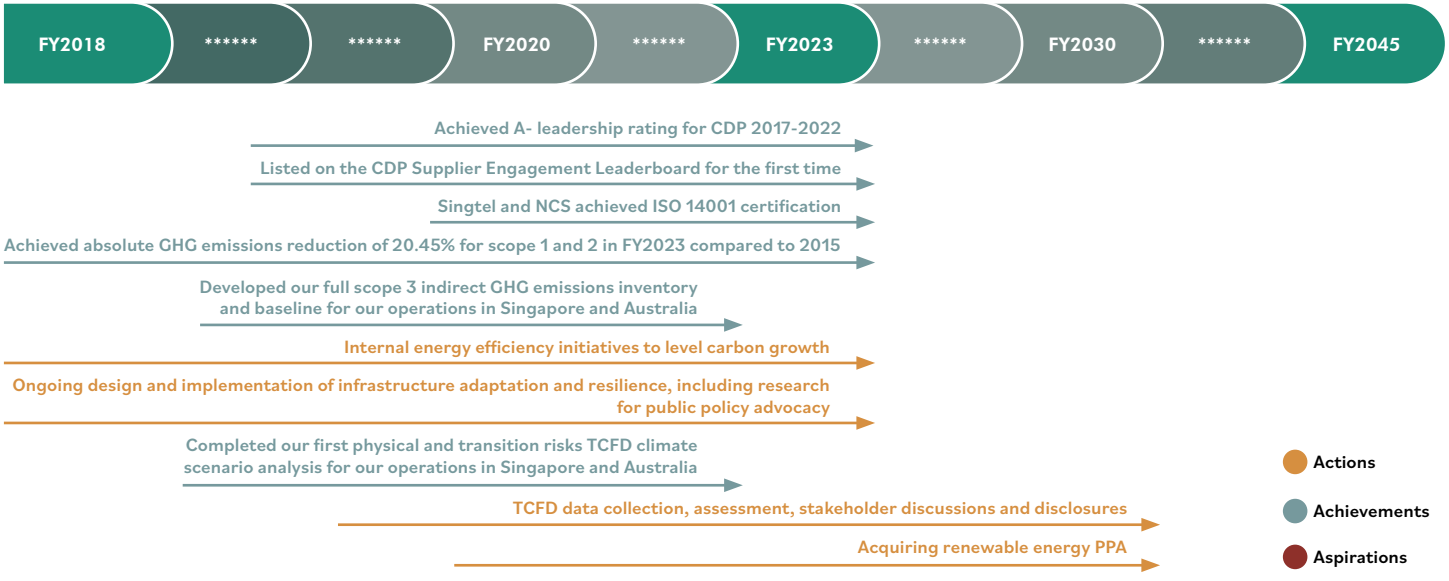
FY2021
Completed TCFD pilot study of physical and transition climate risks of our operations in northern NSW, Australia.

FY2022
- Completed our first physical and transition risks TCFD climate scenario analysis for our Singapore and Australia operations.
- Published our inaugural standalone TCFD Report 2022.
- Developed our full scope 3 indirect GHG emissions inventory and baseline for our operations in Singapore and Australia.
- Piloted Internal Carbon Pricing in Singapore with four projects.
- Launched Singtel Group's first sustainability-linked loan, the largest Singapore-dollar denominated loan at that time.

FY2023
- Listed on the CDP Supplier Engagement Leaderboard for the first time.
- Leadership score in climate change for CDP 2022 for the 6th consecutive year.
- Awarded the Sustainability Perception Index 2023.
- Ranked 97 on Clean200 by Corporate Knights and As You Sow.
- Singtel and NCS achieved ISO 14001 certification.
- Achieved improvement of GHG emissions intensity of 0.030tCO_2e/TB from 0.035tCO_2e/TB.
- Reduced scope 1 and 2 absolute emissions by 11.31%.
- Completed four solar energy generation projects amounting to 1.38MWp and expected to generate 1,700MWh annually.
- Completed a comprehensive review of our SBTi target for revalidation with the support of all business units and brought forward net-zero goal to 2045.

FY2030
SBTi target to reduce absolute scope 1 and 2 GHG emissions by 42%, and scope 3 by 30% from 2015 baseline.

FY2045
Towards net-zero by 2045 in support of GSMA's pathway for the ICT and mobile industry.



1. Managing our GHG emissions across our operations and value chain to reach net-zero

GHG emissions performance for FY2023

The Singtel Group's total GHG emissions for all three scopes in FY2023 were 4,007,299tCO_2e, a 53.63% reduction compared to FY2022. Scope 1 and 2 emissions stood at 438,957tCO_2e, a 11.31% reduction from the previous year and 20.45% compared to 2015 baseline. We have met our SPTs for our SLL/SLB for the year.

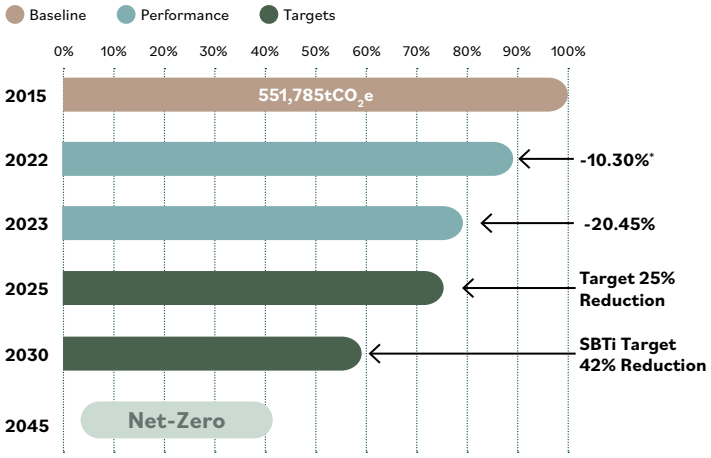
Singtel Group scope 1 and 2 emissions

In FY2023, the Group scope 1 and 2 emissions decreased by 1.13% and 11.44% respectively compared to the year before, resulting in an overall reduction of 55,987tCO_2e or 11.31% from the previous year.

Despite an increase in Optus diesel usage due to the installation of generators and diesel tanks around the country, the overall scope 1 emissions for the Group showed a slight decrease. This was due to lesser refrigerants used by Optus and lower fuel consumption by generators and vehicle fleet in Singapore. There were less maintenance works for the generators and a reduced number of diesel vehicles in our fleet as we transit towards electric vehicles (refer to page 15 for more information).

While there has been an inclusion of underground base station electricity consumption and rollout of 5G connectivity island-wide in Singapore, Singtel saw only a slight overall increase of 0.18% in electricity consumption. This was due to reduction achieved from energy efficiency initiatives within the network, as well as reduced utilisation of our buildings contributed by our hybrid way of working. Coupled with the retirement of local Renewable Energy Certificates (RECs), Singtel scope 1 and 2 emissions in Singapore reduced by 5.08%.

Figure 4: Singtel Group scope 1 and 2 emission targets



*Restated for Singtel Group numbers for 2022

Figure 5: FY2023 Singtel Group scope 1,2 and 3 emissions

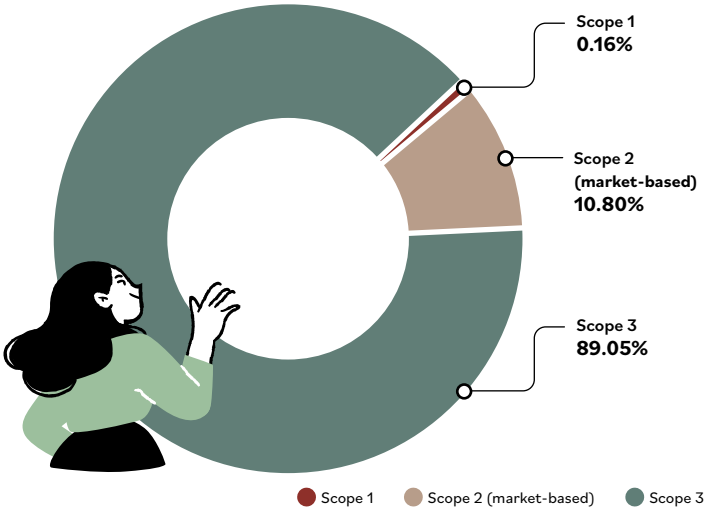
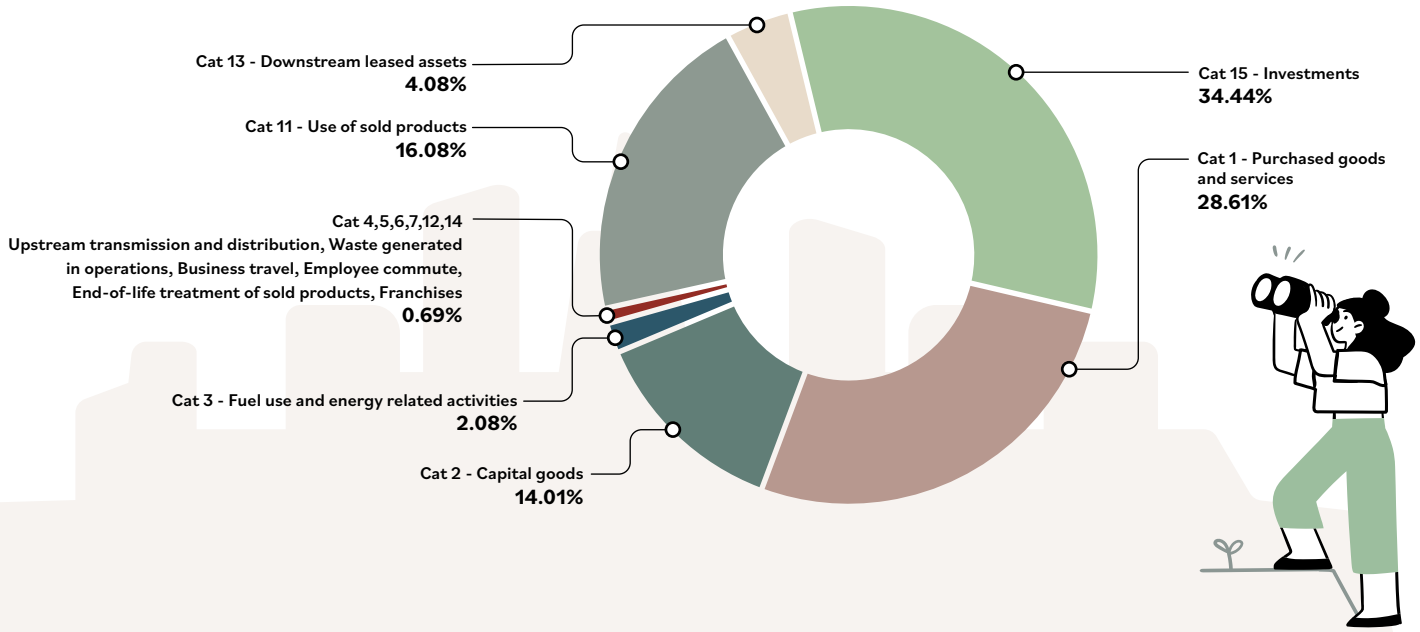


Figure 6: FY2023 Singtel Group scope 3 emissions breakdown



Over at Australia, Optus delivered a 12.96% decrease in electricity consumption due to the decommissioning of our legacy infrastructure. With the retirement of Large Generation Certificates (LGCs), we achieved a reduction of 12.90% for our scope 1 and 2 emissions.

We also stepped up our renewable energy efforts (refer to Figure 8). Our overall electricity consumption backed by renewables this year increased from 5.74% to 7.28%.

Singtel Group scope 3 emissions

FY2023 marks the second year of our full scope 3 indirect GHG emissions assessment. The Group level scope 3 emissions stood at 3,568,342tCO_2e, a 56.20% decrease from FY2022. This year, we improved our accounting method by adopting a hybrid method for category 1 and 2 which resulted in significant emissions reduction. Overall, the top three categories with the largest emissions are category 15, 1 and 11 respectively. These three categories account for 79.13% of our total scope 3 indirect GHG emissions. Table 1 and Figure 6 depict the performance of each category during the year.

Table 1: Singtel Group scope 3 emissions

Category	FY2022 (tCO_2e)	FY2023 (tCO_2e)	Reasons for emissions change from FY2022	% change from FY2022
1: Purchased goods and services	4,173,709	1,021,003	There is an approximate 75.54% decrease in category 1 emissions and 73.41% in category 2 emissions from prior FY. The decrease for both category 1 and 2 are due to the following reasons: 1) Singtel switched from using the spend value of purchased orders (PO) to that of goods received notes (GRN) to determine the spend amount. This improves the data accuracy of the goods and services we purchased for the year because GRN is only issued when the goods and services have been received by Singtel. 2) There was an update to the industry average emission factors used this year which are more robust and reflective of the actual situation. This takes into account adjustment for inflation, currency conversion and updates from the source of emission factors. 3) The Group adopted a hybrid accounting method, using a mix of industry average emission factors, company emission factors and product carbon footprint. Emissions resulting from company emission factors and product footprint are generally lower than when industry average emission factors – what we used previously – alone are used.	-75.54%
2: Capital goods	1,880,644	500,081		-73.41%
3: Fuel and energy related services	65,627*	74,234	Singtel included transmission and distribution losses (T&D) as well as well-to-tank (WTT) T&D losses this year for electricity consumption. Hence we restated FY2022 data to include the T&D losses. In Australia, the upstream emission factors also increased this year.	13.11%
4: Upstream transportation and distribution	5,690*	4,149	Optus has aggregated category 4 and category 9 emissions under category 4 this year. This is an adjustment from last year categorisation.	-27.08%
5: Waste generated in operations	901	1,635	The amount of waste emissions generated in Singtel increased because of renovation works at some of our sites and higher Singapore waste incineration emission factors. Optus waste emissions increased due to more employees returning to offices, as well as new office fit-out e.g. new Adelaide offices.	81.47%
6: Business travel	918	9,115	As pandemic restrictions lifted, our business travels resumed to pre-pandemic levels and more employees returned to the office, driving up employee commute.	892.94%
7: Employee commute	3,308	6,525		97.26%
11: Use of sold products	654,818*	573,697	The increase in emissions was due to three reasons: 1) Improvement in data completeness and quality relating to all sold products as well as more detailed segregation of product types to reflect more accurately on use of sold products. 2) Introduction of smart spaces products in Optus. 3) Update of emission factors.	-12.39%
12: End-of-life treatment of sold products	1,361	812		-40.34%
13: Downstream leased assets	127,425*	145,598	This was driven by higher electricity consumption from our tenants in our data centres in Singapore.	14.26%
14: Franchises	2,710	2,407	Number of franchises in Australia decreased slightly.	-11.16%
15: Investments	1,229,205*	1,229,086	There was a significant increase because one of our regional associates, which we have a major stake in, restated last year's emissions.	-0.01%

* Denote restated numbers

Figure 7: Singtel Group decarbonisation hierarchy

Reducing our GHG emissions in FY2023

Guided by our decarbonisation hierarchy (see Figure 7), we embarked on the following decarbonisation initiatives.

(a) Electrification and replacement of vehicles to reduce scope 1 emissions

During the year, we replaced 50 diesel vans with electric vehicles (EVs) for our Outside Plant Engineering and Field Delivery Operations fleet in Singapore. Each EV can save over 3,294kgCO_2e per annual mileage compared to a regular diesel van. This results in a total reduction of 164,700kgCO_2e scope 1 emissions and air pollution. We are in the process of setting up appropriate infrastructure to support and drive green mobility.

Our fleet of electric vehicles in Singapore.

More than 30 EV charging points are now available at five of our telecommunication exchanges island-wide. In Australia, 51% of our passenger vehicles are hybrid and we also introduced our first EV to our Optus vehicle fleet. We will continue to work with our fleet partners to identify suitable EV options for our operational teams (e.g. light-duty trucks), given the extensive nature of the regional network and lack of EV charging infrastructure in many locations.

(b) Energy efficiency improvement through optimisation and upgrades

We are continuously improving our energy efficiency to reduce our electricity consumption. During the year, we upgraded three chillers at our exchange in Novena, saving an average of 516.84MWh annually. This wraps up our entire chiller upgrade project which we started in 2018, involving a total of 33 chillers with annual savings of 7,920MWh.

For our new 5G network, we have enabled its sleep function which allows the 3.5GHz capacity layer or wavelength to be turned off during our maintenance period every night. This is expected to save 860.19MWh annually. We will continue to look at ways to maximise 5G's energy efficiency. Our network management also embraces advanced technologies and big data analytics. For instance, we improved the design of existing 4G Radio Access Network (RAN) during the year, leveraging artificial intelligence (AI) and machine learning (ML) to predict traffic patterns of individual radio cell transmitters. This resulted in optimised cell sleep configurations and energy savings of up to 8% annually or an average of 1,651MWh annual savings.

We have upgraded the technology in many of our facilities to be more energy efficient. NCS Hub, which started retrofitting works in April 2017, has replaced lights in all stairwells, washrooms, offices and carpark with light emitting diode (LED) ones, saving a total of 557.30MWh to date. All passenger lifts have been replaced with more energy efficient alternating current variable voltages and variable frequency (VVVF) motor drives, contributing to an annual saving of 37.23MWh. The retrofit is expected to be completed in 2025 and NCS Hub is expected to save a total of 956.87MWh annually.

We have also replaced the lights in other facilities, resulting in more than 235.90MWh annual savings. For example, flood lights at our teleports are progressively being replaced with LED bulbs that use at least 75% less energy than fluorescent bulbs. We have rolled out LED lighting across our retail stores and have completed lighting upgrades at 98% of our network sites across Australia.

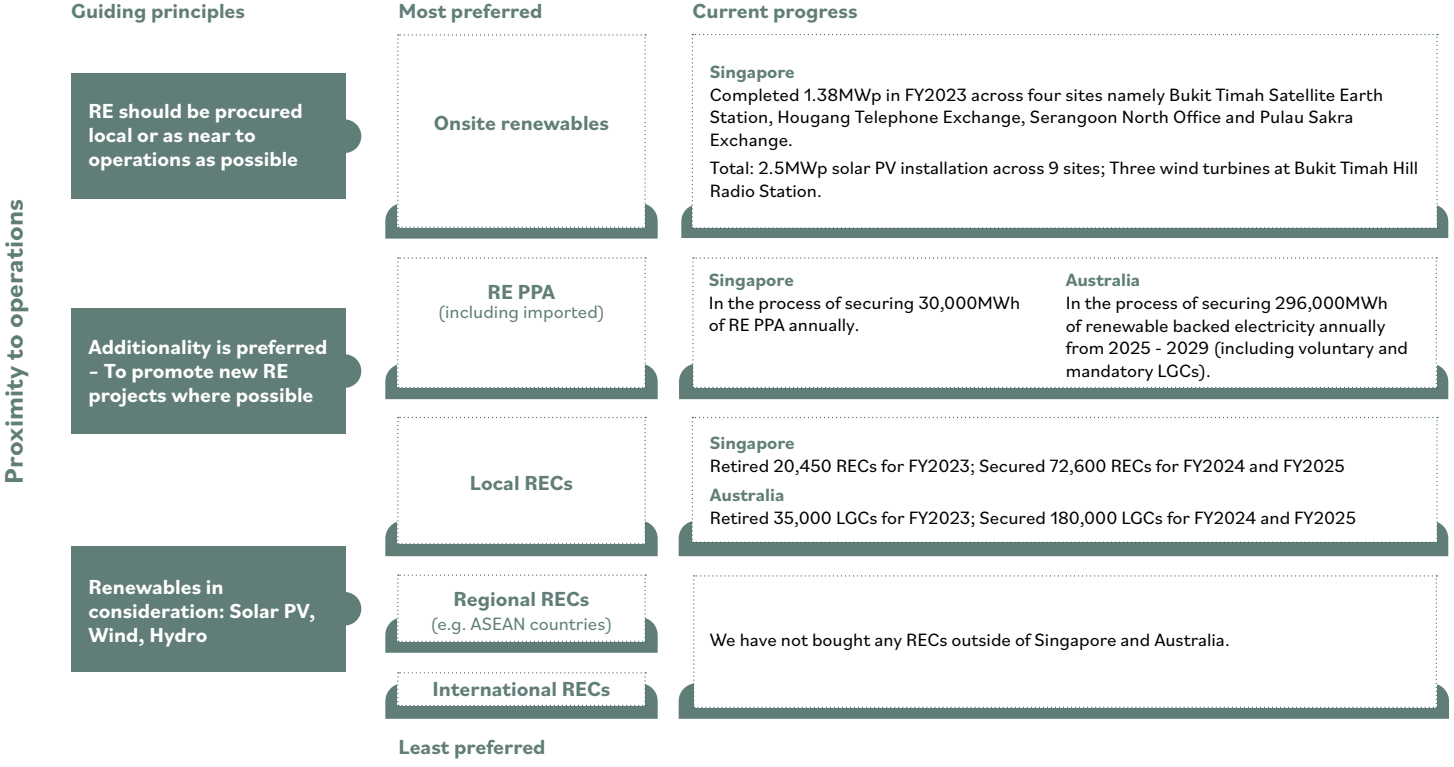
(c) Renewable transition

The networks, offices and other facilities we operate to support our connectivity operations consume electricity. Investment in onsite renewable energy generation and backing our electricity consumption with local renewable energy sources will aid in our decarbonisation journey. We also aim to increase the amount of our electricity consumption backed by renewable energy sources, which will help reduce our scope 2 emissions.

Table 2: Energy reduction initiatives in FY2023

Energy reduction initiatives in FY2023	Description	Estimated annual savings (MWh)	GHG emissions avoidance (tCO_2e)
1. Implementation of energy efficient chiller system across Singtel and NCS facilities	Replaced and overhauled chiller units as well as related mechanical and engineering equipment at our exchanges and office buildings in Singapore, targeting those that have been in operation for 15 years or more.	516.84	209.68
2. Replacement of aircraft warning lights from neon to LED lights	Replaced neon aircraft warning lights with LED at Bukit Timah VHF Station.	14.02	5.69
3. Optimisation of chilled water supply temperature at Singtel exchanges	Reduced chiller plant power consumption by increasing the set point from approximately 7°C to a maximum 8.5°C.	230.73	93.61
4. Replacement of floodlights with LED lights	Replaced our 150 watt (W) metal halide tubes with 50W LED lights that have the same uptime of 12 hours per day.	42.05	17.06
5. Optimisation of lighting system in antenna cabins	Rewired all antenna cabins in Seletar Earth Satellite Station to reduce usage of cabin lighting.	10.16	4.12
6. 5G3500 Radio Deep Sleep	Implemented radio deep sleep to shut down one or several radio units when it is not needed.	860.19	348.98
7. Modernisation of base stations to more energy efficient models	Migration to 5G, a greener technology with higher data transfer rates compared to any previous wireless technology generation and utilises a wide spectrum of 100MHz. This provides cell capacity comparable to four Singtel 4G bands combined. Singtel's overall 5G network energy consumption is up to 58% lower than 4G today.	432.98	175.66
8. Decommissioning of legacy platforms at Optus	Powered down network elements and 3G assets in our Optus network.	18,959	12,893

Figure 8 : Singtel Group renewable energy strategy and approach



During the year, we installed solar PV panels to generate energy at four sites in Singapore during the year, with a total capacity of 1.38MWp. They are expected to generate 1,700MWh of energy annually. We have used all the available spaces at all our sites and will continue to install solar PV panels whenever the opportunity arises for new development projects.

In Singapore, onsite renewable electricity generation is limited due to space constraints. Hence we continue to back our electricity consumption with a portfolio of local RECs. We retired 20,450 Singapore RECs during the year, bringing Singtel renewable energy proportion for the year to 8.34%. In Australia, we retired 35,000 number of LGCs and have committed to achieving 100% of our electricity to be backed by renewable energy sources by end-2025.

2. Linking emissions to financing to quantify carbon and drive changes

We believe in the effectiveness in complementing finance with sustainability to enable lower emission choices during decision making processes.

(a) Internal carbon pricing

We use shadow pricing, a type of Internal Carbon Price (ICP), to attach a hypothetical cost to GHG emissions to guide business decision on capital expenditure and purchase. ICP promotes behaviour change and prepares the business for potential climate-related transitions.

Shadow pricing can incentivise investments in energy efficient options and de-risk stranded assets.

Following the pilot ICP in 2022, we initiated a soft launch of applying a shadow price of S$50 per tonne of CO_2e for projects exceeding 1,000 tonnes, for our Singapore business to assess the potential impacts of carbon pricing on our operations. For example, we applied a shadow price to a tender process for an IT tool that will allow us to generate quotation for orders. Each tenderer was evaluated on their emissions calculated using their company emission factors. The shadow price was then applied to arrive at a holistic cost of ownership, which imputed the total environmental impact as cost associated with using this tool for this particular business activity.

(b) Sustainability-linked financing

For sustainable financing, under our Olives programme, we continued our momentum from last year and issued a sustainability-linked bond and two sustainability-linked credit facilities, with climate-related Sustainability Performance Targets (SPTs).

i. Singtel[1] issued a US$100 million digital sustainability-linked bond.
ii. Singtel[1] signed a S$500 million sustainability-linked revolving credit facility.
iii. Optus[2] signed a A$1.4 billion sustainability-linked revolving credit facility, the first such revolving credit facility by an Australian telco.

(c) Investment in sustainability-related technology

Besides our social innovation programme Singtel Group Future Makers, our corporate venture capital arm Singtel Innov8 invests in and supports the technological innovation and acceleration of promising start-ups.

This year, we invested in two companies – Handprint and Sinai – in the climate tech space. As one of Asia's leading regeneration platforms, Handprint helps companies to embed regenerative practices into their businesses, such as restoring ecosystems critical for planetary health. These can include coral reefs, mangroves and habitat preservation. Handprint curates, quantifies and verifies this positive impact, and provides tools for companies to report and communicate this impact digitally.

Sinai provides a tool for companies to automate carbon analysis and report for their entire business operation, transforming the way they interact with their stakeholders, value chain and the environment.

To create value for our customers and communities, we invested a total of S$16.6 million in Singapore to improve our energy efficiency, reduce emissions and generate green products and services. In Australia, we invested A$15.8 million to improve our network resilience against physical risks and disaster relief to continue serving our customers in times of critical need and reduce our emissions. These adaptation and mitigation activities are carried out based on the scenario modelling which we completed in 2021 to understand the challenges that climate change presents and the impacts we are likely to face in Singapore and Australia.

3. Addressing physical risks through network adaptation and advocacy for climate action

Climate change poses strategic and operational risks to Singtel Group. We strive to understand climate-related risks and opportunities under different and sometimes extreme scenarios and embed our response into our business strategy and operations. Hence, we will continue to invest in network adaptation and resilience, while enhancing our policies and aligning our internal processes with TCFD framework.

Protecting the environment remains as our key priority. Both Singtel and NCS environmental management systems are ISO 14001 certified for our Singapore operations. As part of continuous improvements, we have set targets for our business units (BUs) in the areas of energy, water and waste, and raise the bar annually to improve our environmental performance. We also monitor emerging environmental requirements and changing stakeholder expectations.

(a) Community resilience and disaster response

Climate-related extreme weather events have become increasingly severe and frequent in the past few years and this trend is expected to continue. We are likely to be exposed to major physical risks, such as flooding, extreme heat and bushfires, which may disrupt our business continuity and generate negative financial impact.

1. Through Singtel Group Treasury Pte Ltd | 2. Through Singtel Optus Pty Limited

Embedding sustainability in our new workplace: Comcentre redevelopment

During the year, we announced an exciting plan to redevelop our iconic Comcentre headquarters along Singapore's Orchard Road belt in end-2024. Envisioned as the first end-to-end carbon neutral development from design, construction to operations, this project supports Singtel's vision to build a greener, sustainable future and facilitate our efforts to reach net-zero for our own operations. The redevelopment is expected to be completed in 2028.

The new Comcentre will incorporate the best practices in sustainable and biophilic design. With a target to minimise the embodied, construction and operational emissions of this project. It will aim for the highest health, technology and sustainability ratings, including BCA Green Mark Platinum (Zero Energy), WELL Platinum, WiredScore and SmartScore ratings. It will be designed to provide best-in-class energy performance, leading to energy efficiency of more than 50% compared to 2021 baseline, and achieving net-zero energy through innovative low emission technologies, onsite and offsite renewables.

In March this year, we held the first of a series of Comcentre redevelopment sustainability workshops with various business units to explore additional sustainability initiatives as well as perspectives from stakeholders like employees, tenants and communities.

We are committed to being a reliable and resilient telecommunications company, supporting our community during extreme weather events and mitigating biodiversity loss. As business resilience and network adaptation are critical, we have undertaken initiatives to minimise the physical impacts of extreme weather events on our network infrastructure in Singapore and Australia.

During the year, Australia experienced a series of natural disasters and extreme weather events. To support our customers and communities, we continue to invest in disaster response innovations to keep our network strong and resilient.

For instance, we invested in nine additional Satellite Cell and Trailers (SATCATs) to strengthen our disaster response capabilities as their portable nature allows for rapid deployment should there be network disruption. These back-up mobile network connections are designed to provide temporary mobile coverage and public WiFi for customers and communities.

We also provide customers affected by natural disasters with additional support including data boosts, internet assistance kits and power banks for use at evacuation centres. For example, during the Eugowra flood disaster late last year, we supported the community and affected businesses with loaded prepaid SIMs and devices, rechargeable power banks, multi-charger cables, power surge boards, reusable drink bottles and wireless modems.

To further expand satellite connections for New South Wales (NSW) state emergency services, we have supplied the NSW Telco Authority with eight additional Kymeta portable 'Comms on the Move' antennas which provide them with the ability to leverage the vast Optus satellite footprint to establish a virtual point-of-presence, supporting critical communications even when existing infrastructure has been compromised. With this new deployment, we are building further on our position as the largest commercial supplier of Kymeta antennas in Australia and New Zealand, with a strong presence in regional Australia to provide seamless, cost-effective access.

To minimise mobile outage when power grid fails, we have invested in innovative backup battery solutions. They ensure that our mobile sites have power and connection for an additional 10 to 20 hours of service during a power outage. This also helps power companies with their restoration work.

(b) Collaborating with academia research and industry partners

We collaborate with partners to enhance our capability to respond more effectively and quickly to extreme climate events that Australia is seeing more of late.

During the year, we designed and manufactured six Disaster Recovery Skids (DR Skids), which can be deployed to provide longer-term connectivity in regions affected by natural disasters, through a co-funded strategic initiative with the Federal Government. DR Skids use solar energy as a complementary energy source for standby generators, extending their standby power. The first DR Skid was deployed in November 2022 in response to the severe flooding in Gooloogong, NSW, helping our customers and community to remain connected while the telecommunications infrastructure was under repair.

It is important that we reduce our scope 3 supply chain emissions. During the year, we worked closely with key 5G suppliers - Ericsson, Huawei and Nokia - to better understand and quantify the embodied carbon emissions of our network infrastructure. Embodied emissions include emissions associated

with the network construction processes as well as materials used in our mobile base stations. Through this engagement, we have a clearer picture of our emissions inventory and insights into areas where emissions reduction improvements can be made. We will work with our suppliers on our shared environmental ambitions.

Globally, Singtel Group has played a leading role in the GSMA Climate Taskforce where we participated in a few working groups to develop strategy papers and telco sector guidance. Last year, the first Strategy Paper for Circular Economy was published, focusing on how network equipment can evolve towards more circular business models. Following that, we contributed to a second circularity strategy paper during the year that looked at the largest environmental impact of the mobile industry – mobile devices. The paper was published in November 2022 with the intention to drive circularity related changes within the industry through collection. We were also involved in the GSMA scope 3 guidance development work.

We continue to contribute to the Singapore Standards Board through chairing the Pro-Tem committee on uplifting the standards of e-waste recyclers in Singapore.

(c) Engaging stakeholders to promote sustainability

I. Promoting a sustainable corporate culture

To keep our people abreast of the latest climate-related topics, we provide training and conduct sustainability workshops. During the year, we launched a new e-learning course on the fundamentals of sustainability for our Singapore workforce, which includes a module on environmental sustainability and climate action. The course modules aim to provide our people with basic knowledge of sustainability at Singtel and how they can contribute across our sustainability pillars.

In collaboration with the finance team, we launched the first series of sustainability foundation training. We organised sessions for key departments like procurement and business teams. We shared about ICP and the importance of integrating a sustainability-oriented culture from both corporate and personal perspectives. This training will be extended to employees involved in ICP implementation in the new year.

We also conducted 14 workshops on GHG accounting, climate-related target setting, carbon offsets and greening our business. Examples of these workshops include one conducted for our top executives across the Group on understanding and contributing to our net-zero roadmap; one held with our business product team to align our obligations relating to e-waste and packaging, where we also highlighted opportunities for green revenue, and a procurement workshop where a three-year sustainable procurement roadmap was developed.

Numerous townhalls organised across the Group during the year also incorporated the sustainability theme. In addition, our subsidiary NCS embarked on the equipping journey by ramping up sustainability training of employees in addition to our e-learning course. We organised webinars and face-to-face workshops on NCS sustainability basics and incorporated sustainability into part of our leader training and new hire orientation.

In support of World Water Day 2023, more than 40 employees and their family members participated in the Walk for Water event organised by Public Utilities Board. They learnt the importance of water sustainability and security, as well as water-saving habits.

As part of our environmental conservation efforts, we have planted more than 1,200 native trees across Singapore over the past decade. In November 2022, about 200 Singtel and NCS employees planted another 200 trees at Pulau Ubin in support of National Parks Board's OneMillionTrees Movement which aims to restore nature to our city.

Over the years, Singtel has been supporting WWF Earth Hour, switching off and dimming non-essential lights at our properties and retail stores during the annual symbolic event. For Earth Hour 2023, we ran a community engagement and educational campaign 'Let Your Devices Sleep While You Sleep'.

Singtel and NCS employees gather to plant 200 trees.

We distributed complimentary timer power plugs at Singtel Shops to customers, who pledged to our campaign through WWF Singapore Kosong Plan, to motivate them to commit to net-zero emissions with us by 2045. We also donated S$25,000 in support of the Earth Hour movement. Internally, we distributed the timer power plugs to employees who completed our online sustainability training module to encourage knowledge equipping for a green economy. We strive to increase people's environmental awareness and encourage them to take responsibility for their own carbon footprint.

Timer power plugs distribution at our staff roadshow.

II. Engaging our customers with more sustainable products and services

With rapid digitisation and new climate-related technologies, we want to provide green offerings to customers. In Singapore, we partnered SP Group and launched a green bundle with WiFi6 devices, which are 30% more energy efficient than the preceding WiFi5 devices, exclusive to the new flat residents who signed up for the Tengah Centralised Cooling System.

With Optus Eco, our customers in Australia can reduce their eco-impact by making simple changes to how they connect and manage their services. They also have the option to offset some of their mobile's impact and support Australian carbon reduction projects, amplified by Optus' matching. During the year, more than 13,000 customers have participated and 555 tonnes of CO_2e have been offset in Australia through our Boonora Downs and Tallering Station projects.

III. Demonstrating thought leadership

We recognise that combatting climate change requires companies to work in partnership with others and be active thought leaders to contribute to capacity building. We have representatives in various boards and committees of Institutes of Higher Learning such as the Industry Advisory Committee on Sustainability for Singapore Institute of Technology and the Nanyang Technological University Graduate College Advisory Board.

We actively share our experiences at various conferences, seminars and summits to inspire and support others in their climate journey. Some notable events that our sustainability leaders spoke at during the year are: CDP Environmental Disclosure for Southeast Asia webinar: Global Trends and Best Practices for Impact; Global Compact Network Singapore Summit 2022; Institute of Singapore Chartered Accountants Mini Conference 2023: Complement Sustainability with Finance; Sustainability Leaders' Summit in Melbourne; and The Economist's 2nd Annual Sustainability Week Asia: Upskilling and Reskilling for the Green Transition.

Green ICT

As a leading connectivity and technology provider, we constantly innovate and look for ways to enable our customers to be more sustainable while using our products and services. 5G can also help to drive this.

Enabling industry adoption of 5G

Singtel has successfully integrated 5G technology into A*STAR's Model Factory @ Advanced Remanufacturing Technology Centre (ARTC), enabling businesses to explore the potential of combining digital technologies such as IoT, AI and robotics with 5G to create innovative manufacturing solutions that potentially come with lower emissions. The initiative aims to accelerate the adoption of 5G technology by manufacturers in Singapore and contribute to the country's smart nation initiative towards sustainability through digital innovation.

Enabling customers to reduce emissions

Singtel Enterprise team helped a leading regional financial services group to modernise its traditional international network with sustainability in mind. The system lacked visibility and governance, required physical site visits for maintenance and security changes, and was an inflexible network that did not align with evolving business needs. To help the customer modernise its network with lower GHG emissions in mind, Singtel Enterprise delivered a modern enterprise international network solution that was built with centralised orchestration and automation capabilities offered by Singtel's ***Liquid-X*** platform, a suite of cloud centric services, designed to make enterprise networking easier to connect, manage, monitor and expand globally.

This new network has enabled the provisioning and servicing of the new intelligent network edge to be more templatised and automated. It has also greatly streamlined the customer's need for multi-country professional services travel and supply chain dependencies on various network appliance vendors. This resulted in reduced physical site visits and redundancy, with 75% less network equipment deployed, and a 75% improvement in the energy efficiency of running the network service.

The estimated scope 2 emissions related to using this network were reduced by more than half, with a sizeable scope 3 reduction. This solution will subsequently be replicated when they standardise the Singtel Liquid-X intelligent network edge for all their sites.

On the mobile front, we introduced a handset battery saving feature through our 5G network. This feature will switch to the lower spectrum bandwidth, which is below 100MHz, where possible, depending on data usage requirements. This reduces computing demand on the phone thus reducing power usage. It can potentially reduce up to 7% device power consumption per phone, representing total savings of up to 1,056MWh annually based on the number of supported devices on our network.

RESOURCE MANAGEMENT

Ensuring resource sustainability is a key focus for us, especially as climate change and increased demand impact the supply of raw materials. Our operations generate various types of waste, such as electronic, packaging and corporate waste. By designing products for circularity, reuse and recycling, we can contribute to a sustainable supply chain and reduce GHG emissions.

The circular economy offers considerable opportunities. We will continue to develop low-carbon products and solutions that promote environmental sustainability. The goal is to leverage our technology and services to empower companies to reduce their carbon footprint, by digitising their businesses and operations through our 5G and IoT solutions.

Our approach to resource management considers the impact of our products and services before they reach our stores, during our operations, and after their useful life. To this end, we have taken various actions across all product life cycle stages, such as the development of sustainable packaging and e-waste take-back programme. We are also committed to reusing and recycling wherever possible. In Singapore, we support national waste management targets under the Singapore Green Plan 2030. In Australia, besides complying with the Recycling and Waste Reduction Act 2020, our strategy is driven by three goals to achieve by 2025: divert 90% of our waste from landfill, reuse and recycle over 90% of our e-waste, and use 100% recyclable, reusable or compostable packaging on Optus-branded products.

Reducing the environmental impact of corporate waste within our operations is another priority, and we have recycled waste from our offices during renovations. In particular, we saw a 368% increase in waste recycling from 28 to 131 tonnes during renovations at our Serangoon North office, NCS Hub and Yio Chu Kang Telephone Exchange.

Water conservation is also important to us, and we are committed to minimising our environmental impact by setting a water intensity reduction target in Singtel Environmental Management System. Despite the increase in overall water usage for Singtel, we strive to replace potable water usage with recycled water, such as NEWater, whenever possible. Compared to our water usage before the COVID-19 pandemic, our usage of recycled water in Singapore increased by 157% with the expansion of our data centre operations, while the use of potable water remains relatively constant. To reduce our water consumption, we are developing water conservation targets and initiatives and will make progressive report over the next few years. In Australia, we committed to a minimum NABERS water rating of 4 stars for all our properties. This rating looks at the amount of water used and recycled within a building.

Managing our electronic and corporate waste

We are committed to refining our e-waste management process, ensuring that we comply with regulations, improve operational processes and advocate responsible e-waste disposal.

As part of Singtel's obligation under the Extended Producer Responsibility (EPR) scheme introduced by the National Environment Agency (NEA), we put 146.4 tonnes of ICT products into the market for both consumer and enterprise segments from January to December 2022. From April 2022 to March 2023, we were also responsible for 4 tonnes of all consumer e-waste collected island-wide under the scheme.

As a retailer under the EPR scheme, we offer a one-for-one take-back service for our Singtel branded products under the ICT category for proper disposal at no cost, upon product delivery to customers. During the year, we collected 4.6 tonnes of e-waste for recycling using the ALBA e-waste bin at our Comcentre Singtel Shop.

As a responsible operator, Singtel recycles damaged CPE devices collected back from customer such as modems and set-top boxes amounting to 87.8 tonnes per year. During the year, we refined our existing e-waste management process for more detailed reporting where we derived recycling rates for individual e-waste streams such as scrap copper cables, IT equipment, scrap optical fibre cables and network equipment.

In observance of International E-Waste Day in October last year, we organised a webinar with ALBA E-Waste Singapore to raise staff awareness on the importance of e-waste recycling. We also held a staff e-waste collection drive across five of our office locations that yielded 1.2 tonne of e-waste.

Singtel employees sorting e-waste at our collection drive.

We set up e-waste collection boxes in collaboration with Engineering Good to collect used IT equipment for distribution to their beneficiaries after refurbishing. From November 2022 to March 2023, 1,401 units of household IT equipment, weighing 0.96 tonnes, were collected.

Our 2021-2025 Circular Economy Roadmap which we developed for our Australian operations supports our three 2025 waste management goals. It highlights opportunities to reduce waste and provides actions across our supply chain streams

to minimise the amount of single-use and non-recyclable packaging used in Optus products.

As one of the founding members of MobileMuster, we have been supporting the industry-wide initiative to reduce the amount of old mobile devices ending up in landfill. We have since expanded our in-store recycling programme for customers who can drop off not only their mobile phones but also Optus branded modems for recycling, where 95% of the modem materials are recovered and reused.

We have made good progress in our effort to encourage our customers in Singapore to switch to e-bills. Between April 2022 and March 2023, e-bill utilisation by our consumers increased from 69% to 77%, resulting in a reduction of about 1.5 million sheets of paper used for printing every month, equivalent to saving 97 trees. Utilisation by our enterprise customers increased from 74% to 77%, reducing about 250,000 sheets of paper needed for printing per month, equivalent to saving 16 trees.

Enabling sustainable packaging

Under Singapore's Resource Sustainability Act, Singtel is required to report our packaging waste as part of Mandatory Packaging Reporting. The list of regulated products and our reporting obligations are categorised into three packaging categories: primary packaging for Singtel branded products, service packaging used by all Singtel retail channels, and all packaging used for products exclusively imported for our business.

We report our packaging data and 3R (reduce, reuse and recycle) plans to NEA annually and submitted in March 2023 our data for calendar year 2022. The total amount of packaging used by Singtel and NCS was 138 tonnes, with paper being our top material (see Figure 9).

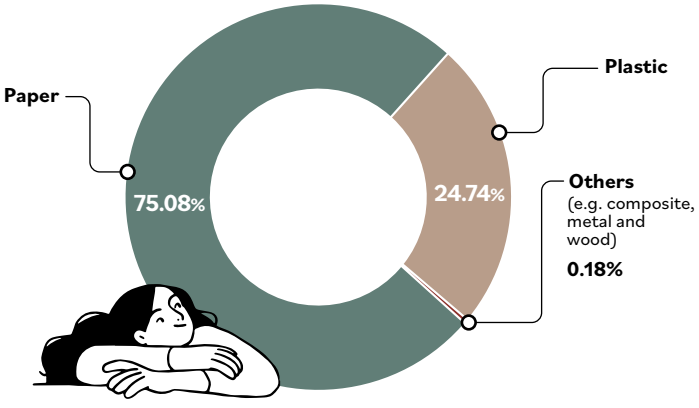
We have set ourselves goals to reduce single-use plastics and also taken a targeted approach to tackle each type of unique waste that we are responsible for, such as SIM cards.

Our all-digital mobile brand GOMO launched its half-sized SIM card in December 2021, which reduced plastic waste. The packaging also includes environmentally friendly materials such as 100% recyclable and FSC certified paper. 99.8% of all GOMO SIM cards are half-SIMs, each weighing 2.3g lighter than a full-SIM. As a result, we avoided approximately 168kg of ABS/PVC plastic in FY2023. Similarly, we saved ten tonnes of plastic in Australia during the year with half-sized SIM cards.

We continue to use more sustainable product packaging. Today, all of our Singtel Broadband routers and mesh packaging boxes are made from at least 80% recycled material. To further reduce our product packaging associated emissions, the newly redesigned Singtel TV set-top box packaging volume decreased by 63%, and we can ship 20% more units per container compared to its previous size.

In Australia, we have developed the first sustainable modem made with 95% recycled plastics for the casing, and its packaging is free from single-use plastic, together with our partner. This solution contributes to our 100% recyclable, reusable or compostable packaging 2025 target and meet the needs of our environmentally-conscious customers.

Figure 9: Singtel and NCS packaging materials by weight (tonnes) for 2022



Summary of our response to TCFD recommendations

Recommendations	Key points
Governance: Disclose the organisation's governance around climate-related risks and opportunities	
a) Describe the board's oversight of climate-related risks and opportunities	Singtel Board provides oversight of the company sustainability strategy and initiatives, and approves the materiality register, targets and disclosures which include climate-related risks and opportunities. The Board is updated on the strategy, plans and performance twice a year, and officially signs off on the annual sustainability report which includes comprehensive disclosures on the company's climate change agenda, climate-related risks and opportunities, targets and performance.
	Board Risk Committee (RC) reviews the company's enterprise risks, including climate-related risks, while our main board provides oversight and stewardship of our GHG reduction strategy and climate-related investments. RC has at least one session per year dedicated solely to discussing climate-related issues affecting the company operations in addition to regular updates, including specific discussions on overall climate strategy and targets. The Main Board approves the overall sustainability annual operating plans and budget at the beginning of the financial year and approves the final sustainability updates and disclosure for the year before the issuance of the annual sustainability report.
	Board Executive Resource and Compensation Committee (ERCC) reviews and approves senior and top executives compensation structure and long- and short-term incentives related to ESG KPIs and performance where climate-related KPIs are included.
	Board Finance and Investment Committee (FIC) approves sustainability-linked financing and associated ESG KPIs.
b) Describe management's role in assessing and managing climate-related risks and opportunities	Singtel Management Committee (MC) provides oversight and stewardship on the company's environmental sustainability strategy including climate-related ones and the associated investments e.g. our investment into renewable energy related matters.
	Risk Management Committee (RMC) reviews key climate-related risks, including emerging risks, mitigation plans and progress against targets, and makes recommendations to RC.
	Renewable Energy Management Sub-Committee (RESC) comprises four senior key executives of the management committee to provide oversight and guidance to the company's renewable energy procurement strategy. The RESC was established in 2021 to ensure initial focus and knowledge building on the renewable energy transition. It was dissolved in 2022. Strategy and decisions relating to all value chain emissions reduction targets and progress including renewable energy are now elevated to the Management Committee given the importance and financial impact of related decisions. The strategy and decisions continue to be supported by the renewable energy working group.
	Group Chief People and Sustainability Officer (GCPSO) has the overall accountability for the management of sustainability and is supported by the Vice President of Group Sustainability who oversees sustainability strategy, programmes, execution, performance and disclosures across the company operations in Singapore and Australia, including climate-related risks and opportunities. The GCPSO makes recommendations to the Group Chief Executive Officer and Management Committee.
Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material	
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term	Opportunities: Development of enabling green and low emissions ICT solutions; first mover advantage as a climate leader; and brand recognition as a reliable and resilient telco service provider during extreme weather events. The Singtel Enterprise team has been supporting customers to review and modernise their connectivity needs with more streamlined solutions using less hardware. Building greener DC data centres in the region is also an important opportunity that Singtel is keenly working on. In Australia, our team continues to strengthen our network resilience with more investments in high risk areas with an additional investment of A$13 million.
	Risks: Material transition risks include carbon pricing, capital allocation and risk of stranded assets and counterparty risk. Physical risks include surface water flooding across 2030, 2050 and 2100; bushfires across 2030, 2050 and 2100; riverine flooding in the long term (specifically for control rooms) and extreme heat by 2100.
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning	We conducted our scenario analysis in 2022 and published a standalone report in June the same year. We looked at the possible impact over the short- (2030), medium- (2040) and long-term (2050) horizons. The outcome of the scenario modelling has been summarised as climate-related risks and opportunities, organised by physical and transition risks that have influenced the financial impact on the company's income and balance sheet performance in the long run as well as our strategies to drive GHG emissions reduction and increase climate resilience (refer to our TCFD report). These scenarios remain valid for Singtel Group for the purpose of planning and decision making, and will be updated every three to five years or whenever our business has major changes. Management of climate-related risks and opportunities is aligned with our business strategies and operations, and forms an integral part of our annual business planning and budgeting process. For FY2024 business planning, climate-related aspects have been integrated into various business lines' planning process, where they now need to factor in internal carbon pricing into emissions-intensive business decisions and develop greener products. A separate 'green budget' has also been allocated at the Group level to support pro-climate initiatives.

Recommendations	Key points
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Selected three climate-related scenario analysis to understand the potential implications of climate-related physical and transition risk scenarios to the company's strategy over the short- (2030), medium- (2040) and long-term (2050). Scenarios 1 (warming to 1.5°C) and 2 (warming to 2°C) are used for transition risks while scenarios 1 and 3 (warming exceeds 3°C BAU) are modelled for physical risks.
Risk Management: Disclose how the organisation identifies, assesses and manages climate-related risks	
a) Describe the organisation's processes for identifying and assessing climate-related risks	Singtel Group identifies, assesses and manages risks to reduce the uncertainty associated with executing our business strategies, and mitigate potential adverse impacts on our business. We have established a comprehensive Risk Management Framework (RMF) at the enterprise level, which sets out our governance structure for managing risks, risk philosophy, risk appetite and tolerance levels, management approach and risk factors. In addition, through stakeholder engagement and materiality assessments, we regularly review and assess the ESG risks that exist or emerge in our broader value chain, and we address them with various corporate sustainability initiatives. We have undertaken Life Cycle Assessments (LCA), Climate Scenario Analysis and SBTi as part of the methodology to identify climate-related risks. Our risk category has been updated to factor in sustainability risk where climate risk is a subset of it. We have not listed it as a separate top risk but instead cover it more specifically under strategic and operational risks to the company. These can include stranded assets in the transition towards a low carbon economy, disruption of business activities, damage to network infrastructure due to extreme weather events as well as impact to people's livelihoods. The approach is for each business unit to identify, assess and manage risks within their own risk register, action plan, annual business planning and budgeting process.
b) Describe the organisation's processes for managing climate-related risks	
c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management	
Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process	Refer to Table 3 and page 25 for our key material metrics, which include GHG emissions, energy consumption, capital deployment, internal carbon price and management remuneration relating to ESG KPIs.
b) Disclose scope 1 and 2, and if appropriate, scope 3 greenhouse gas (GHG) emissions and related risks	The company reports and externally assures scope 1, 2 and 3 GHG emissions. (refer to page 25)
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	Singtel Group has committed to absolute GHG reduction emissions science-based targets of 42% for scope 1 and 2 by 2030, approved by SBTi in 2017 in alignment with a well-below 2°C scenario. In 2019, we committed to the net-zero ambition by 2050, aligned to 1.5°C scenario. In March 2023, we refreshed scope 1 and 2 targets aligned to a 1.5°C scenario, and brought forward our net-zero target to 2045. We have submitted our SBTi targets and are pending SBTi's revalidation and approval.

Table 3: Climate-related financial disclosures

	FY2023	FY2022
Capital deployment		
Investment in climate adaption and resilience measures	S$12.21m	S$2.2b[1]
Investment in climate mitigation measures	S$19.23m	S$126.84m[2]
Internal carbon price ($/t$CO_2$e)	S$50	
Management remuneration relating to ESG KPIs		
Weightage of all ESG-related KPIs on long (LTI) and short (STI) term incentive scorecards for executives and management	LTI: 20%	STI: 10%
Weightage of Climate-related KPIs on long (LTI) and short (STI) term incentive scorecards for executives and management	LTI: 4%	STI: 2%
Avoided GHG emissions (tCO_2e)[3]	13,913	10,042

1. Total capital investment in our networks.
2. Total investment from 2015 to 2022.
3. Refer to Energy Reduction Initiatives in table 2.

Environmental Performance Indicators

ENVIRONMENT	Singtel			Optus			Singtel Group		
	2023	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Total Greenhouse Gases (GHG) emissions (tonnes CO_2 equivalent)[1]	**2,199,066**	4,037,717	4,106,984	**1,808,233**	4,603,543	5,479,798	**4,007,299**	8,641,260	9,586,782
Scope 1 and 2 (market-based) GHG emissions	**95,574**	100,691	107,786	**343,383**	394,253	428,458	**438,957**	494,944	536,244
(i) Scope 1	**4,660**	4,743	5,749	**1,591**	1,579	1,894	**6,251**	6,322	7,643
Fugitive emissions - refrigerants[2]	**3,641**	3,184	4,369	**48**	195	215	**3,689**	3,379	4,584
Fuel Combustion - stationary	**558**	1,059	828	**487**	286	364	**1,045**	1,345	1192
Fuel Combustion - mobile	**461**	500	552	**1,056**	1,098	1,315	**1,517**	1,598	1,867
(ii) Scope 2									
Electricity (location-based)[3]	**109,410**	109,218	114,135	**366,357**	425,015	426,564	**475,767**	534,233	540,699
Electricity (market-based)[3]	**90,914**	95,948	102,036	**341,792**	392,674	426,564	**432,706**	488,622	528,600
(iii) Scope 3	**2,103,492**	3,937,026	3,999,198	**1,464,851**	4,209,290	5,051,340	**3,568,342**	8,146,316	9,050,538
Category 1: Purchased goods and services	**350,608**	1,776,125	1,649,793	**670,395**	2,397,584	3,124,287	**1,021,003**	4,173,709	4,774,080
Category 2: Capital goods	**205,364**	687,465	851,233	**294,717**	1,193,179	1,055,409	**500,081**	1,880,644	1,906,642
Category 3: Fuel- and energy-related emissions[4]	**33,629**	22,620	23,295	**40,605**	43,007	41,981	**74,234**	65,627	65,276
Category 4: Upstream transportation and distribution[5]	**0**	0	0	**4,149**	5,690	9,385	**4,149**	5,690	9,385
Category 5: Waste generated in operations	**1,377**	712	694	**258**	189	183	**1,635**	901	877
Category 6: Business travel	**4,413**	337	4	**4,702**	581	95	**9,115**	918	99
Category 7: Employee commuting	**1,422**	297	441	**5,103**	3,011	4,517	**6,525**	3,308	4,958
Category 8: Upstream leased assets	**0**	0	0	**0**	0	0	**0**	0	0
Category 9: Downstream transportation and distribution[5]	**0**	0	0	**0**	0	0	**0**	0	0
Category 10: Processing of sold products[6]	**N.A.**	N.A.	N.A.	**N.A.**	N.A.	N.A.	**N.A.**	N.A.	N.A.
Category 11: Use of sold products[7]	**131,657**	92,295	101,929	**442,040**	562,523	811,619	**573,697**	654,818	913,548
Category 12: End-of-life treatment of sold products	**115**	334	376	**697**	1,027	1,169	**812**	1,361	1,545
Category 13: Downstream leased assets[3]	**145,598**	127,425	109,870	**N.A.**	0	0	**145,598**	127,425	109,870
Category 14: Franchises	**222**	211	149	**2,185**	2,499	2,695	**2,407**	2,710	2,844
Category 15: Investments[8]	**1,229,086**	1,229,205	1,261,415	**N.A.**	0	0	**1,229,086**	1,229,205	1,261,415
GHG intensity (tCO_2e/S$million revenue)[9]	**312**	537	549	**239**	589	671	**274**	563	613
GHG intensity (tCO_2e/TB)[10]	**0.0127**	0.0134	0.0170	**0.0468**	0.0598	0.0778	**0.0296**	0.0351	0.0453

1. GHG emissions are derived in accordance with the requirements of the "GHG Protocol Corporate Accounting and Reporting Standard" and "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" by World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). The equivalent CO_2 emissions for electricity used are calculated based on the updated simple operating margin grid emission factors from the National Environment Agency, Energy Market Authority and electricity supplier emission factor in Singapore for the relevant time period and from Australian National Greenhouse Gas Account factors for grid emissions relating to the corresponding states in Australia. Scope 1 direct emissions and scope 3 indirect emissions are calculated using: Supplier specific emissions factors, allocated emission factors derived from respective supplier's sustainability and annual reports, BEIS (Department for Business, Energy & Industrial Strategy) Greenhouse Gas reporting: conversion factors, National Greenhouse and Energy Reporting Scheme (NGERS) and Singapore's Fifth Biennial Update Report. Relevant emission factors were sourced from: Life Cycle Assessment (LCA) report on Singapore NEWater, various Australian and international Life Cycle Inventory (LCI) databases (Aus LCI Version 1.31 and Australasian LCI Version 2014.09 databases), were applied to consumption category of primary data to calculate scope 3 indirect emissions. For spend based category data, emissions factors from the LCI database Exiobase (v3.3) implemented in SimaPro 9.1.1.1 were applied by economic sectors and geographic regions to calculate the scope 3 indirect emissions.
2. Optus uses a combination of air, water and refrigerant cooling systems.
3. Restated for Singtel and Singtel Group numbers for FY2022 and 2021 due to the recalculation of tenant electricity consumption data.
4. Restated for Singtel and Singtel Group numbers for FY2022 and 2021 to include transmission and distribution (T&D) losses and well-to-tank (WTT) T&D losses.
5. Singtel numbers are reported in scope 3 Category 1 and 2. Optus numbers are reclassified and restated from scope 3 Category 9 to Category 4 emissions.
6. Not applicable as Singtel Group does not manufacture any products or sell products that require additional processing by the customer for use.
7. Restated for Optus and Singtel Group numbers for FY2022 and 2021 due to the use of more accurate product specification to calculate the emissions.

ENVIRONMENT	Singtel			Optus			Singtel Group		
	2023	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Energy management									
Total energy use (GJ)[3]	**993,409**	999,576	1,033,980	**1,901,837**	1,952,477	1,909,806	**2,895,246**	2,952,053	2,943,786
Total energy use (MWh)[3]	**275,947**	277,660	287,217	**528,288**	542,355	530,501	**804,235**	820,015	817,718
Energy intensity (GJ/S$million revenue)[3]	**141**	133	138	**251**	250	234	198	192	188
Energy intensity (GJ/TB*)	**0.13**	0.13	0.16	**0.26**	0.30	0.35	**0.20**	0.21	0.25
(i) Electricity use (GJ)[3]	**970,851**	969,152	1,005,839	**1,879,142**	1,932,128	1,885,253	**2,849,993**	2,901,280	2,891,092
Electricity use (MWh)[3]	**269,681**	269,209	279,400	**521,984**	536,702	523,681	**791,665**	805,911	803,081
(ii) Fuel use (GJ)[11]	**14,516**	22,118	19,757	**22,230**	19,885	24,089	**36,746**	42,003	42,991
Fuel use (MWh)[11]	**4,032**	6,144	5,488	**6,175**	5,524	6,691	**10,207**	11,668	11,942
(iii) Solar energy (GJ)	**8,043**	8,305	8,384	**464**	464	464	**8,507**	8,769	8,848
Solar energy (MWh)	**2,234**	2,307	2,329	**129**	129	129	**2,363**	2,436	2,458
Purchased Renewable Energy Certificates/Large-scale Generation Certificates (MWh)	**20,450**	2,000	1,000	**35,000**	42,000	0	**55,450**	44,000	1,000
Percentage of electricity backed by renewable sources (%)[12]	**8.34%**	1.59%	1.18%	**6.73%**	7.85%	0.02%	**7.28%**	5.74%	0.43%
Electricity used in Networks (MWh)[13]	**210,269**	203,453	195,702	**441,221**	453,595	435,929	**651,490**	657,048	631,630
Water management									
Potable water use (m^3)[14]	**647,422**	631,230	623,588	**35,670**	36,234	47,262	**683,092**	667,464	670,850
Use of recycled water instead of potable water (m^3)[15]	**339,945**	280,805	225,453	**13,639**	5,885	13,027	**353,584**	286,690	238,480
Water Intensity (m^3/S$million revenue)	**140**	121	114	**N.A.**	N.A.	N.A.	**71**	62	58
Waste management									
Total Waste (tonnes)	**3,136**	3,325	4,150	**1,148**	627	771	**4,284**	3,952	4,921
Non-hazardous waste	**1,288**	1,018	1,047	**636**	432	446	**1,924**	1,450	1,493
Hazardous waste	**1,848**	2,307	3,103	**512**	195	325	**2,360**	2,502	3,428
Waste diverted from disposal by recovery operation (tonnes)									
Non-hazardous waste: Preparation for reuse/Recycling	**278**	219	162	**182**	88	129	**459**	307	291
Hazardous waste: Preparation for reuse/Recycling	**906**	1,920	2,866	**502**	190	323	**1,408**	2,110	3,189
Waste directed to disposal by disposal operation (tonnes)									
Non-hazardous waste: Incineration (with energy recovery)	**1,011**	799	885	**0**	0	0	**1,011**	799	885
Hazardous waste: Incineration (with energy recovery)	**942**	387	237	**0**	0	0	**942**	387	237
Non-hazardous waste: Landfilling	**0**	0	0	**454**	344	317	**454**	344	317
Hazardous waste: Landfilling	**0**	0	0	**10**	5	2	**10**	5	2
Product End-of-Life Management									
Customer E-waste Recycling (tonnes)	**94**	35	47	**4**	6	3	**98**	41	50
Mobile devices reused (units)[16]	**1,033**	-	-	**31**	-	-	**1,064**	-	-
Mobile devices recycled (units)[17]	**10,991**	-	-	**3,979**	-	-	**14,970**	-	-

8. Restated for Singtel and Singtel Group numbers for FY2022 and 2021 due to update in emission factors used by one of our major investee. Emissions from April to December 2022 are taken (if data is available) and extrapolated to get the full data of the financial year, should the investee's reporting year follow the calendar year.
9. Restated for Singtel and Singtel Group numbers for FY2022 and 2021. Covers scope 1, 2 and 3.
10. Covers scope 1 and 2.
11. Restated for Singtel and Singtel Group numbers for FY2022 and 2021 due to the use of more accurate fuel energy conversion factors.
12. This is a new indicator. This covers our Purchased Renewable Energy Certificates/ Large-scale Generation Certificates and Solar Energy divided by our Electricity Use and Solar Energy.
13. This is a new indicator in alignment with GSMA ESG Metrics. This covers our exchanges, mobile base stations and other network related infrastructure. This is included in the above Electricity Use indicator.
14. All potable water withdrawn from municipal third-party water supplies and categorised as freshwater. Water stress areas are not applicable as the company does not contribute to the country's ability, or lack thereof, to meet the human and ecological demand for water.
15. Recycled water consists of NEWater and rainwater harvesting. NEWater is high grade reclaimed water used mainly for operational activities such as cooling in Singapore. Rainwater harvesting is installed in Optus Sydney campus.
16. This is a new indicator in alignment with GSMA ESG Metrics. This covers our handsets and other customer premises equipment (CPE) reused through our take-back schemes in Singapore.
17. This is a new indicator in alignment with GSMA ESG Metrics. This covers our handsets recycled through our take-back schemes in Singapore and Mobile Muster programme in Australia.

03 People and Future of Work

Our strategy and commitment

At Singtel, we focus on developing and retaining a highly engaged and resilient workforce as our people are key to the Group's sustainable growth and success. Rapid technological advances and the shift to hybrid work practices, however, have given rise to changing expectations of work and unprecedented dynamics in the talent market today.

Our strategy to counter VUCA (volatility, uncertainty, complexity and ambiguity) is to go B.I.G. on our people. It is imperative that whatever we do with and for our people helps create a workplace that gives them a sense of Belonging, like a second home to come back to, poises them to make positive Impact and promotes both personal and organisational Growth.

The Singtel Group people framework guides our overarching strategy for People and Future of Work (see Figure 1). During the year, we accelerated our efforts in shaping a distinctive culture, enhancing Diversity, Equity, Inclusion and Belonging (DEIB), building a robust early career talent pipeline, upskilling and reskilling our workforce, and improving employee experience across our business entities.

Shaping a distinctive Singtel Group culture

In 2021, we announced our Group purpose, Empower Every Generation, and refreshed our core values which we have integrated into every aspect of our business. They reflect our intention of bringing everyone along into a more sustainable digital future while advancing the world for our future generations through stewardship and innovation.

Our current focus is on cultivating a distinctive and thriving organisational culture, guided by B.I.G. Our deliberate and methodical approach to transform culture has strengthened the alignment and connectedness between our people and the company. The Group purpose remains the foundation of our cultural ethos and inspires our people to pursue excellence in all endeavours.

This synergistic combination of a supportive work environment and a clear, motivating purpose bolsters employee engagement and drives us in our collective pursuit of success and innovation.

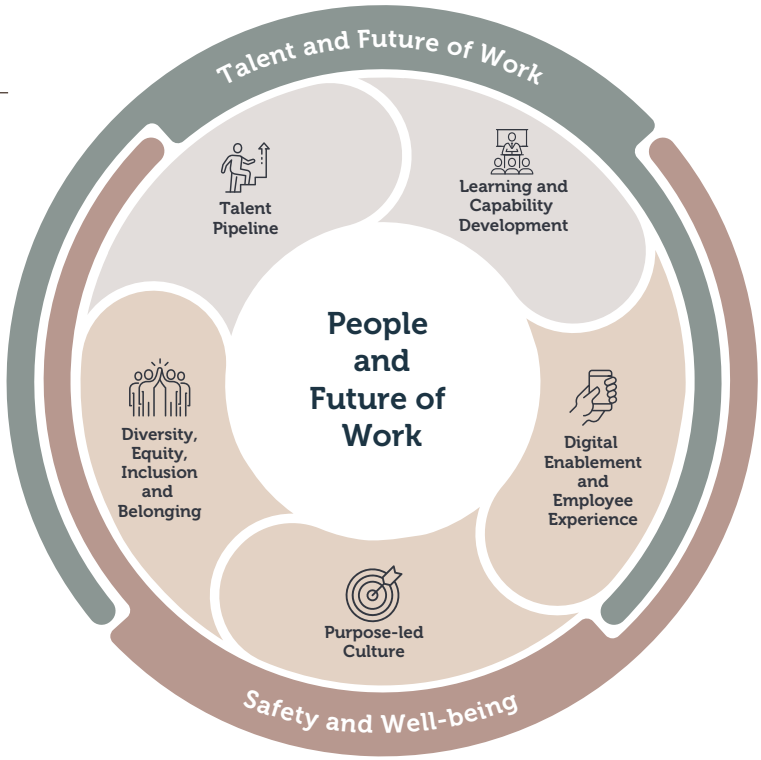


Figure 1: Singtel Group people framework

DIVERSITY, EQUITY, INCLUSION AND BELONGING

Given our global operation and a diverse workforce of over four generations and close to 100 nationalities, embracing DEIB principles and practices has continuously allowed us to foster innovation, positively impacting our stakeholders who include our customers, employees and communities.

Diversity: We envision having a talent pool with a wide range of experiences and voices that fully represent the markets and communities in which we operate. We celebrate individual differences as natural and it is a sign of a healthy organisation. We embrace diversity as key to good business outcomes.

Equity: Through fair and respectful policies and actions, we create access to opportunities for everyone. Unlike equality, which disregards individual differences, equity considers those differences and removes systemic barriers to ensure better access to opportunities for all.

Inclusion: We aim to build a workplace where our people embrace differences. Inclusion helps us develop a group identity, while diversity helps us avoid group thinking.

Figure 2: Singtel B.I.G. framework

empower every generation

Feel a strong sense of Belonging

- Align with Group purpose and values
- Feel included and valued
- Embrace diversity

Make a difference and deliver Impact

- Purpose
- People
- Profit
- Planet

Drive personal and professional Growth

- Learn, unlearn and relearn
- Have career options
- Take ownership to stay relevant

Belonging: We take a step beyond inclusion to ensure our employees feel accepted and valued as part of the Singtel community and connected to our Group purpose, values and culture.

The Singtel Group Human Rights Statement and Code of Conduct underpin Singtel's DEIB strategy. The Human Rights Statement covers critical human rights topics, including health and safety. Our Code of Conduct holds everyone accountable for behaviours and actions related to DEIB and a respectful workplace free of harassment.

In Singapore, we abide by the Tripartite Guidelines on Fair Employment Practices (TGFEP) outlined by the Tripartite Alliance for Fair and Progressive Employment Practices (TAFEP). Globally, we adopt the following four principles in our employment practices: (1) Compliance with local labour laws and regulations; (2) Fair access to opportunities for all; (3) Meritocracy-based decision-making; and (4) Anti-discrimination at the workplace.

In Australia, our employment frameworks contain principles and standards that comply with Federal and State/Territory legislations, mainly in relation to the Fair Work Act 2009 (Cth) and respective anti-discrimination laws.

Our employment practices cover all facets of employment, from recruitment to performance evaluation, career progression to rewards. We prohibit workplace discrimination against these characteristics: (1) age; (2) nationality; (3) sex, marital status, pregnancy status, caregiving responsibilities, sexual orientation; (4) race, religion, language; and (5) disability and mental health conditions.

Our operating framework for DEIB (see Figure 3) ensures that we take actions with a holistic and multi-pronged approach, covering awareness to engagement, leadership to team experience, and measurements to policy integration. This ranges from internal initiatives to international partnerships while augmenting accountability and sustainability.

Figure 3: Singtel DEIB operating framework

Awareness and training

DEIB training is an effective way to raise awareness among our people. During the year, under the Leadership Excellence and Personal Excellence training pillars, DEIB training programmes were tailored to specific audiences, such as managers and executives, and covered topics like unconscious bias, cultural competence and allyship. We also leveraged our annual Singtel Group Learning Fiesta to accelerate learning, co-create content with our people and transform mindsets and skills to power DEIB.

We introduced drama-based interactive learning on workplace diversity and inclusion during the year. This workshop was piloted for over 100 top executives, and extended to over 300 HR professionals and employees. Participants used the skills pod method, where actor-facilitators rotate their specific workplace scenarios to depict DEIB-related challenges and facilitate

reflection and learning. A separate workshop on inclusive leadership was also piloted and will be offered to all people leaders in Singtel.

In Australia, our Executive Women in Leadership programme for senior executives was introduced to help talented female employees transition to their first executive role through formal learning programmes and individualised coaching and support. The programme saw participation from members of the Optus executive leadership team, including CEO Optus Kelly Bayer Rosmarin who personally mentored some of the participants.

We also introduced Included@Optus, a signature learning and development programme that drives shared accountability among our people for creating a safe, respectful and inclusive culture. It challenges them on inclusion and our collective role in fostering an inclusive culture. The programme combines workshop activities and conversations with virtual reality experiences, enabling employees to walk in someone else's shoes to elicit empathy and experience the world from other perspectives. Almost 3,000 employees have participated with a Net Promoter Score of +74 and a favourability rating of 98%, making this programme one of the most popular among our people in Australia.

Singtel Group focuses on employee engagement, training and development.

Engagement

To promote DEIB at the workplace, we have established employee networks to increase camaraderie among our people, promote internal networking and provide a platform for employees to support one another. They also serve as a platform to heighten awareness of our DEIB practices and provide professional development and mentorship opportunities.

Besides our Early Professionals Group for early career employees in Singapore, Women in Network (WIN) and Women in Tech (WIT) were established to engage female engineers and professionals in Singtel and NCS respectively. In the coming year, we plan to expand WIN and WIT to all female employees in Singapore.

In Australia, our employee networks focused on gender diversity, young professionals, multigenerational workplaces, cultural diversity, persons with disabilities and sexual orientation. All our employee networks receive strong executive sponsorship, as well as support and resources from management and Group People and Sustainability.

Leadership, team experience and integration

Gender

We commemorated International Women's Day (IWD) 2023 across the Group through internal and external activities with the theme 'Embrace Equity. Take Action'. We leveraged IWD 2023 to drum up support for women, female voices and male allyship.

We organised a webinar titled 'Building Resilience and Overcoming Challenges: Lessons from Employee Network Leaders and Allies'. About 800 employees heard from speakers from our women networks across Singtel, NCS and Optus, learning from the insights shared about building resilience, overcoming challenges and striving for personal growth. We hosted the inaugural Empower NextGen Women in STEM (Science, Technology, Engineering and Mathematics) Symposium, which featured our tech leaders and Group CEO. The symposium was attended by female STEM graduates in Singapore.

In partnership with Lean In Singapore and SG100 Women in Tech, NCS organised a series of keynote speeches and panel discussions featuring women leaders in the tech industry. An exhibition was also curated at our hub that showcased inspirational stories of NCS women.

Optus announced our corporate sponsorship for United Nations (UN) Women. Being a sponsor enhances what we do for our women networks in Optus and provides inspiration and support to our people passionate about gender equality. It also enhances our support for providing women and girls with more significant opportunities in STEM careers.

As a culmination of our celebration of IWD 2023, we launched a new mentorship programme to support employees and female undergraduates in STEM. The programme addresses the under-representation of women in STEM in Singapore and globally. It provides valuable opportunities for personal and professional growth, connecting participants with experienced mentors who will provide guidance, support and insights into their respective career fields. This will help foster the next generation of leaders in STEM and support their development while expanding the talent pipeline for Singtel Group and the industry. We also rallied support for women and raised funds for a good cause by inviting employees to create a photo mosaic for DEIB. Each photo was matched with a S$5 donation to our corporate philanthropy programme, Singtel Touching Lives Fund.

Persons with disabilities

Another critical component of our DEIB framework is being an inclusive employer for persons with disabilities. Singtel is currently co-chair of the Singapore Business Network on DisAbility (SBNoD), rallying thought leadership for disability inclusion in companies.

We regularly participate in SG Enable RISE mentorship programme that aims to encourage mentors to be more confident working with persons with special needs and for the student mentees with disabilities to discover their strengths, abilities and confidence. During the year, three Singtel executives from sales, network and product management mentored students with hearing impairment, autism and physical disability respectively, paired by SG Enable based on career interest.

Optus supported the International Day of Persons with Disabilities (IDPwD). A wheelchair basketball game was organised for and hosted by Wheelchair NSW/ACT including a live panel discussion featuring Ellie Cole, an Optus Ambassador and Paralympian. At the panel discussion, we announced our sponsorship of WhatAbility, an NGO disability support service which specialises in community access and providing disability support to Australians. We continue to challenge how we think about disability and enhance our inclusive workplace.

Wheelchair basketball game on International Day of Persons with Disabilities.

Measuring our progress

As we continue prioritising DEIB, we measure our progress through internal metrics, external benchmarking and awards. We aim to reach 32% women in management by FY2025 and achieve a gender balanced workforce. Today, women account for 34% of our workforce and 31% are in management. Women representation in Singtel Group Board of Directors and Management Committee is industry-leading at 40% and 44% respectively.

The results of our Group's annual employee engagement survey, Your Voice Survey 2022, indicate that we are moving in the right direction in creating a diverse, equitable and inclusive work environment. 88% of our employees felt that the work environment is open and accepting towards people from diverse backgrounds. 76% felt confident that they are heard when they speak up and express their views. 75% felt a strong sense of belonging at work. Our DEIB scores are consistent across genders, age groups and tenure within the company.

Recognition by HR Excellence Awards 2022.

We have been included in the 2023 Bloomberg Gender-Equality Index (GEI) for the fifth consecutive year. The index requires companies to demonstrate their commitment to gender equality across several areas, such as female leadership and talent pipeline, equal pay and gender pay parity, inclusive company culture, as well as policies and programmes that support gender diversity and inclusion.

Singtel won gold for the Excellence in Women Empowerment Strategy Award by HR Excellence Awards 2022. The award recognised that we have consciously built a safe working space that enables female empowerment, promotion of women in key management positions and accommodation of women's needs.

What do our employees think about B.I.G.?

Our annual employee engagement Your Voice Survey (YVS) measures how fulfilled and motivated our people feel about their jobs and the company they work for. For YVS 2022, we achieved a record participation rate of 91%. Our overall employee engagement score for the Group continued to improve, rising 2% year-on-year. Since 2019, we have seen our score increase by 13% and this shows that we are on the right track to becoming a purpose-driven organisation.

The commitment to our shared purpose is essential for creating a culture that is B.I.G. – one that is underpinned by the pillars of Belonging, Impact and Growth. Our people have strong affiliation with the Group purpose, recognising that the Singtel Group is a caring organisation that supports their overall well-being and motivates them to do their best both personally and professionally.

Our people:

75% feel a strong sense of belonging

83% believe they can make an impact through their work

71% see opportunities for personal and professional growth

Celebrating Diversity
Embracing Equity
Fostering Inclusion

Singtel

"We may be diverse, but we're one family, united by a common purpose."

Kate Aitken
Vice President
People and Culture
Optus

"I love how I can be true to myself and express my creativity."

Bill Ang
Director
Brand Marketing
Singtel

EMPLOYEE SAFETY AND WELL-BEING

Employee well-being is our priority and we continue to invest in programmes, initiatives and amenities that promote and enhance health and safety.

We offer our people comprehensive benefits to help them stay healthy and manage their professional and personal demands. This includes medical and insurance coverage, free annual health screening, a disease management programme, flexible benefit dollars, and an annual cash payment to meet lifestyle needs. We also accord eligible employees paid parental leave – 16 weeks maternity and two weeks paternity leave. In Australia, we have paid parental leave and support for stillbirth, pregnancy loss, and family and domestic violence entitlements.

Our family-friendly policies include flexible work arrangements such as flexible work schedules and workplace, flexible work like part-time, and various family leave arrangements, such as childcare and family care leave (see Table 1).

Our employees' return to the workplace during the year, after COVID safe management measures were relaxed, was supported by our B-WoW (Blended Way of Working) programme. The hybrid work arrangement allows our people to forge stronger bonds and bring about a more vibrant workplace, while balancing their family needs.

Holistic programmes

The holistic well-being programmes across the Group empower our people to take action and achieve their health, professional and lifestyle goals. We build each programme based on these five key pillars: mental, physical, financial, social and professional.

Our iCare programme has garnered more than 3,000 participants for both well-being webinars and indoor activities. Our people have actively embraced and completed about 6,000 sessions on our digital mental well-being app, which we offer through a partnership with a mental healthcare company.

These sessions include learning paths, journals, meditation and breathing activities. Those who participated in this programme rated it 5/5 and shared how it has helped them learn how to communicate with managers, improve their health habits and boost confidence at the workplace.

Creating an environment where everyone Belongs, makes an Impact and Grows to their full potential

We provide our people and their immediate families with wellness resources. Such services are confidential and at no charge to our employees and include clinical counselling support on various work-life topics. They are encouraged to use our Employee Assistance Programme (EAP) should they need to talk to a professional.

Annual reviews of our employee health and medical programmes are conducted to ensure they stay relevant to meet changing needs. During the year, several enhancements were made to our employees' medical benefits, including unlimited medical teleconsultations and lowering of co-payment for visits to government-restructured hospitals and polyclinics. The Health Promotion Board recognised our efforts in promoting our employees' health and well-being, and we were awarded the Singapore Health Award (Excellence) in 2022.

Our grassroots-style Health and Wellness Committee and Singtel Recreation Club (SRC) work closely to plan activities, ranging from sports, social, recreation to health and wellness, for our employees in Singapore and their family members.

SRC celebrated its 50th anniversary in 2022 with a series of celebratory events themed 'Celebrating memories and renewing bonds', and kickstarted with a 3.88km mass fun walk from Comcentre, our first onsite mass activity in two years. During the year, SRC also organised its signature Amazing Race, Games Fiesta and special movie screening. The grand finale, the 50th Anniversary Gala Dinner, was attended by more than 600 members, including Singtel leaders and guests.

Another highlight of the year was the Singtel Family Day 2022, held at the Singapore Zoo, which was brought back after a three-year hiatus. These special events and activities provide a great platform for our people to reconnect and renew their friendships and bonds.

Table 1: Parental leave related statistics in FY2023[1]

	Singtel		Optus[3]	
	Male	Female	Male	Female
Total number of employees entitled to parental leave[2]	303	75	3,922	1,792
Total number of employees who took parental leave	303	75	286	797
Total number of employees who returned to work in the reporting period after parental leave ended	303	72	105	118
Total number of employees who returned to work in the reporting period after parental leave ended and still employed 12 months after their return to work	295	60	72	177
Return to work rate of employees who took parental leave	1.0	0.96	0.37	0.15
Retention rate of employees who took parental leave	0.95	0.56	0.40	0.26

1. Leave granted to men and women employees on the grounds of the birth of a child.
2. Based on eligibility and entitlement in accordance with MOM guidelines or Employment Act. Besides these employees, 5,609 employees who are parents are eligible for additional Family Care Leave to perform their parental duties.
3. Optus does not categorise employees based on their parental status or potential to go on parental leave but defines it as employees who are eligible under their contract.

Our first onsite mass fun walk in two years.

During the year, NCS wellness committee celebrated the completion of the newly renovated NCS Hub by working closely with SRC to provide sporting, social and networking events for our people. We also revamped our NCS gym facilities, featuring AI powered bio-circuit gym equipment that can personalise based on one's size, fitness level and workout goals.

In Australia, we launched a new Total Wellbeing app, which provides well-being support and resources including cognitive behavioural therapy programmes, articles, podcasts, tools and information for our people. Besides direct access to EAP support hotlines and 24/7 text-based counselling via the app, our people can use it to personalise their well-being journeys. We also organise an annual Well-Being Week with a different theme for each day.

Committed to workplace safety and health

As we move into living with COVID, the health and safety of our employees is of utmost concern. The Singtel Group Health, Safety and Security Policy, endorsed by the Group CEO, sets the direction and priority for all business units in providing a safe and secure work environment, resources and support to ensure employee safety and well-being - in support of our goal of 'Zero Major Accident'.

Our workplace safety and health (WSH) management system is managed by the Workplace Safety and Health Steering Committee (WSHSC), which evaluates our WSH performance and determines the effectiveness of the management system, measures and initiatives put in place. The quarterly WSHSC meetings, chaired by senior management, provide the strategic direction for the Group and cascade down to the various business units (BUs). Each WSH committee of our BUs conducts monthly meetings to address operational WSH issues. Relevant information and updates are disseminated through our staff portal Espresso or via the respective BU WSH committees.

During the year, we successfully renewed our ISO 45001 certification in Australia for the next three years. Singtel and NCS are ISO 45001 and bizSAFE certified. As part of ISO 45001 requirements, a WSH legal register of relevant legislations is maintained and tracked to ensure full compliance with our WSH obligations.

To cultivate a culture that prioritises WSH, we have designated a safety week annually in Singapore to highlight information for our people to help them better understand the importance of WSH. They are also required to participate in interactive training videos annually that cover our policies and equip them with the necessary safety knowledge. Training needs are also identified based on our risk assessments of work activities. To track the effectiveness of our WSH measures and initiatives, we evaluate incident statistics and trends to identify areas prone to health and safety risks.

In recognition of our concerted WSH efforts and performance, Singtel and NCS Communications Engineering, a subsidiary of NCS, were awarded the WSH Award (Sliver) from Workplace Safety and Health Council (WSHC) in July 2022.

WSH management system

WSH risk management process is integral to Singtel Group's organisational work processes, from strategic planning to project and change management. Our WSH risk management process is established in accordance with ISO 45001 and the Code of Practice on WSH Risk Management. This includes identifying hazards, assessing risks from the identified hazards, determining and assessing the related risks, assessing WSH opportunities to enhance performance, and adapting work and the environment to improve the Singtel Group WSH management system (refer to page 34, Figure 4).

Our risk management process also outlines the responsibilities of the BUs, BU director and management, risk assessment teams, line supervisor, WSH department and employees managing WSH. To mitigate any potential WSH risk, all contractors are required to conduct risk assessments of the work activities. Workers can also access onsite emergency equipment, such as first aid box and automated external defibrillator.

A key component of our WSH management system is the hierarchy of controls (refer to page 34, Figure 5). Risk control measures are selected in this order of preference: elimination, substitution, engineering control, administrative control and, lastly, personal protective equipment. Elimination is preferred on the hierarchy of controls as it is the most effective by completely removing workers' exposure to hazards. To continually improve our WSH system, we conduct internal audits annually to validate the control effectiveness, identify shortcomings and propose improvements.

Initiatives

iSAFE and Donesafe apps

Our people in Singapore can use iSAFE, which has been integrated into our employee app iConnect, to report any safety hazard or concern at the workplace by taking pictures and providing details of their observations. Every report is routed to our WSH team, which will then rectify the hazard before any accident can occur. The team will also investigate into the root causes and take appropriate measures to prevent a recurrence. Our whistleblowing and grievance reporting policies also protect our employees from any form of retaliation.

Figure 4: Singtel Group WSH management system framework

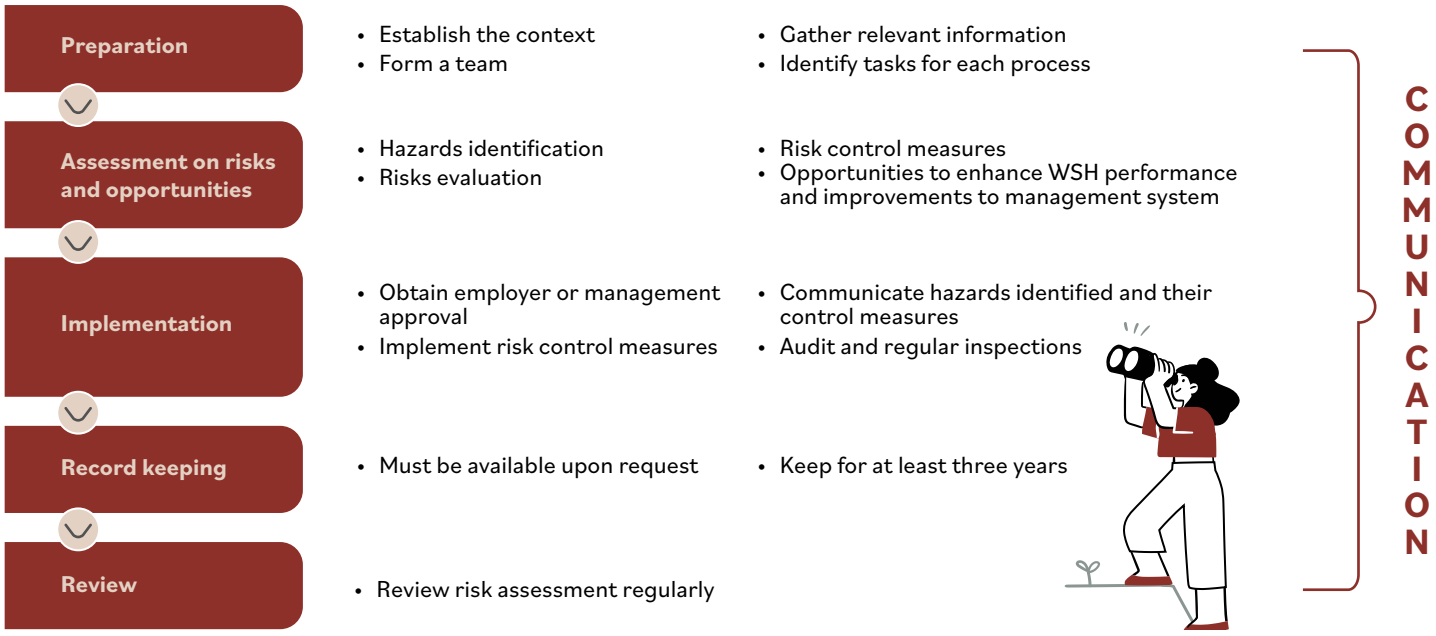


Figure 5: WSH hierarchy of controls

Elimination	E.g. Perform hot work like welding and cutting offsite	Most effective
Substitution	E.g. Replace solvent paint with water-based paint	
Engineering control	E.g. Erect safety guard rails	
Administrative control	E.g. Put up safety warning signs	
Personal protective equipment	E.g. Use safety helmets and shoes	Least effective

We created lessons in the app that feature short tips and pointers for over 25 safety topics, such as first aid for cuts, ladder safety and how to operate a fire extinguisher. This gives our people a quick online reference guide available 24/7.

In Australia, we refreshed our WSH e-learning compliance module during the year. Since 2020, our Donesafe app allows employees to immediately notify our 24/7 security team for any emergency within Optus. We also created an online Donesafe form to manage WSH risks for large team events. We continue to conduct targeted training to help our people manage risks such as customer aggression at our retail outlets and contact centres.

Remote monitoring system

During the year, in collaboration with Ericsson, we implemented remote surveillance cameras on our rooftops to monitor work sites remotely and in real time, particularly for high-risk activities involving working at heights.

Safety time out

In May 2022, due to a spate of workplace fatalities in Singapore, there was a callout from the Ministry of Manpower (MOM), WSHC and National Trades Union Congress (NTUC) for a nationwide safety time out. We immediately conducted an organisation-wide Safety Time Out exercise for all our operations and workspaces, including offices and site operations. It was most timely as people were starting to return to the office with the lifting of COVID safe management measures.

From our exercise, 126 observations were reported and quickly rectified. They included items in common areas and loose wires on the floor, which had created tripping hazards.

Good labour practices

Singtel Group is committed to upholding human rights and adopting fair employment practices that comply with local labour laws across all our global operations.

In Singapore, we abide by MOM's Employment Act and ensure that our employment practices are aligned with the Tripartite Guidelines on Fair Employment Practices set out by TAFEP. Singtel is also a signatory of the Singapore Employers' Pledge of Fair Employment Practices and adopts all the ten Tripartite Standards.

We have fostered a robust and collaborative partnership with the Union of Telecom Employees (UTES) in Singapore since its inception in 1982. Our Group Chief People and Sustainability Officer, Aileen Tan, was awarded the prestigious NTUC Medal of Commendation (Gold) at the 2022 May Day Awards in recognition of her contributions to the labour movement and our people's welfare.

Performance

During the year, we recorded 31 cases of injuries, varying from slips, trips and falls, being hit by a falling object, laceration, muscle stress, being struck by a moving object, to traffic-related ones.

Entity	Slip, trip and fall	Hit by a falling object	Laceration	Muscle stress	Struck by moving object	Fall from height	Traffic-related injury
Singtel	6 cases Male: 1 Female: 5	1 case Male: 1	1 case Male: 1	0 case	2 cases Male: 2	1 case Male: 1	1 case Male: 1
Optus	8 cases Male: 3 Female: 5	2 cases Female: 2	0 case	6 cases Male: 5 Female: 1	2 cases Male: 2	0 case	1 case Female: 1

Table 2: Staff injury types by number and gender

She was one of the two gold recipients, a testament to our good labour-management relationship with UTES, which nominated her for this award.

In Australia, we are committed to creating an Optus that enables people to do their best work. Our Employment Partnership Agreement (EPA), approved by the Fair Work Commission, is integral to creating and fostering a positive workplace culture and positive employee relationships. It includes benefits for our people such as 14 weeks of paid Primary Carer Leave, ten days of paid Family and Domestic Violence Leave and up to four weeks of Gender Affirmation Leave for employees to transition.

As at 31 March 2023, we had 3,022 bargainable employees (23%) in Singapore, covered by collective agreement and 3,727 employees (49%) covered by EPA in Australia. We also support UTES to expand the scope of union representation for our executive employees. As at 31 March 2023, we had 90 executive employees (5.3%) in Singapore represented by UTES under limited representation on an individual basis. We ensure timely consultation with UTES on significant operational changes and engage our people before implementing any labour or employment change.

We support the NTUC U Care Fund with an annual donation of S$100,000. During the year, we disbursed S$21,000 to 37 schooling children of our employees under the joint Singtel-UTES Bursary Awards scheme.

Singtel and NCS are accredited with the Progressive Wage Mark, which recognises companies that pay progressive wages to lower-wage workers. This scheme, recommended by the Tripartite Workgroup on Lower-Wage Workers in August 2021, is administered by Singapore Business Federation on behalf of the tripartite partners – MOM, NTUC and Singapore National Employers Federation.

This is a testament to our commitment to continuously deepening our people's knowledge and skills and providing a clear structure for our lower-wage workers' job progression via skills training to reach their full potential.

Grievance reporting policy

We take workplace grievances seriously, and our Grievance Reporting Policy applies to the entire Singtel Group of companies. We communicate clearly to all our employees that they can raise concerns and report easily via our staff portal Espresso any workplace harassment, bias or discrimination without fear of reprisal (see Table 3 and 4).

We investigate all reported cases thoroughly with urgency and confidentiality. We also ensure all affected stakeholders are engaged in two-way dialogues and proper follow-up on resolution and satisfactory closure.

Table 3: Number of staff grievance cases in FY2023

	Singtel	Optus	Singtel Group
Received	17	65*	82
Substantiated	6	26	32
Not substantiated	8	17	25
Under investigation as of 31 March 2023	3	13	16

* 9 matters were unable to be substantiated.

Table 4: Breakdown of nature of substantiated cases

	Singtel	Optus	Singtel Group
Supervisor management style	2	8	10
Misconduct (includes discrimination and harassment)	3	11	14
Fraud	0	7	7
Employment terms and conditions	1	0	1

TALENT ATTRACTION AND DEVELOPMENT

People are one of the most crucial assets for Singtel Group. And building a future-ready, purpose-led workforce is the cornerstone of talent attraction and development. Our talent management practices are forward-looking and progressive to ensure Singtel Group stays competitive with a sustainable business and workforce.

Early career development

We have built a robust early career talent pipeline across the Group through recruiting graduates from high schools in Australia, and vocational schools, polytechnics and universities in Singapore, Australia and the region. Singtel Group recruited over 1,000 graduates into various structured training programmes during the year, and over 3,000 experienced professionals in different parts of our business.

For university graduates in Singapore, we offer Management Associate Programme (MAP), internships and direct entry level jobs in Singtel and NCS. The MAP's two tracks, Business and Technology, have a strong focus on skills development in cyber security, data, business analytics and software engineering. As an industry-leading programme, it caters for two one-year job rotations, personalised coaching, structured training, leadership development and mentoring.

During the year, our largest cohort of about 70 Management Associates was onboarded. Through MAP, we identify and develop top talent, build a strong leadership pipeline, and promote diversity and inclusion in the company.

NCS offers NUCLEUS, a five-year programme that equips talents with professional training, technical expertise and industry experience in their chosen field of specialisation. They get to develop their tech skills, supporting the acceleration of their careers as they work on technology projects involving government and private sector organisations.

This is based on an upskilling roadmap to build their foundation, develop technical skillsets and deepen their specialisation, culminating in a Master of Technology or relevant professional certification. Since its launch in 2019, NUCLEUS has attracted 750 undergraduate and fresh graduate students. This was recognised by Infocomm Media Development Authority (IMDA), which renewed its support through a second grant of nearly S$20 million.

In Australia, we offer the Optus Graduate and Tech Graduate programmes. During the year, we tripled our Tech Graduate intake and partnered an innovative education programme for software engineers. As part of Optus' Tech Talent dial mover, we launched a Tech Incubator Programme, where graduates undergo two years of rapid upskilling in one of four streams: cyber security, data and analytics, software engineering, digital business and user experience. The programme includes bootcamps, hackathons, seminars and opportunities to obtain certification. During the year, we welcomed 50 students who took on positions in software engineering, cyber security, digital business, and data and analytics.

At the polytechnic level in Singapore, our SHINE Cadet Programme offers scholarships and internships to students pursuing engineering and cyber security diploma courses. SHINE Cadets receive tuition bursaries, earn-and-learn internships at Singtel and NCS, and structured training programmes during their diploma programmes.

To support the polytechnic students in pursuing their degree studies, Singtel and NCS launched a work-study programme called Catalyst and Fusion respectively with more than 130 roles, allowing diploma graduates to work full-time in ICT while pursuing a degree.

Participants in the Catalyst and Fusion programmes receive a full-time salary plus bond-free tuition sponsorship, on top of structured on-the-job training (OJT). These programmes are made possible with strong partnerships with IMDA and various institutes of higher learning (IHL) like Singapore Institute of Technology (SIT).

Employee development

Singtel Group's commitment to employee development extends to all employees through our three corporate academies – Singtel 8George, NCS Dojo and Optus U. The three academies collectively offer four pillars of training for Personal Excellence, 5G/Tech Acceleration, Leadership Excellence and Future Readiness.

Our people development framework anchors on the following A.C.T. principles:

1. **Accelerate** with skills equipping - We invested in in-person workshops and digital learning modules. Our learning platform #CURIOUS offers more than 100,000 accredited learning assets and facilitates self-directed learning, where our people can own and personalise their development based on their needs.
2. **Co-create** skills pathways - Our academies have strong ecosystem partnerships with BUs, learning institutions and academies, government agencies, unions and think tanks. We offer broad-based and role-based curricula to enhance skills and competencies and help our employees stay relevant. Our 'co-create, co-own, co-execute' approach has proven effective and impactful in driving high learner engagement and setting the stage for upskilling and reskilling.
3. **Transform** jobs and roles - We pivot towards ongoing skills refresh and role transformation to ensure our people stay ahead of the curve of future-ready skills. Our 5G Workforce Transformation Committee (5G WTC) and Professional Conversion Accelerator (PCA) are two examples of cross-functional collaboration where committee members meet regularly to share best practices and implement structured interventions for role transformation.

Singtel 8George and NCS Dojo work closely with UTES to identify skill gaps, co-create relevant training programmes and encourage employees to participate in these training opportunities. In the past three years, we have invested S$45 million to develop a comprehensive set of training programmes. In 2022, we renewed our commitment by signing the Singtel Company Training Committee's Memorandum of Understanding (MOU) with UTES, aiming to increase our investment to S$20 million annually in employee development.

Singtel 5G and deep-tech transformation

5G is pivotal to Singtel's core business rejuvenation and future growth. Singtel 8George equips our people with 5G capabilities through role and broad-based training. All employees can access foundational 5G training through our curated #CURIOUS 5G libraries and resources.

We provide targeted role-based training to employees in 5G-related job roles within Networks, IT, Consumer and Enterprise businesses. Guided by experienced mentors, our people undertake certified courses and OJT to apply their learning and gain hands-on experience. They undergo a nine to 12-month structured training plan co-designed by our learning team and internal subject matter experts.

To prevent jobs and roles from becoming obsolete, we partner IMDA, Workforce Singapore and IHLs on PCA. We aim to convert about 3,000 employees into new roles, including in 5G and Tech.

We onboarded 220 professionals from the Tech Skills Accelerator (TeSA) mid-career advance programme, which provides reskilling opportunities for Singapore citizens above 40 years old.

A.C.T. MOU signing with UTES reaffirms Singtel's commitment to staff training and development.

We developed a PCA playbook for employees to encourage them to step up and discover conversion opportunities for career growth and prepare themselves for it. We also proactively guide our BUs to identify job roles to be re-profiled and jointly develop training plans to support role conversion.

NCS Dojo acts as a catalyst for an apprenticeship-centric culture through the involvement of experienced colleagues in content creation and delivery. Over 150 employees from across NCS businesses are involved as journey guides for Dojo programmes and subject matter experts in their respective technical or management domains to share their knowledge with the rest of NCS.

Optus U upskills our people in data and analytics, automation, customer experience, commercial acumen, product management and cyber security that allow them to obtain accreditation with a university. Since November 2021, nearly a thousand of our people have been accredited, exceeding our target of 600. During the year, we introduced five new courses: IOT with Curtin University; AI for Natural Language, AI for Prediction and Customer Centric AI, as well as MBA Micros at Optus and Cyber Security Micro-credentials with La Trobe University; Excel to Python and Data Science II with Macquarie University; and Finance and Product Management programmes with RMIT. Those who participate in these training courses are given a day's study leave, have access to internal coaches and mentors, and receive a micro-credential of five to ten credit points once they complete the course.

Leadership and culture

We accelerated our purpose journey in Singtel Group during the year, where we embedded and integrated Group purpose and COMMIT values across all businesses. Our efforts focused on driving a group-wide alignment, creating a shared understanding of the company's mission and goals and integrating purpose with business strategy. By making purpose the core tenet of our employee experience and talent brand, we hope to create a more fulfilling and meaningful work environment for our people.

YVS 2022 indicated that 84% of our people found the corporate purpose meaningful. 85% of them agreed that senior leaders role model the company's core values. 86% of them saw core values demonstrated in the team. And 84% of them felt empowered to align with our core values.

We rallied the top 10% of leaders within our company to become multiplier leaders. We engaged them through townhalls and workshops to instil enterprise leadership expectations (ELE) and build alignment among all. 200 of our top executives participated in the ELE360 feedback survey, where over 2,000 employees gave them feedback.

Subsequently, ELE was cascaded to 2,000 executives. Our Management Committee members led by example to share the feedback they had received and discussed their own self-reflection. This role-modelling encouraged the rest of the top executives to do the same with their teams.

These efforts have helped us build the momentum for creating a purpose-led, values-driven organisation and shaping our B.I.G. culture.

Performance management

We refreshed our group-wide performance management framework to support a purpose-led and values-driven organisation. It also empowers our people to rethink the way they look at their performance. The new framework stresses the importance of values and behaviours. Our emphasis shifted from mere outcomes and accomplishments to how employees achieved these results. The revised framework includes performance assessments designed for a holistic approach, placing equal focus on business impact, leadership, behaviours and values. Employees are also encouraged to reflect on how they can embody our corporate values and behaviours into their everyday lives.

Supported by the GROW (Goal, Reality, Options and Will) coaching model, we encouraged our leaders to leverage this framework to drive regular conversations with their team members. These conversations allow our people to discuss their progress, development and any concerns they may have with their leaders. It is designed for our leaders to have more intentional conversations with their people. We also encourage our people to have ongoing and honest discussions with their leaders, not just during mid-year and year-end performance reviews.

NCS supports Girls in Tech

In May 2022, NCS held an ideation workshop for 80 girls in support of the newly launched Cross Polytechnic Girls In Tech (GIT) interest group. The group is helmed by girls studying infocomm technology at the five polytechnics. We organised the inaugural two-week GIT hackathon for 40 girls across the five polytechnics a month later. It was an opportunity for them to ideate and propose innovative solutions in their selected tech domains: AI, cyber security and analytics/cloud. Throughout, they were mentored by industry leaders and NCS Women in Tech.

In March 2023, we partnered Inspiring Girls Singapore and Nanyang Girls' High School to host a learning journey for Secondary Four students at NCS. Through tech career sharing, fireside panel discussion and a hands-on experience with the latest NCS technology in robotics, AR, VR and AI, we introduced the girls to the exciting world of STEM careers.

People Performance Indicators

PEOPLE	Singtel			Optus			Singtel Group		
	2023	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Total employees by gender									
Male	**8,483**	7,901	8,003	**5,120**	4,936	5,287	**13,603**	12,837	13,290
Female	**4,477**	4,295	4,388	**2,452**	2,332	2,400	**6,929**	6,627	6,788
Total employees	**12,960**	12,196	12,391	**7,572**	7,268	7,687	**20,532**	19,464	20,078
Total employees by employment contract and gender									
Regular employees (Male)	**7,622**	7,042	6,937	**5,040**	4,856	5,172	**12,662**	11,898	12,109
Contract employees (Male)	**861**	859	1,066	**80**	80	115	**941**	939	1,181
Regular employees (Female)	**3,981**	3,732	3,726	**2,406**	2,286	2,333	**6,387**	6,018	6,059
Contract employees (Female)	**496**	563	662	**46**	46	67	**542**	609	729
Total regular employees by employment type and gender									
Full time (Male)	**8,478**	7,896	7,995	**4,526**	4,420	4,740	**13,004**	12,316	12,735
Part time (Male)	**5**	5	8	**594**	516	547	**599**	521	555
Full time (Female)	**4,462**	4,281	4,377	**1,965**	1,885	1,893	**6,427**	6,166	6,270
Part time (Female)	**15**	14	11	**487**	447	507	**502**	461	518
Casual employees[1]									
Total casual employees	**91**	30	-	**372**	286	-	**463**	316	-
Casual employees (Male)	**58**	-	-	**228**	-	-	**286**	-	-
Casual employees (Female)	**33**	-	-	**144**	-	-	**177**	-	-
Total man hours worked	**9,889**	7,920	-	**176,552**	122,402	-	**186,441**	130,322	-
Man hours worked (Male)	**6,398**	-	-	**112,892**	-	-	**119,290**	-	-
Man hours worked (Female)	**3,491**	-	-	**63,660**	-	-	**67,151**	-	-
Total employees by age group									
<30 years old	**19%**	18%	19%	**23%**	20%	20%	**20%**	18%	19%
30-49 years old	**60%**	61%	62%	**55%**	58%	60%	**58%**	60%	61%
≥ 50 years old	**21%**	21%	20%	**23%**	22%	20%	**22%**	21%	20%
Gender mix by employee category (% female)									
Operations and Support	**42%**	43%	43%	**39%**	39%	40%	**41%**	42%	42%
Professional	**32%**	32%	31%	**31%**	30%[2]	30%	**31%**	31%[2]	31%
Executives and Top Executives	**33%**	33%	34%	**29%**	27%[2]	22%	**31%**	31%[2]	28%
- Executives	**32%**	33%	34%	**30%**	28%[2]	23%	**31%**	31%[2]	28%
- Top Executives	**34%**	34%	34%	**17%**	22%	17%	**29%**	30%	28%
Mean salary ratio (female:male)[3]									
Operations and Support	**0.99 : 1**	0.99 : 1	1 : 1	**1 : 0.94**	1 : 0.94	1 : 0.94	**1 : 0.97**	1 : 0.97	1 : 0.97
Professional	**0.93 : 1**	0.94 : 1	0.96 : 1	**0.94 : 1**	0.93 : 1	0.94 : 1	**0.93 : 1**	0.93 : 1	0.95 : 1
Executives	**0.93 : 1**	0.95 : 1	0.95 : 1	**1 : 0.97**	1 : 1	0.99 : 1	**0.98 : 1**	0.97 : 1	0.97 : 1
Median salary ratio (female:male)									
Operations and Support	**0.98 : 1**	0.98 : 1	-	**1 : 0.96**	1 : 0.98	-	**1 : 0.98**	1 : 1	-
Professional	**0.91 : 1**	0.91 : 1	-	**0.92 : 1**	0.91 : 1	-	**0.91 : 1**	0.91 : 1	-
Executives	**0.93 : 1**	0.94 : 1	-	**1 : 0.99**	1 : 1	-	**0.97 : 1**	0.97 : 1	-
Mean bonus ratio (female:male)[4]									
Operations and Support	**1 : 0.99**	1 : 1	1 : 0.99	**1 : 0.76**	1 : 0.81	1 : 0.94	**1 : 0.88**	1 : 0.92	1 : 0.97
Professional	**0.93 : 1**	0.94 : 1	0.98 : 1	**0.89 : 1**	0.87 : 1	0.89 : 1	**0.91 : 1**	0.91 : 1	0.95 : 1
Executives	**1 : 0.98**	1.12 : 1	1 : 0.94	**0.97 : 1**	0.96 : 1	0.95 : 1	**0.99 : 1**	1 : 0.95	1 : 0.97
Median bonus ratio (female:male)									
Operations and Support	**1 : 1**	0.99 : 1	-	**1 : 0.75**	0.99 : 1	-	**1 : 0.88**	0.99 : 1	-
Professional	**0.95 : 1**	0.95 : 1	-	**0.85 : 1**	0.86 : 1	-	**0.90 : 1**	0.91 : 1	-
Executives	**1 : 0.99**	1.08 : 1	-	**0.97 : 1**	1 : 0.94	-	**0.99 : 1**	1 : 0.93	-
New employee hires	**23.9%**	19.9%	15.5%	**27.8%**	23.0%	15.2%	**25.3%**	21.1%	15.3%
New employee hires by age group									
<30 years old	**10.0%**	6.6%	6.4%	**15.6%**	11.4%	6.0%	**12.1%**	8.4%	6.2%
30-49 years old	**12.3%**	11.7%	7.9%	**10.5%**	10.0%	7.7%	**11.6%**	11.1%	7.8%
≥ 50 years old	**1.6%**	1.6%	1.2%	**1.7%**	1.6%	1.6%	**1.7%**	1.6%	1.3%
New employee hires by gender									
Male	**16.2%**	13.5%	5.0%	**17.0%**	14.5%	9.5%	**16.5%**	13.8%	10.1%
Female	**7.7%**	6.4%	10.5%	**10.8%**	8.5%	5.7%	**8.8%**	7.2%	5.2%

PEOPLE	Singtel			Optus			Singtel Group		
	2023	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Employee Voluntary Turnover	**19.1%**	19.9%	13.2%	**21.9%**	22.6%	12.5%	**20.0%**	20.9%	12.9%
Employee turnover by age group									
<30 years old									
Voluntary	**4.7%**	4.9%	3.8%	**9.5%**	9.6%	6.0%	**6.5%**	6.6%	4.6%
Involuntary	**0.3%**	0.09%	0.0%	**1.7%**	2.1%	0.8%	**0.8%**	0.8%	0.3%
30-49 years old									
Voluntary	**11.6%**	12.5%	7.8%	**10.2%**	11.1%	5.5%	**11.1%**	12.0%	6.9%
Involuntary	**0.5%**	0.3%	0.2%	**2.3%**	3.2%	2.0%	**1.2%**	1.4%	0.9%
≥ 50 years old									
Voluntary	**2.8%**	2.5%	1.6%	**2.2%**	1.9%	1.0%	**2.6%**	2.3%	1.4%
Involuntary	**0.2%**	0.2%	0.1%	**0.8%**	1.8%	0.9%	**0.4%**	0.8%	0.4%
Employee turnover by gender									
Male									
Voluntary	**12.9%**	13.2%	9.0%	**13.3%**	14.9%	8.0%	**13.1%**	13.8%	8.6%
Involuntary	**0.6%**	0.4%	0.2%	**3.1%**	5.0%	2.5%	**1.5%**	2.1%	1.1%
Female									
Voluntary	**6.2%**	6.7%	4.2%	**8.5%**	7.7%	4.5%	**7.1%**	7.1%	4.3%
Involuntary	**0.4%**	0.2%	0.1%	**1.6%**	2.1%	1.3%	**0.9%**	0.9%	0.6%
Total training investment ($million)	**S$15.4**	S$12.5	S$11.8	**A$6.9**	A$6.7	A$5.0	**S$21.9**	S$19.2	S$16.8
Average training hours per employee	**47.8**	51.8	43.5	**32.7**	27.0	14.6	**42.6**	43.1	33.0
Average training hours by gender									
Male	**52.6**	56.3	48.3	**30.9**	25.8	13.7	**44.8**	45.1	34.8
Female	**38.7**	43.4	34.8	**36.8**	29.8	17.0	**38.1**	39.1	29.1
Average training hours by employee category[5]									
Operations and Support	**27**	27.2	20.9	**64.8**	34.8	28.6	**34.2**	28.7	22.7
Professional	**56.1**	62.7	55.3	**28.0**	26.8	12.2	**46.1**	49.3	38.5
Executives and above	**45.2**	50.3	39.6	**30.7**	22.2	10.9	**37.6**	35.7	24.4
Employee health and safety[6]									
Total man hours worked (per million)	**28.5**	27.0	27.6	**12.6**	12.3	13.1	**41.0**	39.3	40.7
Workplace injury incidence rate (per 1,000 employees)	**0.9**	0.6	0.8	**2.5**	1.1	2.6	**1.5**	0.8	1.5
Workplace injury frequency rate (per million hours worked)	**0.4**	0.3	0.4	**1.5**	0.7	1.5	**0.8**	0.4	0.7
Workplace injury frequency rate (Male)	**0.4**	0.2	0.4	**1.2**	0.5	1.6	**0.6**	0.3	0.8
Workplace injury frequency rate (Female)	**0.5**	0.3	0.3	**2.3**	1.1	1.3	**1.0**	0.5	0.6
Workplace injury severity rate	**4.9**	6.0	10.0	**8.5**	11.9	19.0	**6.0**	7.9	12.9
Workplace injury severity rate (Male)	**4.9**	0.8	13.0	**6.0**	9.1	23.7	**5.3**	3.5	16.6
Workplace injury severity rate (Female)	**4.9**	15.7	4.5	**13.8**	18.3	8.0	**7.4**	16.5	5.5
Absenteeism rate	**0.02**	0.020	0.014	**0.02**	0.02	0.013	**0.02**	0.02	0.014
Absenteeism rate (Male)	**0.02**	0.017	0.011	**0.019**	0.015	0.012	**0.019**	0.016	0.011
Absenteeism rate (Female)	**0.026**	0.029	0.019	**0.026**	0.020	0.017	**0.026**	0.026	0.019
Total occupational disease cases	**0**	0	0	**0**	0	0	**0**	0	0
Total occupational disease cases (Male)	**0**	0	0.0	**0**	0	0	**0**	0	0
Total occupational disease cases (Female)	**0**	0	0.0	**0**	0	0	**0**	0	0
High consequence injury rate (per million hours worked)	**0**	0	0.04	**0**	0	0	**0**	0	0.02
Fatalities	**0**	0	0	**0**	0	0	**0**	0	0

1. This is the first year we are reporting on casual workers with a detailed breakdown by gender, who are mainly employed as retail sales consultants in Singapore and Australia.
2. Restated due to reclassification of certain job grades for Group alignment.
3. Based on average monthly salary of regular employees.
4. Based on average annual bonus of regular employees.
5. Singtel excludes contract staff who have a tenure of less than one year, while Optus excludes all contract staff and casual workers in their data.
6. Workplace health and safety metrics are based on the International Labour Organization (ILO) definitions, subject to country definition of lost work shifts e.g. Optus excludes weekends from medical leave when calculating these rates.

04 Community Impact

Our strategy and commitment

The Singtel Group understands that we can achieve our sustainability and business ambitions with the support of a thriving community. Guided by our corporate purpose, Empower Every Generation, we hope to create positive change by empowering and giving back to our communities (see Figure 1).

As a leading communications technology group with a large sphere of influence, we acknowledge that we potentially impact a wide range of human rights particularly affecting vulnerable groups such as children and migrant workers. Hence, we conducted a salient human rights issues assessment during the year to identify and analyse the areas where we may unintentionally or indirectly have an impact on human rights. We also worked with our various business units to understand and address these impacts. From our assessment, we have prioritised promoting user safety, well-being and access to telecommunication services.

Our commitment centres on enhancing digital inclusion, and improving equity by fostering education and employability, and safeguarding online safety. We undertake, organise and implement initiatives and activities aimed at uplifting and supporting the vulnerable groups – children, youth, seniors, persons with disabilities and disadvantaged families (see Table 1).

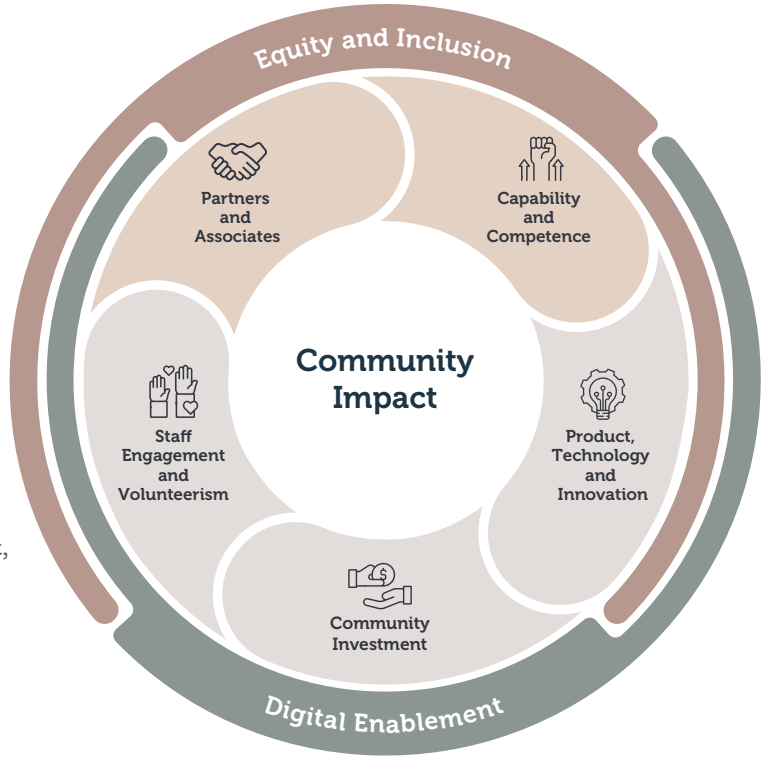


Figure 1: Singtel Group community impact framework

Table 1: Singtel Group community impact efforts and goals

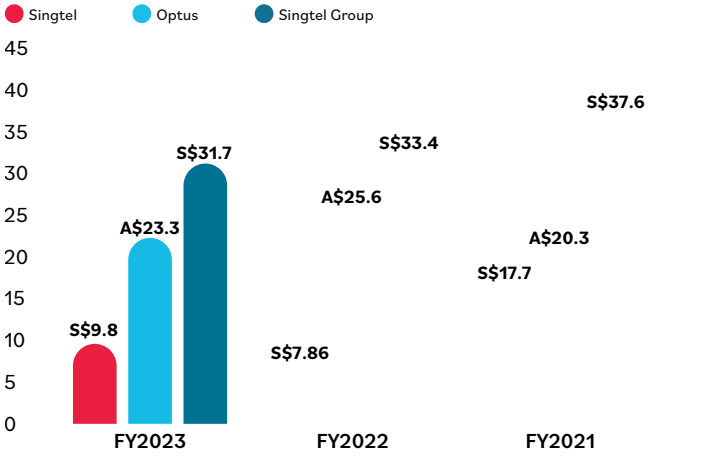
Community impact pillars	Objectives	Key Singtel Group initiatives	Target segments	2025 target	Progress towards 2025 target
Digital Enablement	Bridging the digital divide through digital access and inclusion	• Singtel Digital Silvers • Donate Your Data and Device • Migrant Worker Outreach	Vulnerable seniors, migrant workers, low-income families	One million digitally enabled persons and SMEs (between 2015 and 2025)	>840,000 (between 2015 and 2023)
	Protecting online safety and well-being	• Help123 • Optus Digital Thumbprint • Singtel Digital Silvers	Children, youth, parents, and caregivers		
	Unlocking digital growth opportunities	• Singtel Group Future Makers • SME Digitisation Initiatives	SMEs, non-governmental organisations (NGOs), social impact start-ups and Social Service Agencies (SSAs)		
Equity and Inclusion	Supporting the education of vulnerable groups	• Singtel Touching Lives Fund • Race Against Cancer • ABCN and KARI Foundation	Persons with disabilities, disadvantaged communities and vulnerable youth		
	Advancing employability of disadvantaged population	• Pathways 2 Employment • SBNoD			

DIGITALLY INCLUSIVE AND EMPOWERED COMMUNITIES

With the proliferation of technology, societies today have become highly reliant on digital access. Essential services, information and access are rapidly being digitised – from digital communications to online banking. Hence, vulnerable communities that lack resources or skills to keep up with such technological advancements risk being left behind and excluded digitally, worsening social and economic disparities.

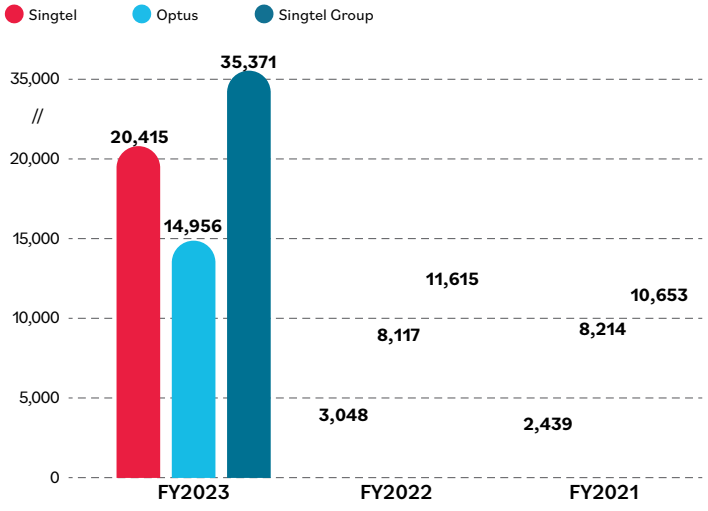
To bridge digital divide, Singtel Group strives to foster digital access and literacy for the vulnerable, and provide them with necessary resources to thrive in this digital age. From our baseline year of FY2015, we hope to digitally enable one million persons and SMEs by 2025. As of FY2023, we have digitally enabled 840,000 persons and SMEs. We invested S$31.7 million in our communities during the year (see Figure 2), and cumulatively S$234.9 million since 2015.

Figure 2: Singtel Group's community investment* ($ million)



* Our community investment, which includes direct financial support, in-kind charitable sponsorship and staff volunteering hours, has been verified by the Business for Societal Impact (B4SI).

Figure 3: Singtel Group's volunteering hours



Staff volunteering is one way we engage our people directly in our social causes to build better empathy and support for the community (see Figure 3). While COVID impacted the ability to undertake many face-to-face volunteering activities, we expect to go back to earlier levels in excess of 25,000 hours.

Digital inclusion

To address the digital divide, we work closely with several national agencies and charity partners to enhance connectivity and access for vulnerable groups such as seniors, low-income families and migrant workers.

Donate Your Data and Device programmes

In Australia, our Donate Your Data programme seeks to provide data access and internet connectivity to disadvantaged and vulnerable communities. Through the programme, customers are encouraged to donate their unused mobile data to those in need.

The donated data is pooled and shared with beneficiaries supported by our charity partners such as KARI Foundation, Australian Business and Community Network (ABCN) and The Smith Family. Beneficiaries include disadvantaged students, lower income families, people facing crises such as natural disasters and domestic violence, and the homeless. During the year, over 12 million GB of data was donated by more than 200,000 customers, benefiting more than 13,400 vulnerable people.

Through our partnership with Good360 Australia, customers can donate brand new or second-hand mobile devices which will be cleaned, data wiped and repackaged. The donated devices are then distributed to disadvantaged individuals and families who can use them to access education or vital services.

Devices that do not meet the requirements for donation are recycled through our Optus in-store Mobile Muster programme. This minimises our environmental impact and fosters our circular economy commitment.

We supported Ukrainians displaced by war and new to Australia to connect with their loved ones and access vital programmes and services. We donated 900 mobile phones paired with Donate Your Data SIM cards, where our staff volunteers helped distribute the phones to the individuals and activate their SIM cards.

Giving devices new lease of life

We launched a device donation drive in collaboration with Engineering Good, a Singapore-based non-profit which capitalises on sustainable engineering and technology to enhance inclusion for vulnerable communities. Under this initiative, device donation bins were set up at four of our Singtel Shops (Comcentre, Jurong Point, Causeway Point and Tampines Mall) for customers to deposit old usable devices such as mobile phones, tablets and laptops. These devices will be refurbished and wiped clean by Engineering Good, and subsequently donated to vulnerable groups including seniors and low-income families.

The team from Engineering Good with Singtel employees.

In doing so, old technological devices are given a new lease of life, advancing resource circularity while broadening digital inclusivity. We have since collected 957kg of electronic devices. For more information, find out ***here***.

We also collected old laptops no longer used by our business units. After data wipe and refurbishment by our IT unit, we donated 71 laptops to our beneficiary special education (SPED) schools and the Singapore Cancer Society, and 33 to Engineering Good.

Digitally enabling seniors

Our Singtel Digital Silvers programme provides seniors living alone in Singapore with social support and a sense of community, while helping them to keep abreast of the digital world. Our staff volunteers conducted one-on-one sessions with seniors at Senior Activity Centres on a weekly basis every Wednesday afternoon. During these sessions, seniors learn digital skills including how to use smartphone functions like voice messaging, transport and e-banking mobile apps, and how to protect themselves against online dangers and scams. Over the past year, we reached out to more than 300 seniors, who are now more confident using mobile devices and apps to navigate the digital world.

We also brought 40 seniors to our Expressions Through Art exhibition at the National Gallery Singapore for an afternoon of art-filled activities (see story on page 45). Our staff volunteers taught them digital skills such as scanning QR codes to access information about the artworks and taking photos with smartphones.

To encourage customers' involvement and support for our community, we enabled our GOMO customers to easily donate their unused data through the GOMO mobile app. We consolidate and credit the donated data monthly into the Singtel prepaid hi! Cards, which we give to vulnerable seniors. During the year, we issued more than 7,000 prepaid hi! Cards, each comes with a monthly 3GB data plan. 36,000 GOMO customers have donated over 1.5 million GB of data since the programme launch in February 2022. GOMO Donate Your Data was awarded the Loyalty & Engagement Award 2022, organised by Marketing Interactive Magazine, for Best use of CSR.

Singtel is a key partner of the Digital for Life (DfL) national movement, organised by the Infocomm Media Development Authority (IMDA), which encourages individuals, corporates and the community to embrace, incorporate and enrich digital changes within their lives. IMDA also recognised Singtel as a Champion of DfL.

Enhancing digital inclusion for migrant workers

Singapore is home to more than one million migrant workers, with majority working in construction, healthcare and domestic help, and over half are our hi!Card prepaid mobile customers. We collaborate with Migrant Workers' Centre (MWC) and Centre for Domestic Employees (CDE) on regular engagement activities such as roadshows and entertainment targeting at various ethnic groups.

We continue to enhance their mobile experience with our new 5G network. In conjunction with Singapore National Day 2022 celebrations, we brought 5G experience to Sungei Tengah Lodge, one of the biggest dormitories with over 25,000 workers. We hosted 10,000 migrant workers for a day of celebrations and 5G experience – from soccer and tug-of-war games to the 5G video phone booth and battle of the networks (4G vs 5G). The event concluded with live performances by popular Tamil and Bengali artistes, which garnered 120,000 views on Facebook Live.

Our mobile wallet service Singtel Dash enables migrant workers on any mobile network to remit money overseas easily to loved ones at home in countries such as Bangladesh, China, India, Indonesia, Malaysia, Myanmar, the Philippines and Thailand. These migrant workers can manage their accounts and remit funds overseas using Dash Remit via hi!App at their fingertips.

Protecting against scam

In February 2023, Singtel became the first telco in Singapore to announce a free Scam Call Protect service for customers. We worked with MWC and CDE and have since educated over 48,000 migrant workers at key dormitories on this feature.

This is part of our ongoing efforts to raise scam awareness among our customers. Singtel's Scam Call Protect blocks more than 30 million scam calls and 20 million scam SMSes every month.

Singtel Touching Lives Fund
20 years of impact

Our corporate philanthropy programme Singtel Touching Lives Fund (STLF), which supports children and youth studying in special education (SPED) schools in Singapore, celebrated its 20th anniversary in 2022. Our current six beneficiary schools – APSN Chaoyang School, APSN Tanglin School, APSN Delta Senior School, Cerebral Palsy Alliance Singapore School, Eden School and MINDS Lee Kong Chian Gardens School – help over 3,000 students with special needs annually to assimilate into society and live independently. Since its inception, STLF has raised more than S$54 million.

In the initial years after its inception in 2002, STLF supported vulnerable children and youth, working with various charitable organisations focusing on disabilities, early intervention programmes for infants and children, and after-school care for youth-at-risks. Ten years on, we sharpened STLF's focus to fully support the critical education of children and youth with special needs in Singapore.

Besides supporting our six beneficiary schools to deliver critical education programmes to equip students with knowledge, skills and confidence, STLF enabled Singtel employees and partners to have meaningful engagement with these children and youth through our programmes like Singtel Carnival.

Touching lives. Making a difference.

The social impact created by STLF over the years is clearly demonstrated by the numerous success stories from these students. Many have transformed their lives while still schooling or after graduation when they obtained gainful employment, became more independent and started to contribute to society. They also gained greater confidence and self-esteem through acquiring new skills and discovering their passions in schools.

APSN Chaoyang School, Tanglin School and Delta Senior School

Lucas Ong, 9, was a Primary 1 student in 2021 placed in the school's Autism Structured Programme (ASP) (class ratio of four students to one teacher), as he faced difficulties regulating his emotions. Through the programme and close support of teachers and therapists as well as his parents, Lucas made improvements in his communication skills and can now better express his feelings and thoughts. Hence he was fully integrated into a Primary 2 Integrated Programme (class ratio of ten students to one teacher) for students with mild intellectual disability and ASD. Chaoyang School is a primary school for 7 to 12 year-old children with mild intellectual disability and also takes in those with mild autism to gain critical developmental skills and support.

Benny Ong, 21, graduated in 2022 from Delta Senior School, which delivers vocational training for youth with mild intellectual disability aged 17 to 21 years old. He picked up mindfulness practices in horticulture lessons and applied them whenever he felt stressed. This also helped to strengthen his resilience and his performance during his job attachment. He became a full-time employee of the school's employment partner SBR Landscape & Construction at Sentosa Siloso Beach Resort, achieving his dream of becoming a landscape technician and fulfilling his interest in working with plants.

Hay Qing Hui, 31, steadily progressed through the three schools and was employed full-time by APSN Tanglin School, where he has been an instructor assistant since 2013. As someone diagnosed with mild intellectual disability from young, the schools' programmes helped him to overcome feelings of insecurity and discover his identity and self-worth. He was actively involved in sports while studying in Tanglin School, and today he is an athlete leader with Special Olympics Singapore, advocating for unified sporting activities where athletes of different abilities learn from each other. He won the prestigious Goh Chok Tong Enable Award in 2022 in recognition of his potential and commitment to serve the community.

Cerebral Palsy Alliance Singapore School

Siti Hawa Bte Abdullah, 20, was diagnosed with Spastic Left Hemiplegia since birth. She has gained independence in daily tasks like personal grooming and hygiene and also acquired adequate language and numeracy skills to function well in the community. She graduated from the school in 2021 and was placed on the SG Enable School-to-Work Transition Programme, which is an internship pathway from 2022 to 2024. She currently works in housekeeping at Pan Pacific Hotel.

Eden School
Ahmad Syahmi Bin Suhainy, 21, who has Autism Spectrum Disorder, graduated in 2019. In school, he made significant improvements in the area of emotional regulation and became more sociable and inquisitive over time. Syahmi was also nominated to become our STLF Ambassador In 2013. Through the school's vocational programme, he learnt critical hard and soft skills to prepare him for employment in the food industry, which is his area of interest, and works at Burger King today.

MINDS Lee Kong Chian Gardens School
Mohamed Aimi Bin Hamini, 19 , who has intellectual disability, graduated in 2022. Through his schooling years, Aimi acquired various vocational skills such as cashiering and customer service. He was also very active in sports and took part in Special Olympics National Games in 2017 and 2022. His transition from a shy kid who lacked confidence into a mature, confident and independent youth highlights the value of special education and support from all quarters. Today, he is an employee of Pizza Hut.

**We have recieved permission to feature the above students and graduates.*

Artistic talent showcase

We recognise the power of art in facilitating meaningful connections and conversations and this drives our ongoing support for Singapore art. Art is no less important to students with special needs. Hence, to commemorate STLF's 20th anniversary, we organised and sponsored an art exhibition 'Expressions Through Art' at the National Gallery Singapore. The exhibition, held in August 2022, featured 128 pieces of 2D and 3D artworks created by students from all the SPED schools in Singapore.

The event was graced by President Halimah Yacob and Dr Mohamad Maliki bin Osman, Second Minister for Education and Minister in the Prime Minister's Office. APSN Tanglin School principal Liza Ow conducted a guided tour for them, explaining SPED art curriculum and how these students express their creativity through art using different materials and styles, like acrylic and oil painting. The student artists were also onsite to introduce their artworks to our guests.

By showcasing the artistic talents of SPED students, Singtel hopes to provide an open, conducive and accessible platform for Singaporeans to better understand the diverse and unique talents and skills of persons with special needs while celebrating the spirit of creativity and inclusion.

The schools informed us that the exhibition fostered confidence in students whose artworks were showcased, and this inspired other students.

Expressions Through Art: Numbers at a glance

21
SPED schools participated

3,500
visitors

128
2D and 3D artworks displayed

199
student artists featured

Children from the SPED schools with (from left to right) Director, National Gallery Singapore, Dr Eugene Tan; Singtel Group Chief People and Sustainability Officer and STLF Chairperson, Aileen Tan; Second Minister for Education and Minister in the Prime Minister's Office, Dr Mohamad Maliki bin Osman; President Halimah Yacob; Group CEO, Yuen Kuan Moon; Principal of APSN Tanglin School, Liza Ow; and Vice President of Group Sustainability, Andrew Buay.

Levelling up skills and confidence

During the year, our annual flagship fundraising event, Singtel Charity Golf, returned to its usual pre-COVID format of golf and dinner. We worked with APSN Delta Senior School to give their students the opportunity to put their F&B training into practice – by serving pre-dinner drinks and the first dinner course. Students from APSN Tanglin School also did a drum performance for our golf dinner guests. More money was raised for STLF through an auction of one of the artworks at our Expressions Through Art exhibition during dinner.

Altogether, we raised S$1.15 million for STLF from our business partners, a 65% increase from the S$700,000 raised at last year's golf event, which did not have dinner due to safe management measures.

Such collaborations with our beneficiary schools help students to build their confidence and social skills interacting with people.

S$1.15 million
raised

Singtel Group CEO, Yuen Kuan Moon, and Consumer Singapore CEO, Anna Yip (third from right) with business partners at Singtel Charity Golf.

APSN Tanglin School students doing a percussion performance at Charity Golf dinner.

Alignment with national strategies

All our community impact programmes are aligned with the NCSS Social Service Sector Strategic Thrusts (4ST). Singtel was represented on its committee and helped shape the strategy. 4ST aims to achieve the vision of 'every person empowered to live with dignity in a caring and inclusive society'.

- **Thrust 1: Empowered and included individuals, families, and communities**
- **Thrust 2: Effective and impactful social purpose entities**
- **Thrust 3: Caring, collaborative and impactful social service ecosystem**
- **Thrust 4: Future-directed social service sector**

We ensure that vulnerable groups such as seniors and persons with disabilities are supported by bridging the digital divide and through programmes like STLF. We also help build capacity of social purpose entities such as TOUCH and other SSAs, while working closely with national agencies like NCSS and IMDA for our community engagement programmes to build a more impactful social service ecosystem. We strongly encourage social innovation and use of technology such as 5G for greater social impact.

A carnival with impact

The Singtel Carnival held in November 2022 saw our largest turnout since it was first organised in 2013. 2,000 students from 18 SPED schools were treated to a day of fun at our eighth annual Singtel Carnival, Singapore's largest event dedicated to children with special needs. Over 1,700 Singtel volunteers and 180 volunteers from the Singapore Business Network on DisAbility (SBNoD) group of companies, volunteered at the event, which had 50 food and game stalls including handicraft activities and rides for students to enjoy.

This annual mega event, which took a break during COVID, is one that the schools and students keenly look forward to. It offers students with special needs a day to have fun in a safe environment while developing their social skills and self-confidence. It also allows our employees to develop empathy and appreciate persons with disabilities, and how to interact and work with them.

Most of our staff volunteers surveyed felt Singtel Carnival was engaging and meaningful, while providing a platform for teambuilding and boosting their mental well-being. All the schools surveyed felt Singtel Carnival was a good learning experience for the students and it brought joy and laughter to them.

Singtel Carnival 2022: Numbers at a glance

18 SPED schools	**2,000** students	**171** teachers and caregivers
1,900 staff volunteers	**50** games and food stalls	**4 and 5** satisfaction scores on a five-point scale from every staff volunteer and school

Our five Optus Future Makers finalists received a total funding of A$200,000.

Supporting innovation for social good

We have long recognised that technology and innovation can play important roles in supporting and meeting community or social needs, something now embedded in the NCSS 4ST to develop a future-directed social service sector in Singapore. Our Singtel Group Future Makers programme launched in 2016 has funded over S$5 million to support more than 80 local and regional social impact start-ups. These start-ups harness technology to provide innovative solutions that various sectors, such as disability, seniors and agriculture can benefit from.

During the four-month programme in Singapore, the three finalists of Singtel Future Makers 2022 – Moon Technologies, SoundEye and WeWalk – underwent capacity building sessions with our 5G enterprise experts to better understand how they can embed 5G capabilities and leverage Singtel's 5G technology and network to help the community. We provided each start-up with an initial S$50,000 grant to bring their ideas to life.

In November last year, they pitched their proposals to more than 70 of our corporate partners at the programme's finale. WeWalk, which enhances the mobility of visually impaired people through their revolutionary smart cane and smartphone app, received the Voter's Choice Award of an additional S$30,000, while Moon Technologies, which developed augmented reality smart glasses for emergency response, secured an additional US$35,000 sponsored by our partner Qualcomm for the most promising 5G for social impact proposal on the pitch day.

In Australia, our five Optus Future Makers finalists pitched to our judging panel for a share of A$200,000 in funding in December 2022 after a four-month journey of mentorship and support by subject matter experts. Charopy received the top grant of A$70,000 which will go towards eradicating recycling bin contamination through IoT technology.

Pioneera took the people's choice award for its AI tool that proactively monitors signs of staff burnout, and received an additional A$10,000 in funding. We plan to run a pilot of the two start-ups' solutions with Optus. With Future Makers, we are able to empower more people through tech for good solutions by creating a social innovation ecosystem while building start-ups' capacities and accelerating their growth.

Education and employability

At Singtel Group, we are committed to upholding corporate social responsibility. Through our strategic community programmes and philanthropic contributions, we hope to empower vulnerable segments of society, including disadvantaged children, youths and families, persons with special needs and Indigenous Australians, to reach their fullest potential. We organised and participated in initiatives and activities to bolster the education and employability of these vulnerable groups. Our efforts to advance the inclusion and development of these groups in Singapore have been recognised annually by Community Chest with its Charity Platinum Award since 2001 and Volunteer Partner Awards since its launch in 2020.

In Australia, our initiatives focus on improving educational and employment opportunities for disadvantaged individuals and groups such as Indigenous students and those from low-income families. We are one of the founding members of Australian Business and Community Network (ABCN), whose programmes help students from low socio-economic backgrounds to achieve their full potential. During the 2022 school year, we ran more than 40 programmes in primary and secondary schools across five states, reaching about 900 students, supported by about 230 Optus staff volunteer mentors. We also supported its Regional, Rural and Remote (RRR) programme, where we mentored 60 students in remote areas via four workshops, developing their skills and confidence.

Our longstanding partnership with KARI Foundation also allows us to invest in the next generation of Indigenous students in Australia. During the year, 35 Optus staff volunteers participated in four KARI workshops as mentors and supported 20 students. Our community efforts helped Optus to rank fifth for the Good Company ranking of Top 10 Best Companies to Give Back 2022.

Improving employability of the vulnerable population

Singtel is one of the founding members and the current co-chair of the SBNoD, a community established in 2015 that convenes regularly to discuss and exchange expertise and resources to support persons with disabilities and disability employment. We are also involved in the national disability agency SG Enable's RISE Mentorship Programme for tertiary students with disabilities. During the year, we fielded three executive mentors for this programme.

Similarly, in Australia, our Pathways 2 Employment programme was created to improve the employability of disadvantaged youths transitioning between school and work. Vulnerable high school students are equipped with the necessary skills to find, apply and be hired for jobs within the retail sector and Optus. During the year, 150 students participated in eight workshops across New South Wales, Queensland and Victoria, supported by 45 of our staff volunteers who mentored these students. They helped students identify strengths and develop soft skills required for their future careers. Many KARI Foundation students also participated in the programme, of which more than half of them found a job successfully.

Table 2: Impact on students who participated in our Optus Digital Thumbprint programme's facilitator-led workshops

Impact metrics	Before	After	Increase
Students completing the Cyberbullying and Respectful Relationships workshop feel confident in supporting their friends if they are being cyberbullied	81%	93%	12%
Students completing the Cyber Security workshop reported that they were aware of how to keep their personal data secure online	79%	96%	17%

Table 3: Confidence level of students who participated in ABCN programmes including those involving Optus mentors

Rating statement	Before	After	Increase
I know how to set, review and achieve my short and long term goals	33%	92%	59%
I have a wide range of career options and future pathways	33%	90%	57%
I am using a range of tools and strategies to support my health and well-being	38%	93%	55%
I feel prepared for the world of work	36%	92%	56%
I am aware of the skills that employers are looking for	42%	97%	55%
I understand how to perform in a job interview	39%	99%	59%

ONLINE SAFETY

As technology and digital innovation transform the world around us, concerns around online safety and security continue to rise. From inappropriate content and cyber bullying to online scam, the vulnerable groups like children, youth and seniors are exposed to increasing online risks.

As a responsible service provider and in line with our salient human rights issues assessment, the Singtel Group proactively mitigates such risks by promoting safe use of digital platforms and technology. We have several initiatives to impart online safety knowledge and skills to these vulnerable groups.

We also work closely with national agencies in Singapore and the Office of the e-Safety Commissioner in Australia to stay abreast of and remain compliant to the evolving digital regulatory landscape. We use tools such as Global Child Forum and GSMA-UNICEF MO-CRIA: Child Rights Impact Self-Assessment Tool for Mobile Operators to keep pace with the latest and best practices on safeguarding children against online harms and human rights infringements.

Safeguarding online safety in Singapore

To enhance the knowledge parents and caregivers have on cyber wellness and online safety, Singtel supports Help123, an integrated digital parenting and cyber wellness platform developed by TOUCH Community Services. Since its launch in 2017, we have provided over S$1 million to support this platform and its offerings. Help123 provides a range of services, resources and knowledge pertaining to cyber safety and wellness. The platform also offers online safety webinars and workshops, digital resources and a helpdesk hotline (1800 6123 123) for parents and caregivers.

During the year, Help123 reached more than 4,000 parents and children through workshops. From our post-workshop surveys, almost all said they would recommend Help123 workshops to others. They also felt that the workshops were fun and productive, allowing parent and child to understand each other better, while picking up effective digital parenting techniques.

Advancing digital education and online safety in Australia

Digital technology and online platforms allow people to meaningfully participate in society. In Australia, we empower and encourage children and youth to practise safe and responsible habits when they are online through our Optus Digital Thumbprint Programme (DTP).

Our programme has been endorsed by the eSafety Commissioner as a Trusted eSafety Provider. Through in-person and virtual workshops, students learn about the importance of cyber security, how their actions shape their online identity, and how to seek help when they become victims of cyber bullying. During the year, we delivered workshops to more than 80,000 students across Australia.

We expanded our programme and provided more opportunities for regional Australian students to learn about digital safety and well-being. We introduced new workshops on 'Staying safe on games and apps' and 'Keeping my information private online' for Year Three and Four students, and 'Cyberbullying and respectful relationships' for Year Five and Six students.

Racing against cancer

Group CEO, Yuen Kuan Moon; Singtel Group Chief People and Sustainability Officer and STLF Chairperson, Aileen Tan, presenting a S$250,000 cheque to Singapore Cancer Society (SCS) - (from left) Albert Ching, CEO SCS; Wee Leong How, Chairman SCS; witnessed by Minister for Education, Chan Chun Sing.

05 Sustainable Value Creation

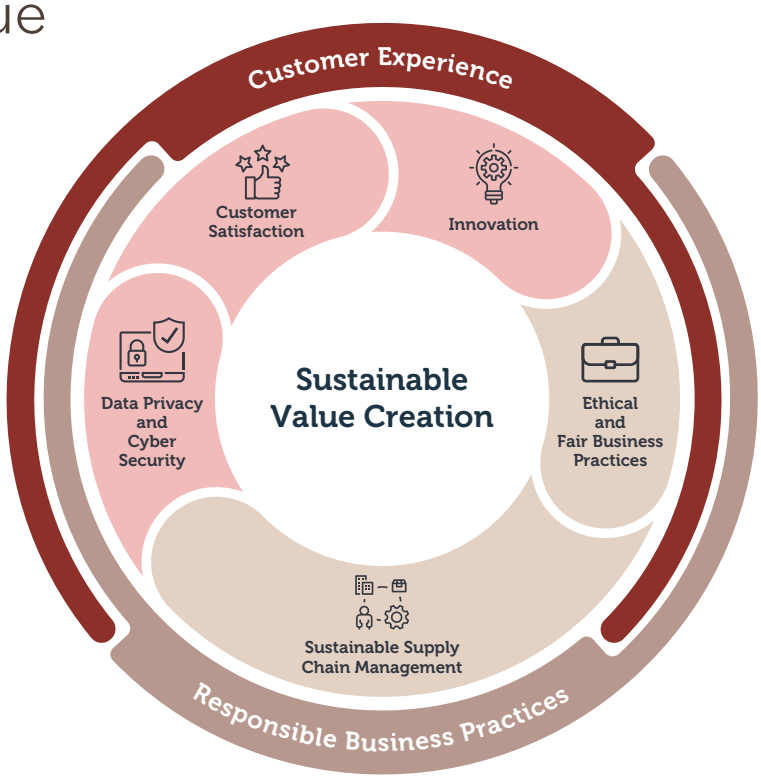


Figure 1: Singtel Group sustainable value creation framework

Our strategy and commitment

The Singtel Group is committed to being a responsible and innovative leader in the markets where we operate, where we serve over 14 million consumer and enterprise customers daily. We empower our employees, customers, community and stakeholders of all generations through our infocomm technology (ICT) services and solutions. We also embrace responsible business practices across our operations and supply chains to drive positive business, environmental and societal impact (see Figure 1).

As a signatory to the UN Global Compact since 2007, we conduct business in line with its Ten Principles. We address salient human rights issues in our value chain and operations, guided by the UN Guiding Principles on Business and Human Rights. This ranges from customer data privacy to suppliers' treatment of workers and local communities.

SUSTAINABLE SUPPLY CHAIN MANAGEMENT

Singtel Group has an extensive supply chain spanning from mobile and network equipment vendors to security and managing agents. During the year, we engaged 5,227 suppliers to procure products and services for our businesses. We recognise the potential human rights issues that our value chain faces. These range from health and safety risks for our suppliers' workers to environmental degradation and even displacement of local communities from the manufacture of products that they supply to us. We are committed to upholding human rights and limit negative environmental and social impact in our supply chain through our sustainable supply chain strategy and management.

During the year, Optus published our third Modern Slavery Statement which highlights the actions we took to address modern slavery risks. This included a risk assessment of our major suppliers through questionnaires and capacity building to help them better manage human rights risks. Suppliers are required to have in place health, safety and security practices for all aspects of their business, including compliance with all local and national laws, in line with international standards on labour and human rights, and modern slavery. We work with them to ensure there are no breaches, and will terminate our business relationship with suppliers who are non-compliant under certain circumstances of breaches.

Understanding our value chain

We completed a baseline, spend-based assessment of our scope 3 greenhouse gas (GHG) footprint in the prior year and continue to seek improvements to the methodology. We also continue to monitor changes to the primary drivers of GHG emissions in our overall business activities and value chain. During the year, we became one of the first Singapore-based companies to join the ***CDP Supply Chain Programme***, allowing us to leverage our purchasing power to effect positive change in our supply chain. We will encourage our top spend and GHG emitting suppliers, who account for about 45% of our scope 3 emissions, to disclose their environmental impact and emissions reduction plans. Through the CDP programme, we can identify collaboration opportunities with our suppliers to improve the emissions allocation methodologies and drive climate action.

We worked closely with key 5G suppliers Ericsson, Huawei and Nokia to better understand and quantify the embodied carbon emissions of our network infrastructure. Embodied emissions include emissions associated with the network construction processes and materials used in our mobile base stations. From this engagement, we have a clearer picture of our emissions inventory and insights into areas where emissions reduction improvements can be made together with our suppliers. We have also begun engaging some of our enterprise customers interested in emissions allocation for their scope 3 accounting.

Procurement screening process

As part of our tender process, we require 100% of our new suppliers to acknowledge the requirements and expectations set out in our Singtel Supplier Code of Conduct. This includes compliance with key topics like environmental management, business ethics, human rights and modern slavery, and workplace safety and health. We benchmarked against best practice for our procurement of infrastructure, technology, operations and maintenance services. We also take into consideration the results from the supplier sustainability and life cycle assessments we conducted two years ago in our procurement decisions.

During the year, we included in our sustainability risk assessment framework a focus on GHG emissions, renewable energy and data privacy. We also incorporated a shadow carbon price of S$50 per tonne of CO_2e if a project exceeds 1,000 tonnes. For example, during the year, we applied a shadow price to a tender process for an IT tool that generates quotes for orders. Every response was evaluated and emissions calculated using company emission factors. The shadow price was then applied to arrive at a holistic cost of ownership, which imputes the total GHG impact as cost associated with the purchase of this tool.

Supplier conduct and engagement

Our Supplier Code of Conduct requires suppliers to adopt effective environmental management practices and encourages them to track and reduce GHG emissions, while undertaking initiatives to promote greater environmental responsibility and incorporate circularity into their products. We will continue to refine fundamental requirements as well as social and environmental criteria such as labour rights, life cycle management, waste management and training.

In the coming year, we will step up our supplier engagement by developing a platform to consolidate our sustainable supply chain management efforts and processes, including our supplier assessment and education programme. To improve the scope and robustness of our supplier assessments, we plan to incorporate an external risk assessment and third-party validation. We also plan to build a sustainable product database for our business units to purchase.

In Australia, we continue to work with Supply Nation, a non-profit organisation that links major companies throughout Australia with Indigenous Australian businesses. We now have access and opportunities to support more than 3,000 Indigenous suppliers.

Contractor workplace safety and health

Workplace safety and health (WSH) is our top priority and we strive to inculcate good safety habits and practices among our suppliers and contractors to ensure that all work activities are carried out safely (see Table 1). Our contractors are required to be ISO 45001 certified and accredited under our Safe Contractor Accreditation (SCA) programme, which we introduced in 2016. This is a set of Singtel WSH standards for contractors who perform high risk technical or physical work to mitigate safety risks with the aim of ensuring zero accidents. It requires contractors to adopt prescriptive requirements to uplift their WSH standards.

In 2022, we revamped the SCA programme to reflect the evolving WSH landscape and focus on prevailing and new challenges. This includes implementing programmes to address the mental well-being of workers, adopting technology to improve WSH outcomes, and including considerations such as good WSH performance and bizSAFE certification in their selection criteria of sub-contractors.

The revised SCA programme also incorporates a grading system, assessed by auditors on how well the contractors perform for various criteria set out in the accreditation requirements. The achievements of the contractors are differentiated by various award levels of gold, silver and a pass. Those who have performed well will be recognised at the upcoming 2023 Singtel SCA Award and Recognition event. Through such efforts, we hope to inspire and encourage our contractors to continue keeping the workplace and their workers safe. In the coming year, we will also work to incorporate environmental considerations into the programme.

Table 1: FY2023 WSH indicators of third-party contractors[1]

Contractor safety and health	Singtel			Optus			Singtel Group		
	2023	2022	2021	2023	2022	2021	2023	2022	2021
Workplace injury incidence rate (per 1,000 employees)	**14.4**	7.8	13.7	**12.8**	11.8	5.3	**13.6**	9.7	Not available
Workplace injury frequency rate (per million hours worked)	**4.2**	2.7	4.4	**19.2**	18.9	5.9	**6.9**	5.3	
Workplace injury severity rate (per million hours worked)	**8.4**	15.3	61.1	**522.4**	14.2	11.7	**100.4**	15.2	
High consequence injury rate	**0**	0	Not available	**0**	0	Not available	**0**	0	
Fatalities	**0**	0	0	**0**	0	0	**0**	0	

[1]Cleaners and security guards

First-ever indie rock concert livestreamed from an underground MRT cabin powered by Singtel 5G network.

PRODUCT AND SERVICE QUALITY

We deliver positive human rights impact through our reliable and high quality network and services for our customers, enabling them with access to information and essential services, as well as free expression through online platforms and social networks but not putting anyone at risk. We also recognise that any service disruption could adversely affect our customers' daily lives, both personal and professional, well-being and business operations, especially those heavily reliant on our telecommunication and connectivity services. Business continuity is critical hence we mitigate network service disruption risks with measures to enhance our network resilience.

5G can transform industries with its higher data bandwidth and lower latency. In May 2021, we launched our 5G standalone network in Singapore, which offers customers access to the most advanced 5G connectivity in Southeast Asia. Two months later, we achieved nationwide 5G standalone coverage three years ahead of regulatory requirements, making Singapore the first country in the world to have full 5G coverage. Similarly, we have over 3,000 5G sites covering major capital cities and towns across various states in Australia. Our standalone 5G network was crowned the fastest in Singapore by Ookla, as well as in Southeast Asia and Oceania by Opensignal.

Experience the 5G benefits

We provide unparalleled customer experiences through our innovative service offerings, reliable networks and quality customer care. We leverage our 5G capabilities and customer insights to enhance our retail experience, operations and customer engagement while improving productivity.

These efforts allowed us to continue to lead the market with our Net Promoter Score in Singapore as of March 2023. During the year, we applied network slicing technology on our 5G network to support the livestreaming in ultra high definition of the New Year's Eve countdown party, Formula 1 Singapore Grand Prix and FIFA World Cup matches. This allowed our 5G customers to experience the most stable and superior viewing experience on the go, even in high traffic areas.

In February 2023, Singapore consumers experienced for the first time a 5G-enabled musical performance, livestreamed from an MRT train cabin 17 metres underground. The performance featured local band, Sobs, whose performance was transmitted over Singtel's social media platforms via our 5G network.

Collaboration with industry leaders

To develop 5G use cases, we collaborated with Intel to establish a 5G Multi-access Edge Compute (MEC) incubator to help enterprises adopt 5G seamlessly, deploy applications that need low latency processing at the edge, drive innovation and accelerate their digital transformation. Enterprises can tap into Singtel and Intel's ecosystem to deliver their 5G use cases, including ready-to-deploy applications for rapid trials and proof of concepts for research and development. Still in its early stages, innovative solutions such as accelerated content delivery, mixed reality, high-performance computing capabilities and artificial intelligence (AI) video analytics were already successfully trialled on this platform, showcasing the potential use cases of 5G-enabled technologies.

Through our collaboration with Microsoft, we are able to incorporate Microsoft Azure Public MEC into our 5G network and Singtel Paragon. This allows us to provide enterprises

with a cost-efficient and pay-per-use model for mission-critical applications that require high output with low latency. This innovation benefits use cases with high mobility, such as drones, autonomous vehicles, service robots, and delivery fleets, as they can access Azure Public MEC from any location in Singapore in a latency-optimised manner. We empower customers and businesses which can now rapidly build and deploy end-to-end use cases, such as metaverse based real-time simulations and live video analytics, that help improve their capabilities and operations.

We collaborated with SK Telecom to expand their metaverse business in Asia Pacific by providing our 5G technology expertise and exploring areas such as quantum cryptography to build safer networks. Both companies are driven to unlock new digital use cases in the metaverse, creating growth opportunities for enterprises and enriching experiences for our customers.

We partnered Zoom Video Communications Inc to enhance our unified communications offerings. Our customers can now use the latest enterprise communication solutions to enhance their service delivery, application development pipeline and overall operational efficiency.

NCS enables enterprise customers such as Bridgestone to achieve their sustainability goals through digitisation. Bridgestone, a global leader in tyres and rubber manufacturing, delivers sustainable, safe and smart global mobility offerings through: (1) a cloud-based IoT solution that eliminates labour intensive tyre pressure inspections using data from real-time sensors. This allows fleet operators to monitor and respond quickly to performance and safety issues for operations uptime, optimise safety, minimise fuel consumption and extend tyre life for improved emissions intensity; (2) a digital tyre management platform that captures customer information and empowers Bridgestone's field personnel and dealers to conduct audits and provide quality consultancy services; and (3) an end-to-end management platform that digitised the entire tyre retreading process. Retreading also enables circularity as worn tyres are repaired for reuse on a commercial vehicle.

During the year, we participated in two roundtable discussions on modern slavery and domestic and family violence, and shared insights with other operators in Australia. They were organised by Telco Together, a foundation enabling telcos to collaborate and create solutions that support social causes and effect positive change, of which Optus is a member.

Greater innovation with Singtel Innov8

Through Singtel Innov8, our corporate venture capital fund, we aim to strategically invest in companies that offer impactful technological solutions to customers. Leveraging our extensive industry capabilities and experience, we assist these companies in all stages of their growth, from early product development to eventual market commercialisation. Singtel Innov8 has invested in markets like Southeast Asia, Australia, China, Israel and US. In August 2022, Singtel pumped in an additional US$100 million, bringing our total capital commitment to US$350 million. The capital injection will help Singtel Innov8 identify and support innovative start-ups with new technologies and capabilities that can also drive improvements in our own core operations.

Innov8's investment mandate now includes start-ups developing tech solutions for social and environmental impact. During the year they invested in these start-ups:

(i) Handprint, which helps businesses verify and quantify their positive sustainability impact and provides tools for companies to communicate this impact digitally.

(ii) Intellect, a mental health start-up based in Singapore, provides self-directed mental wellness programme and online therapy sessions through its platform across Asia Pacific markets.

(iii) Sinai Technologies, a decarbonisation intelligence platform, allows companies to visualise and manage emissions from different perspectives such as by facilities or processes.

(iv) Ferrum Health, a private AI platform providing healthcare providers with real-time access to latest medical imaging technology to give better patient care.

Read about our portfolio ***here***.

Protecting our customers

During the year, we launched ***Broadband Protect***, which identifies and blocks malicious webpages on devices that are connected to customers' home network. The feature uses AI and machine learning, and automatically blocks a site when a potential risk is detected. This protects our customers against phishing, malware and botnets. Should they wish to access these sites, they can easily manage controls via My Singtel App.

The Infocomm Media Development Authority (IMDA) publishes regular quality related industry ***statistics***. In their latest report for December 2022, Singtel had one of the lowest customer complaint rates for our mobile, broadband and fixed line services among all the operators.

In November 2022, IMDA imposed a fine of S$50,000 on Singtel for "Breach of Condition 9 of the Facilities-Based Operations Licence (failure to cooperate with civil or public bodies)". The details of the contravention are confidential. Please refer to IMDA website ***here***.

During the year, Optus did not receive any fines from the Australian Communications and Media Authority (ACMA).

ETHICAL AND FAIR BUSINESS PRACTICES

Singtel Group holds onto the highest standards of business conduct as highlighted by our two core values – Operate with Integrity and Make Customers First. We continuously enhance our efforts around corporate governance, ethics and compliance, in our bid to step up our stewardship role and strengthen the relationship with our stakeholders and their trust in us. We encourage our people to incorporate our

core values into processes and decision making by operating responsibly, ethically and with integrity in everything they do. Our commitment to responsible and ethical business practices as well as good corporate citizenship while providing quality services and solutions forms the bedrock of how we operate our business.

This is supported by a comprehensive framework covering strong leadership and corporate culture, robust and effective internal controls and policies, and risk management. Internal Audit, Group Risk Management, Legal and Group People and Sustainability work closely with our business units to continuously uplift our corporate governance, raise awareness and train our people.

Fair marketing communications

We recognise the importance of marketing and advertising our products and services responsibly. Singtel Group is committed to fair marketing practices by being clear and transparent in the way we communicate with customers. This is highlighted by the marketing code under our Code of Conduct, which specifically outlines the requirements that we and our representatives must follow to ensure that all activities comply with various laws and guidelines such as the Singapore Code of Advertising Practice, Personal Data Protection Act (PDPA) and the Australian Consumer Law.

During the year, the Advertising Standards Authority of Singapore (ASAS) raised two cases to Singtel from customers who felt that our advertised promotions were not clear or could be misleading. We explained our position to ASAS and took corrective action by realigning our marketing communications and information on our website to accurately present key Terms and Conditions (T&Cs) to customers in an upfront manner. We take our customer feedback seriously and will ensure that information of future campaigns, including T&Cs, are presented transparently and clearly on our website and app. The same information will be disseminated to our customer care officers who can clarify with customers who enquire.

The Australian Competition and Consumer Commissions (ACCC) found Optus to be in contravention of Australian Consumer Law over false and misleading representation related to the sale of National Broadband Network (NBN) plans in 2019. As a result, in November 2022, Optus was ordered to pay a A$13.5 million fine and incidental costs, compensate affected customers and update or maintain a consumer compliance programme.

Anti-bribery and corruption

We recognise that our success is built on a foundation of integrity and ethical behavior, and we are committed to conducting our business in a transparent and accountable manner.

The Singtel Group takes a zero tolerance approach to all forms of fraud, bribery, corruption and unethical behaviour. We have robust internal controls and good corporate governance across the Group to mitigate bribery, corruption and fraud risks. Our employees, contractors and business partners are expected to comply with our policies.

The Singtel Group Anti-Bribery and Corruption (ABC) Policy, in conjunction with the various Codes of Conduct in place at all Group entities, mandates that Singtel Board members, management, employees and third parties who represent us, such as suppliers, contractors and business partners, uphold the highest levels of business integrity, in line with Singtel's values and expectations. We have also established internal procedures and guidelines in key areas such as gifts and hospitality, donations, sponsorships, investigations and whistleblowing to support our policies.

Table 2: Number of cases received in FY2023 and cases brought forward from FY2022

	Singtel		Optus		Singtel Group	
	Whistleblower channels (all complaints)	Other channels (fraud/corruption-related)	Whistleblower channels (all complaints)	Other channels (fraud/corruption-related)	Whistleblower channels (all complaints)	Other channels (fraud/corruption-related)
Received	21	15	41	121	62	136
Substantiated	6	8	12	54	18	62
Not substantiated	11	4	15	37	26	41
Under investigation	4	3	14	30	18	33
Number of cases under investigation as at 31 March 2022	1	3	14	44	15	47
Substantiated	0	3	5	31	5	34
Not substantiated	1	0	9	13	10	13

Table 3: Breakdown of nature of substantiated cases in FY2023

Types/Nature of cases	Singtel	Optus	Singtel Group
1. Breach of policy including IT security policy	10	37	47
2. Employee fraud	1	9	10
3. Employee misconduct, undeclared conflict of interest and inappropriate behaviour	5	39	44
4. Identity theft	0	17	17
5. Complaints by customers or general public	1	0	1

** There is no incident of corruption in FY2023.*

During the year, we established a dedicated ABC function to continuously review and enhance our existing policies and programmes. Our ABC compliance programme covers six key elements, designed to enable us to prevent, detect and respond to ABC risks.

01 Governance and structure

02 Policies, procedures and controls

03 Risk assessment

04 Training and communications

05 Oversight and reporting

06 Response and enhancements

We recognise the importance of protecting our operations, employees and assets against misconduct, unethical practice, fraud and corruption, and have put in place a Group Whistleblower Policy. This policy outlines the principles, procedures and safeguards, including confidentiality, anonymity and protection from reprisal. Our Whistleblower hotlines are operated by external service providers in Singapore and Australia.

They provide a safe environment for internal and external parties to raise concerns based on reasonable suspicion on potential misconduct by employees, suppliers or third parties relating to Singtel Group, without any fear of retaliation. Investigations of suspected fraud, corruption or unethical behaviour will be carried out by a specialist team in an objective manner as outlined by relevant Group policies such as the Singtel Group Investigation Policy and ***Singtel Group Whistleblower Policy***.

If a matter is substantiated as criminal conduct, it will be referred to law enforcement agencies as necessary and appropriate disciplinary actions will be taken. Should a substantiated incident involve an employee, we will take appropriate disciplinary action, up to and including termination of employment or contract. Likewise, vendors involved in corrupt or fraudulent activity will be barred from future procurement activity and have their contracts terminated.

The outcomes of all cases received are reported to the Audit Committee half-yearly and to the Fraud Risk Management Committee every quarter. We review our whistleblower programme and relevant policies annually to keep them in line with standards of good practice and ensure ongoing compliance with any local regulatory developments.

Every year, all employees are required to undergo mandatory online courses on our Code of Conduct, Fraud Awareness and ABC Policy, and complete a conflict of interests declaration. During the year, more than 99% of our employees completed their training and we followed up with those who did not for valid reasons. Failure to do so will affect their performance rating and compensation. We review these training courses periodically to ensure relevance. Regular communication and case studies on our anti-corruption policies and procedures are also sent to all employees for awareness and as a reminder to comply with our code and policies.

During the year, we received 62 reports via our whistleblower channels regarding various allegations, including employee misconduct. We also received 136 allegations of fraud-related and similar matters via other channels, such as compliance checks and investigations by law enforcement agencies. In total, 80 cases were substantiated, while another 67 were not. 51 cases remained under investigation as at 31 March 2023.

In addition, we closed 62 matters received in the prior year that were still under investigation as at 31 March 2022, of which 39 cases were substantiated (see Table 2-3).

Responsible tax management

We are committed to a high standard of tax governance and compliance with applicable tax laws of the jurisdictions where we operate.

The Board is responsible for risk governance and assisted by the Audit Committee in the oversight of tax matters. Our Tax Risk Management Framework formalises our risk appetite and governance structure for managing tax risk. The framework also sets a coordinated approach in the identification, management and mitigation of potential tax risks while promoting responsible tax management. The Group Chief Financial Officer, under the appointment by the Audit Committee and supported by the Vice President of Group Tax, supervises the efficacy of the framework and our tax risk management practices.

For more information, please refer to our Responsible Tax Management Statement ***here***.

Board	Overall responsibility for the Group's risk governance
Audit Committee	Assists the Board in the oversight of tax risk governance
Group Chief Financial Officer	Responsible for ensuring proper tax risk management and compliance
Vice President of Group Tax	Supports Group Chief Financial Officer in the execution of the Group's global tax strategy

Figure 2: Singtel tax governance structure

We engage the Australian Taxation Office (ATO) under its Action Differentiation Framework and Justified Trust Approach, an initiative based on the global movement to build and maintain community confidence that companies are paying the right amount of tax. ***Optus' Tax Transparency Reporting*** sets out the policy, strategy and governance for our Australian operations. As a signatory of the Board of Taxation's voluntary Tax Transparency Code, we have been publishing Tax Transparency Reports since 2018. The latest Optus Tax Transparency Report discloses our contributions to corporate income tax and reconciles accounting profit to income tax expense and tax payable in Australia.

In December 2021, the Group's wholly owned subsidiary, Singapore Telecom Australia Investments Pty Ltd (STAI), received an unfavourable judgement from the Federal Court of Australia with respect to its action against the Commissioner of Taxation. The court case relates to the amended assessments from ATO received in 2016 and 2017 for STAI's acquisition financing of Optus in 2001.

The amended assessments amounted to A$393 million, of which STAI has paid A$134 million. It is estimated that STAI's holding company, Singtel Australia Investment Ltd, would be entitled to a corresponding interest withholding tax refund of approximately A$89 million. STAI lodged a court appeal which was heard by the Full Federal Court in April 2023 and is awaiting the hearing outcome.

DATA AND CUSTOMER PRIVACY

Like most businesses today, our operations are also exposed to cyber security threats with potential to cause customer data breach, jeopardising our customer privacy that could lead to financial loss. In line with our core value Make Customers First, we take data protection seriously and have taken active steps to protect and use our customers and employees' data in a responsible manner. We seek to uphold the highest standards of data privacy protection and cyber security measures, as we further expand our digital businesses and services.

Singtel Data Protection Policy and ***Optus Privacy Policy*** outline how we collect, use, share and protect our customers' personal data. We strictly adhere to data protections laws in the jurisdictions we operate in such as PDPA in Singapore and the Privacy Act and Telecommunications Act in Australia.

Data privacy incidents

During the year, we recorded seven privacy incidents in Singapore involving more than 1,000 individuals. These incidents were mainly due to human and process errors. Employees involved have been coached and process lapses rectified.

In Australia, there were 77 cases of non-cyber related complaints that have been categorised as privacy incidents. Of these, nine cases were referred by the Telecommunications Industry Ombudsman (TIO), and one case from the Office of the Australian Information Commissioner (OAIC). We met the threshold to notify the OAIC on one occasion, which was related to the Optus cyber incident, and reported a Notifiable Data Breach relating to the personal information of 9.8 million customers.

In September 2022, Optus suffered a cyber attack which resulted in the exposure of some customers' personal information. We communicated openly and transparently with all stakeholders affected and worked closely with the government and financial institutions to protect our customers. We took immediate corrective action to prevent similar cases from recurring.

We also committed to covering the cost of replacing identity documents, such as driving licence, for customers who were advised to do so. In April 2023, a class action against Optus was filed in the Federal Court of Australia on behalf of customers in relation to the cyber attack. We will defend the proceedings. In addition to the measures already taken, we continue to provide support for customers who may have been impacted by the attack.

Data governance management

Our Vice President of Group Chief Data Office is our designated Data Protection Officer and is responsible for the strategic oversight, implementation and direction of our data protection initiatives and policies across Singtel Group to ensure compliance with applicable data protection laws. He reports directly to the Board Risk Committee on potential risks to data privacy and works with them to create solutions to mitigate these risks. Singtel is in the process of applying for the Data Protection Trustmark (DPTM) certification from IMDA.

To keep abreast of the rapidly evolving cyber risk landscape, we are guided by our Group Cyber Security Policy for managing risks associated with information security. The policy is aligned to industry best practices and international standards such as ISO 27001, and covers various aspects of IT risk governance, including change management, user access management, database configuration standards and disaster recovery planning. The policy also serves as a key pillar in driving robust IT security controls across the Group.

We conduct regular vulnerability assessments and penetration tests on our corporate information systems and network infrastructure to identify and rectify security weaknesses. To maintain our strict internal controls and comprehensive governance process, all application systems undergo regular testing and security reviews prior to their production and launch. We have also established an escalation process for incident management, which includes security breaches to ensure timely response, internally and externally, to minimise impact.

Our Internal Audit department also conducts routine audits on the IT systems and telecommunications infrastructure that underpin the Group's operations. These audits provide independent assurance on the control environment in relation to various cyber security, data privacy and operational risks. Management is responsible for acknowledging the identified areas of improvement and works with Internal Audit to establish mitigation measures in response.

This can be in the form of controls design for new programmes and initiatives to which Internal Audit provides control advisory reviews in support of Management. We also have a Third-Party Service Provider Security Risk Governance Programme which formalises the process where we conduct awareness and compliance checks on our third-party vendors' cyber security practice. This helps to ensure that they adhere to Singtel's cyber security requirements and regulations. To protect data, we have strict verification processes to prevent unauthorised information access and limit staff access to information residing on our systems and vendor systems.

Staff education and training

We take a proactive approach to raising staff awareness on cyber security and data privacy risks through education and capacity building. We require all our people to attend annual online and refresher privacy training that emphasises their responsibility to safeguard data. Targeted training is also conducted for our customer service teams and offshore contact centres that are more exposed to data privacy risks. In addition, we share data handling tips regularly through our various outreach channels to raise our people's awareness on cyber security issues and the importance of data privacy and protection in their daily work. Our people are subject to a variety of exercises on phishing emails to ensure their capability in recognising and handling such cyber security risks. We update our programme content regularly to keep up with evolving phishing tactics and scams.

Customer empowerment

To protect our customers from the rising cyber crime threats, we send regular scam alerts to remind them to stay vigilant and protect themselves against scams. We continue to improve our processes and internal controls to protect customer data.

We empower customers with the choice to opt out of receiving promotional messages or marketing calls. In Singapore, we conduct our marketing activities in accordance with the Do Not Call provisions of the PDPA and the Spam Control Act. In Australia, we act in accordance with the Privacy Act and Privacy Provisions of the Telecommunications Act, the Spam Act and Do Not Call Register.

Glossary

List of key abbreviations	
ABCN	Australian Business and Community Network
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ASAS	Advertising Standards Authority of Singapore
COP	Conference of Parties
EMS	Environmental Management System
EPR	Extended Producer Responsibility
ESG	Environmental, Social and Governance
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GSMA	Global System for Mobile Communications Association
ICP	Internal carbon pricing
ICT	Info-communications Technology
IMDA	Infocomm Media Development Authority
LGC	Large Generation Certificate
MEC	Multi-access Edge Compute
NDRR	National Disaster Risk Reduction
NEA	National Environment Agency
NGO	Non-Governmental Organisation
OAIC	Office of the Australian Information Commissioner
Olives	The sustainability financing programme of Singtel Group
PDPA	Personal Data Protection Act
PDPC	Personal Data Protection Commission
PPA	Power Purchase Agreement
REC	Renewable Energy Certificate
SASB	Sustainability Accounting Standards Board
SBNoD	Singapore Business Network on DisAbility
SBTi	Science Based Targets initiative
SLB	Sustainability-linked bond
SLL	Sustainability-linked loan
SME	Small and Medium-sized Enterprise
STEM	Science, Technology, Engineering and Mathematics
STLF	Singtel Touching Lives Fund
TAFEP	Tripartite Alliance for Fair and Progressive Employment Practices
TCFD	Task Force on Climate-related Financial Disclosures
UNGC	United Nations Global Compact
UN SDGs	United Nations Sustainable Development Goals
WSH	Workplace safety and health

Reference: Policies and Statements	
Optus Human Rights Statement	*https://www.optus.com.au/content/dam/optus/documents/about-us/sustainability/governance/human-rights-statement_fa1.pdf*
Optus Modern Slavery Statement	*https://www.optus.com.au/content/dam/optus/documents/about-us/sustainability/governance/2022-optus-modern-slavery-statement.pdf*
Optus Privacy Policy	*https://www.optus.com.au/about/legal/privacy*
Singtel Group Human Rights Statement	*https://www.singtel.com/content/dam/singtel/about-us-singtel/company/governance/singtel-group-human-rights-statement.pdf*
Singtel Data Protection Policy	*https://www.singtel.com/data-protection*
Singtel Whistleblower Policy	*https://www.singtel.com/about-us/company/corporate-governance/whistleblower-policy*
Singtel Responsible Tax Management Statement	*https://www.singtel.com/content/dam/singtel/about-us-singtel/company/governance/Responsible-Tax-Management-20-Apr-2023.pdf*
Singtel Group Anti-Bribery and Corruption Policy	*https://www.singtel.com/content/dam/singtel/corporate/anti-bribery-and-corruption-policy.pdf*
Singtel Group Code of Conduct	*https://www.singtel.com/content/dam/singtel/corporate/Code_of_conduct.pdf*
Singtel Group Environment Policy	*https://www.singtel.com/content/dam/singtel/about-us-singtel/sustainability/sustainability-at-singtel/environment/Singtel-Group-Environment-Policy.pdf*
Singtel Group Health, Safety and Security Policy	*https://www.singtel.com/about-us/sustainability/sustainability-at-singtel/people*
Singtel Group Supplier Code of Conduct	*https://www.singtel.com/content/dam/singtel/about-us-singtel/tender/singtel-group-supplier-code-of-conduct.pdf*

Key environmental and social performance indicators

	Singtel			Optus			Singtel Group		
	2023	2022	2021	**2023**	2022	2021	**2023**	2022	2021
Environmental Performance									
Total energy use (GJ)[1]	**993,409**	999,576	1,033,980	**1,901,837**	1,952,477	1,909,806	**2,895,246**	2,952,053	2,943,786
Greenhouse Gases (GHG) emissions, (tonnes CO_2 equivalent)[2]	**2,199,066**	4,037,717	4,106,984	**1,808,233**	4,603,543	5,479,798	**4,007,299**	8,641,260	9,586,782
Scope 1	**4,660**	4,743	5,749	**1,591**	1,579	1,894	**6,251**	6,357	7,643
Scope 2 (market-based)[1]	**90,914**	95,948	102,036	**341,792**	392,674	426,564	**432,706**	488,622	528,600
Scope 3 [3]	**2,103,492**	3,937,026	3,999,198	**1,464,851**	4,209,290	5,051,340	**3,568,342**	8,146,316	9,050,538
Carbon intensity (tCO_2e/TB)	**0.0127**	0.0134	0.0170	**0.0468**	0.0598	0.0778	**0.0296**	0.0351	0.0453
Potable water use (m^3)[4]	**647,422**	631,230	623,588	**35,670**	36,234	47,262	**683,092**	667,464	670,850
Use of recycled water instead of potable water (m^3)	**339,945**	280,805	225,453	**13,639**	5,885	13,027	**353,584**	286,690	238,480
Total hazardous and non-hazardous waste (tonnes)[5]	**3,136**	3,325	4,150	**1,148**	627	771	**4,284**	3,952	4,921
Social Performance: People									
Total employees	**12,960**	12,196	12,391	**7,572**	7,268	7,687	**20,532**	19,464	20,078
Male	**8,483**	7,901	8,003	**5,120**	4,936	5,287	**13,603**	12,837	13,290
Female	**4,477**	4,295	4,388	**2,452**	2,332	2,400	**6,929**	6,627	6,788
New employee hires	**23.9%**	19.9%	15.5%	**27.8%**	23.0%	15.2%	**25.3%**	21.1%	15.3%
Employee voluntary turnover	**19.1%**	19.9%	13.2%	**21.9%**	22.6%	12.5%	**20.0%**	20.9%	12.9%
Mean salary ratio (female:male)[1]									
Operations and Support	**0.99 : 1**	0.99 : 1	1 : 1	**1 : 0.94**	1 : 0.94	1 : 0.94	**1 : 0.97**	1.04 : 1	1 : 0.97
Professional	**0.93 : 1**	0.94 : 1	0.96 : 1	**0.94 : 1**	0.93 : 1	0.94 : 1	**0.93 : 1**	0.93 : 1	0.95 : 1
Executives	**0.93 : 1**	0.95 : 1	0.95 : 1	**1 : 0.97**	1 : 1	0.99 : 1	**0.98 : 1**	0.97 : 1	0.97 : 1
Median salary ratio (female:male)									
Operations and Support	**0.98 : 1**	0.98 : 1	-	**1 : 0.96**	1 : 0.98	-	**1 : 0.98**	1 : 1	-
Professional	**0.91 : 1**	0.91 : 1	-	**0.92 : 1**	0.91 : 1	-	**0.91 : 1**	0.91 : 1	-
Executives	**0.93 : 1**	0.94 : 1	-	**1 : 0.99**	1 : 1	-	**0.97 : 1**	0.97 : 1	-
Mean bonus ratio (female:male)[2]									
Operations and Support	**1 : 0.99**	1 : 1	1 : 0.99	**1 : 0.76**	1 : 0.81	1 : 0.94	**1 : 0.88**	1 : 0.92	1 : 0.97
Professional	**0.93 : 1**	0.94 : 1	0.98 : 1	**0.89 : 1**	0.87 : 1	0.89 : 1	**0.91 : 1**	0.91 : 1	0.95 : 1
Executives	**1 : 0.98**	1.12 : 1	1 : 0.94	**0.97 : 1**	0.96 : 1	0.95 : 1	**0.99 : 1**	1 : 0.95	1 : 0.97
Median bonus ratio (female:male)									
Operations and Support	**1 : 1**	0.99 : 1	-	**1 : 0.75**	0.99 : 1	-	**1 : 0.88**	0.99 : 1	-
Professional	**0.95 : 1**	0.95 : 1	-	**0.85 : 1**	0.86 : 1	-	**0.90 : 1**	0.91 : 1	-
Executives	**1 : 0.99**	1.08 : 1	-	**0.97 : 1**	1 : 0.94	-	**0.99 : 1**	1 : 0.93	-
Total training investment ($million)	**S$15.4**	S$12.5	S$11.8	**A$6.9**	A$6.7	A$5.0	**S$21.9**	S$19.2	S$16.8
Average training hours per employee	**47.8**	51.8	43.5	**32.7**	27.0	14.6	**42.6**	43.1	33.0
Employee health and safety[3]									
Workplace injury incidence rate (per 1,000 employees)	**0.9**	0.6	0.8	**2.5**	1.1	2.6	**1.5**	0.8	1.5
Workplace injury frequency rate (per million hours worked)	**0.4**	0.3	0.4	**1.5**	0.7	1.5	**0.8**	0.4	0.7
Total occupational disease cases	**0**	0	0	**0**	0	0	**0**	0	0
High consequence injury rate (per million hours worked)	**0**	0	0.04	**0**	0	0	**0**	0	0.02
Fatalities	**0**	0	0	**0**	0	0	**0**	0	0
Social Performance: Community									
Community investment (S$/A$m)[1]	**S$9.8**	S$7.9	S$17.7	**A$23.3**	A$25.6	A$20.3	**S$31.7**	S$33.4	S$37.6
Total volunteering hours	**20,415**	3,048	2,439	**14,956**	8,117	8,214	**35,371**	11,165	10,653
Digital enablement reach[2]	**69,553**	22,791	18,009	**94,044**	90,612	76,161	**163,597**	113,403	94,170

Environmental

1. Restatement of Singtel and Group (FY2022 and FY2021).
2. Covers scope 1, 2 and 3 (FY2021, FY2022 and FY2023 full scope 3 15 categories). Restatement of Singtel, Optus and Group (FY2022 and FY2021).
3. Restatement of Singtel, Optus and Group (FY2022 and FY2021).
4. Covers Optus Sydney campus and Optus Melbourne offices only.
5. Data covers waste directly managed by Optus' contracted waste vendor.

Community

1. Includes direct financial support, in-kind charitable sponsorship and staff volunteering hours. This has been verified by the Business for Societal Impact (B4SI).
2. Restatement of Optus and Group (FY2021 and FY2022).

People

1. Based on average monthly salary of regular employees.
2. Based on average annual bonus of regular employees.
3. Workplace safety and health metrics are based on the International Labour Organization (ILO) definitions, subject to country definition of lost work shifts e.g. Optus excludes weekends from medical leave when calculating these rates.

GRI Content Index

Statement of use	Singapore Telecommunications Limited has reported in accordance with the GRI Standards for the financial year 1 April 2022 to 31 March 2023 (FY2023)
GRI 1 used	GRI: Foundation 2021
Applicable GRI Sector Standard(s)	NA

GRI standard		Disclosure	Page number	Level of external assurance
General Disclosures				
GRI 2: General disclosures 2021	**The organisation and its reporting practices**			
	2-1	Organisational details	*Website*	
	2-2	Entities included in the organisation's sustainability reporting	1	
	2-3	Reporting period, frequency and contact point	1	
	2-4	Restatements of information	1	
	2-5	External assurance	1	
	Activities and workers			
	2-6	Activities, value chain and other business relationships	Annual Report 2023, *Website*	
	2-7	Employees	39-40	
	2-8	Workers who are not employees	50	
	Governance			
	2-9	Governance structure and composition	7, Annual Report 2023, *Corporate Governance*, *Website*	
	2-10	Nomination and selection of the highest governance body	Annual Report 2023, *Corporate Governance*	
	2-11	Chair of the highest governance body	Annual Report 2023, *Corporate Governance*	
	2-12	Role of the highest governance body in overseeing the management of impacts	Annual Report 2023, *Corporate Governance*	
	2-13	Delegation of responsibility for managing impacts	7, 23, Annual Report 2023, *Corporate Governance*	
	2-14	Role of highest governance body in sustainability reporting	7, 23, Annual Report 2023, *Corporate Governance*	
	2-15	Conflicts of interest	8, 53-54, Annual Report 2023, *Corporate Governance*	
	2-16	Communication of critical concerns	5-8, Annual Report 2023, *Corporate Governance*	
	2-17	Collective knowledge of the highest governance body	7	
	2-18	Evaluation of the performance of the highest governance body	Annual Report 2023, *Corporate Governance*	
	2-19	Renumeration policies	Annual Report 2023, *Corporate Governance*	
	2-20	Process to determine remuneration	Annual Report 2023, *Corporate Governance*	
	2-21	Annual total compensation ratio	69:1 (Group CEO total compensation to median annual total compensation for Singtel Group, excluding GCEO*) ** Figure is based on full-year FY2022 remuneration for Mr Yuen Kuan Moon as he assumed the appointment of GCEO with effect from 1 January 2021.*	
	Strategy, policies and practices			
	2-22	Statement on sustainable development strategy	3-4	
	2-23	Policy commitments	Disclosed throughout Sustainability Report 2023 across all four sustainability pillars, *Corporate Governance*	
	2-24	Embedding policy commitments	Disclosed throughout Sustainability Report 2023 across all four sustainability pillars	
	2-25	Processes to remediate negative impacts	Disclosed throughout Sustainability Report 2023 across all four sustainability pillars	
	2-26	Mechanisms for seeking advice and raising concerns	33, 35-36, 53-54, *Whistleblower Policy*	
	2-27	Compliance with laws and regulations	11, 49-56	Singtel Group
	2-28	Membership associations	Appendix	
	Stakeholder engagement			
	2-29	Approach to stakeholder engagement	5, *Stakeholder Engagement*	
	2-30	Collective bargaining agreements	35	

GRI standard		Disclosure	Page number	Level of external assurance
Disclosures on Material Topics				
GRI 3: Material topics 2021	3-1	Process to determine material topics	5-6	
	3-2	List of material topics	5-6	

Material topics				
GRI standard		Disclosure	Page number	Level of external assurance
Climate Change and Environment				
Climate Change				
GRI 3: Material topics 2021	3-3	Management of material topics	11-12	
GRI 302: Energy 2016	302-1	Energy consumption within the organisation	26	Singtel Group
	302-2	Energy consumption outside of the organisation	NA – No energy consumption outside of organisation	
	302-3	Energy intensity	26	Singtel Group
	302-4	Reduction of energy consumption	16	Singtel
GRI 305: Emissions 2016	305-1	Direct (scope 1) GHG emissions	13, 25	Singtel Group
	305-2	Energy indirect (scope 2) GHG emissions	13, 25	Singtel Group
	305-3	Other indirect (scope 3) GHG emissions	13-14, 25	Singtel Group
	305-4	GHG emissions intensity	25	Singtel Group
	305-5	Reduction of GHG emissions	13-14, 25	Singtel Group
Resource Management				
GRI 3: Material topics 2021	3-3	Management of material topics	21-22	
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	21-22	
	306-2	Management of significant waste-related impacts	21-22	
	306-3	Waste generated	26	Singtel Group
	306-4	Waste diverted from disposal	26	Singtel Group
	306-5	Waste directed to disposal	26	Singtel Group
GRI 303: Water and effluents 2018	303-1	Interactions with water as a shared resource	*Website*	
	303-2	Management of water discharge-related impacts	*Website*	
	303-3	Water withdrawal	26	Singtel Group
	303-4	Water discharge	26	
	303-5	Water consumption	*Website*	
People and Future of Work				
Talent Attraction and Development				
GRI 3: Material topics 2021	3-3	Management of material topics	27	
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	39-40	Singtel Group
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	32	
	401-3	Parental leave	32	
GRI 404: Training and education 2016	404-1	Average hours of training per year per employee	40	Singtel Group
	404-2	Programmes for upgrading employee skills and transition assistance programmes	36-38	

GRI Content Index (cont)

Material topics				
GRI standard		Disclosure	Page number	Level of external assurance
People and Future of Work				
Employee Safety and Well-being				
GRI 3: Material topics 2021	3-3	Management of material topics	32	
GRI 403: Occupational health and safety 2018	403-1	Occupational health and safety management system	33-34	
	403-2	Hazard identification, risk assessment, and incident investigation	33-34	
	403-3	Occupational health services	33-34	
	403-4	Worker participation, consultation, and communication on occupational health and safety	33-34	
	403-5	Worker training on occupational health and safety	33-34	
	403-6	Promotion of worker health	32-34	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	33-34	
	403-8	Workers covered by an occupational health and safety management system	All permanent/full-time employees are covered by Singtel's occupational health and safety management system	
	403-9	Work-related injuries	35, 40	Singtel Group
	403-10	Work-related ill health	40	Singtel Group
Diversity, Equity, Inclusion and Belonging (DEIB)				
GRI 3: Material topics 2021	3-3	Management of material topics	27-28	
GRI 405: Diversity and equal opportunity 2016	405-1	Diversity of governance bodies and employees	30	
	405-2	Ratio of basic salary and renumeration of women to men	39	
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	35-36	
Community Impact				
Digitally Inclusive and Empowered Communities				
GRI 3: Material topics 2021	3-3	Management of material topics	41	
GRI 413: Local communities 2016	413-1	Operations with local community engagement, impact assessments, and development programmes	42-48	
	413-2	Operations with significant actual and potential negative impacts on local communities	No operations with significant negative impacts on local communities	
GRI 203: Indirect economic impacts 2016	203-1	Infrastructure investments and services supported	12-24, 36, 42-48	
	203-2	Significant indirect economic impacts	12-24, 36, 42-48	
Sustainable Value Creation				
Sustainable Supply Chain Management				
GRI 3: Material topics 2021	3-3	Management of material topics	49-50	
GRI 204: Procurement practices 2016	204-1	Proportion of spending on local suppliers	50	
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	50	Singtel Group
	308-2	Negative environmental impacts in the supply chain and actions taken	49-50	
GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	50	Singtel Group
	414-2	Negative social impacts in the supply chain and actions taken	49-50	

Material topics				
GRI standard		**Disclosure**	**Page number**	**Level of external assurance**
Product and Service Quality				
GRI 3: Material topics 2021	3-3	Management of material topics	51-52	
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	52	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	52	
Ethical and Fair Business Practices				
GRI 3: Material topics 2021	3-3	Management of material topics	52-55	
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	53-54	
	205-2	Communication and training about anti-corruption policies and procedures	54	
	205-3	Confirmed incidents of corruption and actions taken	53-54	
GRI 417: Marketing and Labelling 2016	417-3	Incidents of non-compliance concerning marketing communications	53	
Data and Customer Privacy				
GRI 3: Material topics 2021	3-3	Management of material topics	55-56	
GRI 418: Customer privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	55	Singtel Group

Sustainability Accounting Standards Board (SASB) Index

Table 1. Sustainability Disclosure Topics and Accounting Metrics

Topic	SASB Code	Accounting metric	Category	Unit of measure	Remarks/Page reference	
					Singtel	Optus
Environmental footprint of operations	TC-TL-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Quantitative	Gigajoules (GJ), Percentage (%)	(1) 993,409 (2) 97.8% (3) 8.34%	(1) 1,901,837 (2) 74.7% (3) 25.3%
Data privacy	TC-TL-220a.1	Description of policies and practices relating to behavioural advertising and customer privacy	Discussion and Analysis	N/A	Refer to *Singtel Data Protection Policy*.	Refer to *Optus Privacy Policy*.
	TC-TL-220a.2	Number of customers whose information is used for secondary purposes	Quantitative	Number	We do not have these specified metrics. Our *Singtel Data Protection Policy* describes the customer information we collect and how we use it.	We do not have these specified metrics. Our *Optus Privacy Policy* describes the customer information we collect and how we use it.
	TC-TL-220a.3	Total amount of monetary losses as a result of legal proceedings associated with customer privacy	Quantitative	Reporting currency	No fines or non-monetary sanctions were imposed on Singtel. Refer to Sustainable Value Creation Chapter. (page 55-56)	No fines or non-monetary sanctions were imposed on Optus. Refer to Sustainable Value Creation Chapter. (page 55-56)
	TC-TL-220a.4	(1) Number of law enforcement requests for customer information, (2) number of customers whose information was requested, (3) percentage resulting in disclosure	Quantitative	Number, Percentage (%)	Singtel does not disclose unless required by law.	Optus reports annually to the Australian Communications and Media Authority (ACMA) on our disclosures of personal information, which occurs under specific sections of the Telecommunications Act 1997 or the Telecommunications (Interception and Access) Act 1979. Optus does not publicly disclose or publish the number of disclosures we make.
Data security	TC-TL-230a.1	(1) Number of data breaches, (2) percentage involving personally identifiable information (PII), (3) number of customers affected	Quantitative	Number, Percentage (%)	(1) 7 (2) 100% (3) More than 1,000	(1) 78 (2) 100% (3) 9.8 million Refer to Sustainable Value Creation chapter (page 55 and 56) for further details including corrective actions implemented in response to data breaches.
	TC-TL-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cyber security standards	Discussion and Analysis	N/A	Refer to Sustainable Value Creation chapter (page 55-56) for details.	Refer to Sustainable Value Creation chapter (page 55-56) for details.
Product end-of-life Management	TC-TL-440a.1	(1) Materials recovered through take back programmes, percentage of recovered materials that were (2) reused, (3) recycled, and (4) landfilled	Quantitative	Metric tons (t), Percentage (%)	(1) 101.8 tonnes (2) 0.9% (3) 92.3% (4) 0%	(1) 4.0 tonnes (2) Data unavailable (3) 99.3% (4) 0.7%
Competitive behavior and Open internet	TC-TL-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	Quantitative	Reporting currency	Refer to Sustainable Value Creation chapter. (page 53)	Refer to Sustainable Value Creation chapter. (page 53)

Topic	SASB Code	Accounting metric	Category	Unit of measure	Remarks/Page reference	
					Singtel	Optus
Competitive behavior and Open internet	TC-TL-520a.2	Average actual sustained download speed of (1) owned and commercially-associated content and (2) non-associated content	Quantitative	Megabits per second (Mbps)	We do not have these specified metrics. We publish our network speed on our website, presented as a range of speed for 'Stationary' state and 'Mobility' state.	We do not have these specified metrics.
	TC-TL-520a.3	Description of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices	Discussion and Analysis	N/A	We comply with IMDA's Net Neutrality Policy and do not measure these specified metrics.	We do not measure these specified metrics.
Managing systemic risks from technology disruptions	TC-TL-550a.1	(1) System average interruption frequency and (2) customer average interruption duration	Quantitative	Quantitative Disruptions per customer, Hours per customer	We submit quarterly reports to IMDA on the quality and performance of key services against Quality of Service (QoS) standards regulated by IMDA. These services include 3G, 4G, Fixed Network Telecommunication, Broadband Access, Mobile Broadband and Fibre Connection. Refer to *IMDA's Quality of Service Reports*.	We do not measure these specified metrics. We submit quarterly reports on our network performance to the Risk Management Committee.
	TC-TL-550a.2	Discussion of systems to provide unimpeded service during service interruptions	Discussion and Analysis	N/A	Singtel Networks has a robust Business Continuity Management (BCM) programme which is audited and ISO 22301 (BCMS) certified. The team conducts risk assessments across various areas including processes, people, infrastructure, supply chain and others annually. Necessary mitigation measures are put in place to reduce the impact and ensure the continuity of critical services when a disruption happens. There are also guidelines in place for internal and external communication, as necessary. In addition, the team conducts regular business continuity exercises to validate the effectiveness of business continuity solutions and familiarise with the roles and responsibilities when disruption occurs.	We enhance our Optus network resilience through design and deployment of redundant platforms and systems. This manifests through: • Physical and functional redundancy on core switching nodes • Alternative transmission and fibre routing transmission ('rings') • Backup power systems including battery systems and generators • Mobile networks that have overlapping coverage and multiple technology layers (3G, 4G and 5G) • Deployment of temporary telecommunication solutions during major outage events (SATCAT and cells on wheels) We have also established ITIL processes dealing with incidents, problems and change management to support proactive responses to network and customer impacting events.

Sustainability Accounting Standards Board (SASB) Index

Table 2. Activity Metrics

Topic	SASB Code	Accounting metric	Category	Unit of measure	Remarks/Page reference	
					Singtel	Optus
Number of wireless subscribers	TC-TL-000.A	Number of customers that contract with the entity for mobile services, which include cellular phone service and/or wireless data service	Quantitative	Number	4,309,000	10,352,000
Number of wireline subscribers	TC-TL-000.B	Number customers that contract with the entity for fixed line phone services	Quantitative	Number	255,000	1,079,000
Number of broadband subscribers	TC-TL-000.C	Number of customers that contract with the entity for fixed line cable and internet services, which include WiFi connections	Quantitative	Number	668,000	1,315,000
Network traffic	TC-TL-000.D	-	Quantitative	Petabytes	7,509.3 PB	7,329.0 PB

GSMA ESG Metrics

Topic	Code	KPI	Alignment	Remarks/Page reference	
				Singtel	Optus
Environment					
Science-based targets	GSMAENV-01	1.1 Disclose whether you have set, or have committed to set, GHG emissions targets that are in line with the goals of the Paris Agreement - to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C - and to achieve net-zero emissions before 2050.	TCFD Recommendations; CDSB R01, R02, R03, R04 and R06; SASB 110; SBTi	Yes. Refer to Climate Change and Environment chapter. (page 11-12)	Yes. Refer to Climate Change and Environment chapter. (page 11-12)
Scope 1, 2 and 3 emissions	GSMAENV-02	**1.2a Scope 1 and 2 GHG emissions** i. Absolute scope 1 and 2 emissions (tonnes CO_2e) ii. Absolute scope 1 and 2 emissions (tonnes CO_2e) per 1GB data iii. Percentage change in absolute scope 1 and 2 emissions since last reporting period	GRI 305:1-3, TCFD, GHG Protocol (modified)	i. 95,574 ii. 0.0000127 iii. -5.1%	i. 343,383 ii. 0.0000468 iii. -12.9%
		1.2b Scope 3 GHG emissions i. Absolute scope 3 emissions (tonnes CO_2e) ii. Absolute scope 3 emissions (tonnes CO_2e per 1GB data iii. Percentage change in absolute scope 3 emissions since last reporting period		i. 2,103,492 ii. 0.000280 iii. - 46.6%	i. 1,464,851 ii. 0.000199 iii. -61.3%
Energy consumption	GSMAENV-03	**1.3a Total energy consumption** i. Total energy consumed (MWh) ii. Total energy consumed (MWh) per 1GB of data	GRI 302-1; SASB TC-TL-130a.1 (modified)	i. 275,768 ii. 0.0000367	i. 528,277 ii. 0.0000721
		1.3b Network energy consumption i. Total network energy consumed (MWh) ii. Total network energy consumed (MWh) per 1GB of data		i. 210,269 ii. 0.0000280	i. 441,221 ii. 0.0000601 *Note: Network energy covers electricity used from Mobile and Networks*
		1.3c Network energy mix i. Percentage grid renewable ii. Percentage grid non-renewable iii. Percentage off-grid renewable iv Percentage off-grid non-renewable		Data unavailable	Data unavailable

GSMA ESG Metrics (cont)

Topic	Code	KPI	Alignment	Remarks/Page reference	
				Singtel	Optus
Materials repaired and reused	GSMAENV-04	**1.4a Network equipment repaired or reused** i. Percentage of network equipment repaired or reused, by units ii. Percentage of network equipment repaired or reused, by purchase price	SASB TC-TL-440a.1 (modified)	Data unavailable	Data unavailable
		1.4b Handsets and other CPE repaired or reused i. Percentage of handsets and CPE repaired or reused, by units ii. Percentage of handsets and CPE repaired or reused, by purchase price		i. 0.20% ii. Data unavailable	i. 0.002% (covers only Donate Your Device) ii. Data unavailable
Waste generated	GSMAENV-05	**1.5a Total waste generated (tonnes) per 1GB of data**	GRI 306-3 (modified)	0.000000417	0.0000001094
		1.5b Network waste (tonnes) per 1GB of data		Data unavailable	0.0000000436
		1.5c Handset and other CPE waste (tonnes) per 1GB of data		0.0000000128	0.0000000004
		1.5d All other waste (tonnes) per 1GB of data		Data unavailable	0.0000000655
Materials recycled	GSMAENV-06	**1.6a Network waste recycled** i. Percentage of network waste recycled (units) ii. Percentage of purchase price of recycled network waste	SASB TC-TL-440a.1 (modified)	Data unavailable	Data unavailable
		1.6b Handset and CPE waste recycled i. Percentage of handset and CPE waste recycled (units) ii. Percentage of purchase price of recycled handset and CPE waste		i. 100% (only for handsets as data from CPE units is not available) ii. Data unavailable	i. 99.7% (based on number of handsets recycled through MobileMuster) ii. Data unavailable
		1.6c All other waste recycled i. Percentage of all other waste recycled (units) ii. Percentage of purchase price of all other recycled waste		Data unavailable	Data unavailable
Digital Inclusion					
Population covered by mobile network	GSMAINC-01	**2.1 Percentage of population covered by operator's mobile network Breakdown by: 3G, 4G, 5G**	ITU Indicator 2.6	3G, 4G and 5G: 99%	3G and 4G: 98.5% 5G: Not disclosed
Device and subscription affordability	GSMAINC-02	**2.2a Cost of the most affordable smartphone, as percentage of monthly GDP per capita**	GSMA Methodology	1.78%	0.0132%
		2.2b Average cost of 1GB of data, as percentage of monthly GDP per capita		0.0093%	0.0077%
Digital skills programmes	GSMAINC-03	**2.3 Number of people (excluding employees) who have completed a basic, intermediate or advanced digital skills training programme (as per ITU definition), divided by total subscribers.**	ITU Digital Skills Toolkit	0.0145	0.0078
Customer data incidents	GSMAINT-01	**3.1a Number of data breaches, per million subscribers**	SASB TC-TL-230a.1 (modified)	0.000007	0.000078
		3.1b Percentage of data breaches involving PII		100%	100%

GSMA ESG Metrics (cont)

Topic	Code	KPI	Alignment	Remarks/Page reference	
				Singtel	Optus
Digital Integrity					
Customer data incidents	GSMAINT-01	**3.1c Number of customers affected, per million subscribers**	SASB TC-TL-230a.1 (modified)	0.001284	9.8
		3.1d Number of regulatory actions for data protection violations (e.g. marketing related complaints, data breaches), per million subscribers		0	1 from the Office of the Australian Information Commissioner (OAIC)
Digital rights policy	GSMAINT-02	**3.2 Is there a policy specifically covering digital rights protection and transparency, privacy, freedom of expression, government mandates to shut down or restrict access, and/or government requests for data? (yes/no)**	2020 Ranking Digital Rights Corporate Accountability Index	No	No
Online safety measures	GSMAINT-03	**3.3 Do you have controls or programmes in place to improve online safety for children and other vulnerable groups? (yes/no)**	-	Yes. Refer to our *Singtel Group Human Rights Statement* and our Community Impact chapter covering online safety. (page 48)	Yes. Refer to our *Singtel Group Human Rights Statement* and our Community Impact chapter covering online safety. (page 48)
Supply chain					
Sustainable procurement policy	GSMASUP-01	**4.1a Do you have a sustainable procurement policy in place? (yes/no)**	ISO 20400:2017	No. However, we have a *Singtel Group Supplier Code of Conduct* covering 1. Corporate governance 2. Human Rights and Modern Slavery, including labour practices 3. Workplace Health and Safety 4. Environmental Management 5. Supplier Management, including grievance mechanism	No. However, we have a *Singtel Group Supplier Code of Conduct* covering 1. Corporate governance 2. Human Rights and Modern Slavery, including labour practices 3. Workplace Health and Safety 4. Environmental Management 5. Supplier Management, including grievance mechanism
		4.1b If yes, how many of the following elements does it cover? a. Organisational governance b. Human rights c. Labour practices d. Environment e. Fair operating practices f. Consumer issues g. Community involvement and development		Not applicable, refer to our response in 4.1a.	Not applicable, refer to our response in 4.1a.
Supplier assessments	GSMASUP-02	**4.2a Percentage of suppliers screened against the sustainable procurement policy using company defined and documented assessment procedure, within the previous two years**	GRI 308-1; GRI 414-1 (partially)	Data unavailable	Data unavailable
		4.2b Percentage of suppliers assessed against the sustainable procurement policy through site visits, within the previous two years		Data unavailable	Data unavailable

UN Global Compact Principles

Principle	Description	Page reference
Human Rights		
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and	*Singtel Human Rights Statement*, 4, 8-10, 11, 28, 34, 41, 47, 49, 51
Principle 2	Make sure that they are not complicit in human rights abuses	
Labour		
Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	*Singtel Human Rights Statement*, 35
Principle 4	The elimination of all forms of forced and compulsory labour;	8, 28, 34-35, 49-50
Principle 5	The effective abolition of child labour; and	
Principle 6	The elimination of discrimination in respect of employment and occupation.	
Environment		
Principle 7	Businesses should support a precautionary approach to environmental challenges;	5-7, 11-24
Principle 8	Undertake initiatives to promote greater environmental responsibility; and	11-26
Principle 9	Encourage the development and diffusion of environmentally friendly technologies.	20, 51-52
Anti-Corruption		
Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery	*Singtel Group Anti-Bribery and Corruption Policy*, 4, 8, 53-54

Key memberships and collaborations

- Agency for Integrated Care
- Australian Business and Community Network Foundation
- Business for Societal Impact
- Global System for Mobile Communications Association
- Infocomm Media Development Authority
- KARI Foundation
- National Council of Social Service
- National Environment Agency
- National Sustainable Procurement Roundtable
- Redflow
- SG Enable
- Singapore Business Network on DisAbility
- Singapore Standardisation Programme
- Union of Telecom Employees

FY2023 Sustainability Awards

Singtel

1. 2023 Bloomberg Gender-Equality Index
2. CDP 2022
   - A- Leadership score in Climate Change
   - A Leadership score in Supplier Engagement Rating – part of the leader board and among the top 8% assessed for the first time this year
3. Clean 200 by Corporate Knights and As You Sow
   - Ranked#97
4. World Benchmarking Alliance's 2023 Digital Inclusion Benchmark
   - Ranked #14, the top-ranked Southeast Asian company
5. Community Chest Awards 2022
   - Charity Platinum Award
   - Volunteer Partner Award
6. HR Excellence Awards 2022 – Excellence in CSR Strategy
7. Company of Good – Champion of Good 2022
8. Digital for Life (DfL) Champion
9. Asia Sustainability Reporting Awards (ASRA) 2023 – Gold: Asia's Best Community Impact Reporting and Asia's Best Diversity Reporting, Silver: Asia's Best Climate Reporting
10. Loyalty & Engagement Awards 2022 – Best use of CSR: GOMO Donate Your Data #DataForAll
11. President's Certificate of Commendation (COVID-19)
12. LowCarbon SG Participant 2022

Optus

13. Good Company: Top 10 Best Companies to Give Back 2022 (awarded 5th place)
14. ACOMMS Awards 2022: Finalist in the 'Cyber Security & Online Safety Innovation' category for Digital Thumbprint Programme

Listings/Ratings

2023 Bloomberg Gender-Equality Index

CDP 2022
- A- Leadership score in Climate Change
- A Leadership score in Supplier Engagement Rating – part of the leader board and among the top 8% assessed for the first time this year

Corporate Knights and As You Sow's Clean 200 - ranked #97

EcoVadis
- Singtel Group: Silver (93rd percentile)
- Singtel Europe: Gold (96th percentile)

FTSE4Good 2022 List – 3.5

MSCI ESG - A

Sustainalytics 2023 – Medium Risk (19th percentile in Telco sector)

World Benchmarking Alliance's 2023 Digital Inclusion Benchmark
- Ranked #14, the top-ranked Southeast Asian company

Independent Limited Assurance Statement

Independent Limited Assurance Statement in connection with the Subject Matter included in the Sustainability Report of Singapore Telecommunications Limited ("Singtel Group") for the financial year ended 31 March 2023.

Scope

We have been engaged by Singtel Group to perform a 'limited assurance engagement', as defined by International Standards on Assurance Engagements, here after referred to as the engagement, to report on the Sustainability Report of Singapore Telecommunications Limited ("Singtel") and Singtel Optus Pty Ltd ("Optus") (Collectively referred to as "Singtel Group") as set out in the Subject Matter and Criteria section (the "Subject Matter") as of 20 June 2023 for the period from 1 April 2022 to 31 March 2023 ("FY2023") ("the Sustainability Report").

Subject Matter and Criteria

In preparing the Subject Matter, Singtel applied the Global Reporting Initiative ("GRI") Standards ("the Criteria") as set out in the table below:

GRI Standards Disclosures

** Pertains to only Singtel's Sustainability Performance Data*

*** Pertains to Singtel Group's Sustainability Performance Data*

+ Pertains to only Optus' Sustainability Performance Data for Large-scale generation certificates (LGCs)

ESG Topics	GRI Topic-Specific Disclosure		"Shall" requirements under each disclosure	SR2023 page reference
Climate Change	**GRI (2016) 302-1****	Energy consumption within the organisation	a. Total fuel consumption within the organisation from non-renewable sources, in joules or multiples, and including fuel types used. b. Total fuel consumption within the organisation from renewable sources, in joules or multiples, and including fuel types used. c. In joules, watt-hours or multiples, the total: i. Electricity consumption ii. Heating consumption iii. Cooling consumption iv. Steam consumption d. In joules, watt-hours or multiples, the total: i. Electricity sold ii. Heating sold iii. Cooling sold iv. Steam sold e. Total energy consumption within the organisation, in joules or multiples. f. Standards, methodologies, assumptions, and/or calculation tools used. g. Source of the conversion factors used. 2.1 When compiling the information specified in Disclosure 302-1, the reporting organisation shall: 2.1.1 avoid the double-counting of fuel consumption, when reporting self-generated energy consumption. If the organisation generates electricity from a non-renewable or renewable fuel source and then consumes the generated electricity, the energy consumption shall be counted once under fuel consumption; 2.1.2 report fuel consumption separately for non-renewable and renewable fuel sources; 2.1.3 only report energy consumed by entities owned or controlled by the organisation; 2.1.4 calculate the total energy consumption within the organisation in joules or multiples using the following formula: Total energy consumption within the organisation = Non-renewable fuel consumed + Renewable fuel consumed + Electricity, heating, cooling, and steam purchased for consumption + Self-generated electricity, heating, cooling, and steam, which are not consumed (see clause 2.1.1) – Electricity, heating, cooling, and steam sold	26
	GRI (2016) 302-3**	Energy intensity	a. Energy intensity ratio for the organisation. b. Organisation-specific metric (the denominator) chosen to calculate the ratio. c. Types of energy included in the intensity ratio; whether fuel, electricity, heating, cooling, steam, or all. d. Whether the ratio uses energy consumption within the organisation, outside of it, or both. 2.5 When compiling the information specified in Disclosure 302-3, the reporting organisation shall: 2.5.1 calculate the ratio by dividing the absolute energy consumption (the numerator) by the organisation-specific metric (the denominator); 2.5.2 if reporting an intensity ratio both for the energy consumed within the organisation and outside of it, report these intensity ratios separately.	26

ESG Topics	GRI Topic-Specific Disclosure		"Shall" requirements under each disclosure	SR2023 page reference
Climate Change	**GRI (2016) 302-4***	Reduction of energy consumption	a. Amount of reductions in energy consumption achieved# as a direct result of conservation and efficiency initiatives, in joules or multiples. #: reported, by Singtel, as estimated annualised energy savings and emissions avoidance b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all. c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it. d. Standards, methodologies, assumptions, and/or calculation tools used. 2.7 When compiling the information specified in Disclosure 302-4, the reporting organisation shall: 2.7.1 exclude reductions resulting from reduced production capacity or outsourcing; 2.7.2 describe whether energy reduction is estimated, modelled, or sourced from direct measurements. If estimation or modelling is used, the organisation shall disclose the methods used.	16
	GRI (2016) 305-1**	Direct (Scope 1) GHG emissions	a. Gross direct (Scope 1) GHG emissions in metric tons of CO_2 equivalent. b. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all. c. Biogenic CO_2 emissions in metric tons of CO_2 equivalent. d. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential ("GWP") rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used. 2.1 When compiling the information specified in Disclosure 305-1, the reporting organisation shall: 2.1.1 exclude any GHG trades from the calculation of gross direct (Scope 1) GHG emissions; 2.1.2 report biogenic emissions of CO_2 from the combustion or biodegradation of biomass separately from the gross direct (Scope 1) GHG emissions. Exclude biogenic emissions of other types of GHG (such as CH_4 and N_2O), and biogenic emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass).	13, 25
	GRI (2016) 305-2**	Energy indirect (Scope 2) GHG emissions	a. Gross location-based energy indirect (Scope 2) GHG emissions in metric tons of CO_2 equivalent. b. If applicable, gross market-based energy indirect (Scope 2) GHG emissions in metric tons of CO_2 equivalent. c. If available, the gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all. d. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. e. Source of the emission factors and the global warming potential ("GWP") rates used, or a reference to the GWP source. f. Consolidation approach for emissions; whether equity share, financial control, or operational control. g. Standards, methodologies, assumptions, and/or calculation tools used. 2.3 When compiling the information specified in Disclosure 305-2, the reporting organisation shall: 2.3.1 exclude any GHG trades from the calculation of gross energy indirect (Scope 2) GHG emissions; 2.3.2 exclude other indirect (Scope 3) GHG emissions that are disclosed as specified in Disclosure 305-3; 2.3.3 account and report energy indirect (Scope 2) GHG emissions based on the location-based method, if it has operations in markets without product or supplier-specific data; 2.3.4 account and report energy indirect (Scope 2) GHG emissions based on both the location-based and market-based methods, if it has any operations in markets providing product or supplier-specific data in the form of contractual instruments.	13, 25
	GRI (2016) 305-3**	Other indirect (Scope 3) GHG emissions	a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO_2 equivalent. b. If available, the gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 or all. c. Biogenic CO_2 emissions in metric tons of CO_2 equivalent. d. Other indirect (Scope 3) GHG emissions categories and activities included in the calculation.	13-14, 25

ESG Topics	GRI Topic-Specific Disclosure		"Shall" requirements under each disclosure	SR2023 page reference
Climate Change	**GRI (2016) 305-3****	Other indirect (Scope 3) GHG emissions	e. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year; iii. the context for any significant changes in emissions that triggered recalculations of base year emissions. f. Source of the emission factors and the global warming potential ("GWP") rates used, or a reference to the GWP source. g. Standards, methodologies, assumptions, and/or calculation tools used. 2.5 When compiling the information specified in Disclosure 305-3, the reporting organisation shall: 2.5.1 exclude any GHG trades from the calculation of gross other indirect (Scope 3) GHG emissions; 2.5.2 exclude energy indirect (Scope 2) GHG emissions from this disclosure. Energy indirect (Scope 2) GHG emissions are disclosed as specified in Disclosure 305-2; 2.5.3 report biogenic emissions of CO_2 from the combustion or biodegradation of biomass that occur in its value chain separately from the gross other indirect (Scope 3) GHG emissions. Exclude biogenic emissions of other types of GHG (such as CH_4 and N_2O), and biogenic emissions of CO_2 that occur in the life cycle of biomass other than from combustion or biodegradation (such as GHG emissions from processing or transporting biomass).	13-14, 25
	GRI (2016) 305-4**	GHG emissions intensity	a. GHG emissions intensity ratio for the organisation. b. Organisation-specific metric (the denominator) chosen to calculate the ratio. c. Types of GHG emissions included in the intensity ratio; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). d. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all. 2.7 When compiling the information specified in Disclosure 305-4, the reporting organisation shall: 2.7.1 calculate the ratio by dividing the absolute GHG emissions (the numerator) by the organisation-specific metric (the denominator); 2.7.2 if reporting an intensity ratio for other indirect (Scope 3) GHG emissions, report this intensity ratio separately from the intensity ratios for direct (Scope 1) and energy indirect (Scope 2) emissions.	25
	GRI (2016) 305-5*+	Reduction of GHG emissions	a. GHG emissions reduced as a direct result of reduction initiatives, in metric tons of CO_2 equivalent. b. Gases included in the calculation; whether CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3, or all. c. Base year or baseline, including the rationale for choosing it. d. Scopes in which reductions took place; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3). e. Standards, methodologies, assumptions, and/or calculation tools used. 2.9 When compiling the information specified in Disclosure 305-5, the reporting organisation shall: 2.9.1 exclude reductions resulting from reduced production capacity or outsourcing; 2.9.2 use the inventory or project method to account for reductions; 2.9.3 calculate an initiative's total reductions of GHG emissions as the sum of its associated primary effects and any significant secondary effects; 2.9.4 if reporting two or more Scope types, report the reductions for each separately; 2.9.5 report reductions from offsets separately.	16, 25
Resource management	**GRI (2020) 306-3****	Waste generated	a. Total weight of waste generated in metric tons, and a breakdown of this total by composition of the waste. b. Contextual information necessary to understand the data and how the data has been compiled. 2.1 When compiling the information specified in Disclosure 306-3-a, the reporting organisation shall: 2.1.1 exclude effluent, unless required by national legislation to be reported under total waste; 2.1.2 use 1000 kilograms as the measure for a metric ton.	26
	GRI (2020) 306-4**	Waste diverted from disposal	a. Total weight of waste diverted from disposal in metric tons, and a breakdown of this total by composition of the waste. b. Total weight of hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations: i. Preparation for reuse; ii. Recycling; iii. Other recovery operations. c. Total weight of non-hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations: i. Preparation for reuse; ii. Recycling; iii. Other recovery operations.	26

ESG Topics	GRI Topic-Specific Disclosure		"Shall" requirements under each disclosure	SR2023 page reference
Resource management	**GRI (2020) 306-4****	Waste diverted from disposal	d. For each recovery operation listed in Disclosures 306-4-b and 306-4-c, a breakdown of the total weight in metric tons of hazardous waste and of non-hazardous waste diverted from disposal: i. onsite; ii. offsite. e. Contextual information necessary to understand the data and how the data has been compiled. 2.2 When compiling the information specified in Disclosure 306-4, the reporting organisation shall: 2.2.1 exclude effluent, unless required by national legislation to be reported under total waste; 2.2.2 use 1000 kilograms as the measure for a metric ton.	26
	GRI (2020) 306-5**	Waste directed to disposal	a. Total weight of waste directed to disposal in metric tons, and a breakdown of this total by composition of the waste. b. Total weight of hazardous waste directed to disposal in metric tons, and a breakdown of this total by the following disposal operations: i. Incineration (with energy recovery); ii. Incineration (without energy recovery); iii. Landfilling; iv. Other disposal operations. c. Total weight of non-hazardous waste directed to disposal in metric tons, and a breakdown of this total by the following disposal operations: i. Incineration (with energy recovery); ii. Incineration (without energy recovery); iii. Landfilling; iv. Other disposal operations. d. For each disposal operation listed in Disclosures 306-5-b and 306-5-c, a breakdown of the total weight in metric tons of hazardous waste and of non-hazardous waste directed to disposal: i. onsite; ii. offsite. e. Contextual information necessary to understand the data and how the data has been compiled. 2.4 When compiling the information specified in Disclosure 306-5, the reporting organisation shall: 2.4.1 exclude effluent, unless required by national legislation to be reported under total waste; 2.4.2 use 1000 kilograms as the measure for a metric ton.	26
	GRI (2018) 303-3**	Water withdrawal	a. Total water withdrawal from all areas in megalitres, and a breakdown of this total by the following sources, if applicable: i. Surface water; ii. Groundwater; iii. Seawater; iv. Produced water; v. Third-party water. b. Total water withdrawal from all areas with water stress in megalitres, and a breakdown of this total by the following sources, if applicable: i. Surface water; ii. Groundwater; iii. Seawater; iv. Produced water; v. Third-party water, and a breakdown of this total by the withdrawal sources listed in i-iv. d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used. 2.1 When compiling the information specified in Disclosure 303-3, the reporting organisation shall use publicly available and credible tools and methodologies for assessing water stress in an area.	26
Employee safety and well-being	**GRI (2018) 403-9****	Work-related injuries	a. For all employees: i. The number and rate of fatalities as a result of work-related injury; ii. The number and rate of high-consequence work-related injuries (excluding fatalities); iii. The number and rate of recordable work-related injuries; iv. The main types of work-related injury; v. The number of hours worked. e. Whether the rates have been calculated based on 200,000 or 1,000,000 hours worked. g. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumption used. 2.1 When compiling the information specified in Disclosure 403-9, the reporting organisation shall: 2.1.1 exclude fatalities in the calculation of the number and rate of high-consequence work-related injuries; 2.1.2 include fatalities as a result of work-related injury in the calculation of the number and rate of recordable work-related injuries;	35, 40

ESG Topics	GRI Topic-Specific Disclosure		"Shall" requirements under each disclosure	SR2023 page reference
Employee safety and well-being	**GRI (2018) 403-9****	Work-related injuries	2.1.3 include injuries as a result of commuting incidents only where the transport has been organised by the organisation; 2.1.4 calculate the rates based on either 200,000 or 1,000,000 hours worked, using the following formulas: Rate of fatalities as a result of work-related injury = (Number of fatalities as a result of work-related injury / Number of hours worked) x [200,000 or 1,000,000] Rate of high-consequence work-related injuries (excluding fatalities) = (Number of high-consequence work-related injuries (excluding fatalities) / Number of hours worked) x [200,000 or 1,000,000] Rate of recordable work-related injuries = (Number of recordable work-related injuries / Number of hours worked) x [200,000 or 1,000,000]	35, 40
	GRI (2018) 403-10**	Work-related ill health	a. For all employees: i. The number of fatalities as a result of work-related ill health; ii. The number of cases of recordable work-related ill health; iii. The main types of work-related ill health. e. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumption used. 2.3 When compiling the information specified in Disclosure 403-9, the reporting organisation shall include fatalities as a result of work-related ill health in the calculation of the number of cases of recordable work-related ill health.	40
Talent attraction and development	**GRI (2016) 401-1****	New employee hires and employee turnover	a. Total number and rate of new employee hires during the reporting period, by age group, gender and region. b. Total number and rate of employee turnover during the reporting period, by age group, gender and region.	39 - 40
	GRI (2016) 404-1**	Average hours of training per year per employee	a. Average hours of training that the organisation's employees have undertaken during the reporting period, by: i. gender; ii. employee category.	40
Sustainable supply chain management	**GRI (2016) 308-1****	New suppliers that were screened using environmental criteria	a. Percentage of new suppliers that were screened using environmental criteria.	50
	GRI (2016) 414-1**	New suppliers that were screened using social criteria	a. Percentage of new suppliers that were screened using social criteria.	50
Ethical and fair business practices	**GRI (2021) 2-27****	Compliance with laws and regulations	a. Report the total number of significant instances of non-compliance with laws and regulations during the reporting period, and a breakdown of this total by: i. instances for which fines were incurred; ii. instances for which non-monetary sanctions were incurred; b. Report the total number and the monetary value of fines for instances of non-compliance with laws and regulations that were paid during the reporting period, and a breakdown of this total by: i. fines for instances of non-compliance with laws and regulations that occurred in the current reporting period; ii. fines for instances of non-compliance with laws and regulations that occurred in previous reporting periods; c. Describe the significant instances of non-compliance; d. Describe how it has determined significant instances of non-compliance.	11, 52 - 53
Data and customer privacy	GRI (2016) 418-1**	Substantiated complaints concerning breaches of customer privacy and losses of customer data	a. Total number of substantiated complaints received concerning breaches of customer privacy, categorised by: i. complaints received from outside parties and substantiated by the organisation; ii. complaints from regulatory bodies. b. Total number of identified leaks, thefts, or losses of customer data. c. If the organisation has not identified any substantiated complaints, a brief statement of this fact is sufficient. 2.1 When compiling the information specified in Disclosure 418-1, the reporting organisation shall indicate if a substantial number of these breaches relate to events in preceding years.	55

Management's and Board of Director's responsibilities

The Management is responsible for selecting Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the subject matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibilities

Our responsibility is to express a limited assurance conclusion on the Subject Matter based on the procedures we performed and evidence we obtained.

We conducted our engagement in accordance with the International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information ('ISAE 3000'), International Standard for Assurance Engagements on Greenhouse Gas Statements ('ISAE3410') and the terms of reference for this engagement as agreed with Singtel Group on 1 April 2023, supplemental to the principal agreement dated 1 April 2023. Those standards require that we plan and perform our engagement to obtain limited assurance about whether, in all material respects, the Subject Matter is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Our independence and quality control

We have maintained our independence and confirm that we have met the requirements of the Accounting and Corporate Regulatory Authority ("ACRA") Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code"), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

EY also applies Singapore Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Description of procedures performed

Procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking aggregation or calculation of data within IT systems.

The GHG quantification process is subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of GHGs. Additionally, GHG procedures are subject to estimation (or measurement) uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

A limited assurance engagement consists of making enquiries, primarily of persons responsible for preparing the Subject Matter and related information, and applying analytical and other appropriate procedures.

1. Inquired with Singtel Group's Sustainability team to
   a. Understand principal business operations,
   b. Appreciate key sustainability issues and developments,
   c. Map out information flow for sustainability reporting and the relevant controls,
   d. Identify data providers with their responsibilities, and
   e. Recognise the likelihood of possible manipulation of sustainability information and data

2. Held virtual and face-to-face meetings with Singtel Group's data stakeholders and management.

3. Conducted process walk-through of systems and processes for data aggregation and reporting, with relevant personnel to understand the quality of checks and control mechanisms, assessment and tests of controls in relation to the relevant Subject Matter in the Sustainability Report.

4. Interviews with employees and management based in Singapore (Group Sustainability, Group Procurement, Device Business Unit, Home Product Marketing, M2M Product team, Consumer Postpaid, Consumer Product and Partnership, Data Protection Office, People Operations, People Development Energy Management, Facilities, Infrastructure Security & Workplace Safety & Health, Regulatory & Interconnect, Mobile & Voice Engineering, Supply Chain Management, Consumer Finance, Business Strategy and Marketing Intelligence and Product Development) and Australia (Regulatory and Public Affairs, People and Culture, Infrastructure Services, Corporate Property, Facilities Management, Networks Supply Chain, Optus Procurement and Supply Chain) as well as third parties (e.g. EDGE) to understand key sustainability issues related to the select indicators and processes for the collection and accurate reporting of performance information.

5. Undertook analytical review procedures to support the reasonableness of the data.

6. Tested, on a sample basis, underlying source information to check accuracy of the data in relation to the relevant Subject Matter in the Sustainability Report.

7. Identified and checked assumptions supporting disclosures related to select sustainability performance disclosure.

8. Obtained third-party reports and confirmations in relation to the relevant Subject Matter in the Sustainability Report.

9. Conducted general desktop research on the relevant Subject Matter.

10. Checked that data and statements in relation to the relevant Subject Matter had been correctly transcribed from corporate systems and / or supporting evidence, into the Sustainability Report

11. Relied on Singtel Group's management representation letter on the relevant Subject Matter in the Sustainability Report. We also performed such other procedures as we considered necessary in the circumstances.

Conclusion

Based on our procedures and the evidence obtained, we are not aware of any material modifications that should be made to the Subject Matter as of 20 June 2023 for the year ended 31 March 2023, in order for it to be in accordance with the Criteria.

Restricted use

This report is intended solely for the information and use of the Management of Singtel Group and is not intended to be and should not be used by anyone other than those specified parties.

Ernst & Young LLP
Singapore
20 June 2023

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