We identify and manage risks to reduce the uncertainty associated with executing our business strategies and maximise opportunities that may arise. Risks can take various forms and can have material adverse impact on our reputation, operations, human resources and financial performance.

We have established a comprehensive risk management framework approved by our Risk Committee. The risk management framework sets out the governance structure for managing risks, our risk philosophy, risk appetite and tolerance levels, our risk management approach as well as risk factors.

In addition, our risk assessment and mitigation strategy are aligned with our Group strategy and is an integral part of the annual business planning and budgeting process.

# **GOVERNANCE STRUCTURE FOR MANAGING RISKS**

#### **THE BOARD**

- Instils culture and approach for risk governance
- Provides oversight of risk management systems and internal controls
- Reviews key risks and mitigation plans
- · Determines risk appetite and tolerance
- Monitors exposure

## **RISK COMMITTEE**

- Reviews and recommends risk strategy and policies
- Oversees design, implementation and monitoring of internal controls
- Reviews adequacy and effectiveness of the Group's risk framework
- Monitors the implementation of risk mitigation plans

## **AUDIT COMMITTEE**

- Reviews adequacy and effectiveness of the Group's internal control framework
- Oversees financial reporting risk for the Group
- Oversees internal and external audit processes
- Monitors exposure

# **MANAGEMENT COMMITTEE**

• Implements risk management practices within all business units and functions

# **RISK MANAGEMENT COMMITTEE**

- · Supports the Board and Risk Committee in terms of risk governance and oversight
- Sets the direction and strategies to align risk management and monitoring with the Group's risk appetite and tolerance
- Reviews the risk assessments carried out by the Business Units
- · Reviews and assesses risk management systems and tools
- Reviews efficiency and effectiveness of mitigations and coverage of risk exposures

## **CYBER SECURITY RESILIENCY COMMITTEE**

- Supports the Risk Management Committee on matters related to Cyber Security Risks
- Provides direction and strategy to strengthen defence against cyber security threats
- · Reviews security controls of Information Technology (IT) systems and network infrastructure

## **OUR RISK PHILOSOPHY**

Our risk philosophy and risk management approach are based on three key principles:

## **RISK CENTRIC CULTURE**

- Set the appropriate tone at the top
- Promote awareness, ownership and proactive management of key risks
- · Promote accountability

# STRONG CORPORATE GOVERNANCE STRUCTURE

- Promote good corporate governance
- Provide proper segregation of duties
- Clearly define risk-taking responsibility and authority
- Promote ownership and accountability for risk-taking

# PROACTIVE RISK MANAGEMENT PROCESS

- Robust processes and systems to identify, quantify, monitor, mitigate and manage risks
- Benchmark against global best practices

# **RISK APPETITE**

The Board has approved the following risk appetite statement:

- The Group is committed to delivering value to our shareholders achieved through sustained profitable growth. However, we shall not compromise our integrity, values and reputation by risking brand damage, service delivery standards, severe network disruption or regulatory non-compliance.
- The Group will defend our market leadership position in Singapore and strengthen our market position in Australia and in Asia Pacific through our regional associates. We will continue to pursue business expansion in the emerging markets, including acquiring controlling stakes in the associates, and actively managing the risks.
- The Group is prepared to take measured risks to seek new growth in the digital space by providing global platforms and enablers, targeted at a global footprint, while leveraging our current scale and core strengths.
- The Group targets an investment grade credit rating and dividend payout policy consistent with our stated dividend policy and guidance.

# **RISK MANAGEMENT**

We have established a rigorous and systematic risk review process to identify, monitor, manage and report risks throughout the organisation based on our risk philosophy. Management has primary responsibility for identifying, managing and reporting to the Board the key risks faced by the Group. Management is also responsible for ensuring that the risk management framework is effectively implemented within the business units. The business units are supported by specialised functions such as Regulatory, Legal, Tax, Environment and Sustainability,

Insurance, Treasury and Credit Management in the management of risks. In addition, through stakeholder engagement and materiality assessments, we regularly review and assess the environmental, social and governance (ESG) risks that exist or emerge in our broader value chain, and we address them with various corporate sustainability initiatives. Our corporate sustainability initiatives are discussed further on page 108 and in our Group Sustainability Report.

Our key risk management activities also include scenario planning, business continuity/disaster recovery management and crisis planning and management. Close monitoring and control processes, including the use of appropriate key risk and key performance indicators, are implemented to ensure the risk profiles are managed within policy limits.

In addition, we have in place a formal programme of risk and control self-assessment where line personnel are involved in the ongoing assessment and improvement of risk management and controls.

The effectiveness of our risk management policies and processes

is reviewed on a regular basis and, where necessary, improved. Independent reviews are conducted by third party consultants regularly to ensure the appropriateness of the risk management framework. The consultants also report key risks to the Board, as well as provide periodic support and input when undertaking specific risk assessments. Overall the risk management processes facilitate alignment of our strategy and annual operating plan with the management of key risks.

Singtel's Internal Audit (IA) carries out reviews and internal control advisory activities aligned to the key risks in our businesses. This provides independent assurance to the Audit Committee (AC) on the adequacy and effectiveness of our risk management, financial reporting processes, and internal control and compliance systems. In order to provide assurance to the Board, the CEOs of our business units submit an annual report on the key risks and mitigation strategies for their respective businesses to the Risk Committee. Our Group CEO and Group CFO provide a written certification to the Board confirming the integrity of financial reporting, and the efficiency and effectiveness of the risk management, internal control and compliance systems every year.

In the course of their statutory audit, external auditors review our material internal controls to the extent of the scope laid out in their audit plans. Any material non-compliance and internal control weaknesses, together with their recommendations to address them, are reported to the AC. Our Management, with the assistance of Singtel IA, follows up on the external auditors' recommendations as part of their role in reviewing our system of internal controls.

The systems that are in place are intended to provide reasonable but not absolute assurance against material misstatements or loss, as well as ensuring the safeguarding of assets, the maintenance of proper accounting records, the reliability of financial information, compliance with applicable legislation, regulations and best practices, and the identification and management of business risks.

# **RISK FACTORS**

Our financial performance and operations are influenced by a vast range of risk factors. Many of these affect not just our businesses, but also other businesses in and outside the telecommunications industry. These risks vary widely and many are beyond the Group's control. There may also be risks that are either presently unknown or not currently assessed as significant, which may later prove to be material. However, we aim to mitigate the exposures through appropriate risk management strategies and internal controls.

The section below sets out the principal risk types, which are not listed in the order of significance.

- Economic Risks
- · Political Risks
- · Regulatory and Litigation Risks
- Competitive Risks
- Expansion Risks
- Project Risks

- New Business Risks
- · Technology Risks
- · Vendor/Supply Chain Risks
- Information Technology Risks
- · Cyber Security Risks
- Data Protection and Privacy Risks
- Financial Risks
- Network Failure and Catastrophic Risks
- Talent Management Risks
- Electromagnetic Energy Risks
- Climate Change Risks

# **ECONOMIC RISKS**

Changes in domestic, regional and global economic conditions may have a material adverse effect on the demand for telecommunications, information technology (IT) and related services, digital services, and hence, on our financial performance and operations. As the global headwinds intensify resulting in

uncertainty in the macro-economic environment, this could have an adverse effect on our overall Group strategy and growth.

The global credit and equity markets have experienced substantial dislocations, liquidity disruptions and market corrections. These and other related events have had a significant

impact on economic growth as a whole and consequently, on consumer and business demand for telecommunications, IT and related services, and digital services.

Our planning and management review processes involve the periodic monitoring of budgets and expenditures to minimise the risk of over-investment. Each of the business units in our Group has continuing cost management programmes to drive improvements in their cost structures.

## **POLITICAL RISKS**

Our Group Consumer business is geographically diversified with operations in Singapore, Australia and the emerging markets. Some of the countries in which our business operates have experienced or continue to experience political instability. The continuation or reemergence of such political instability in the future could have a material adverse effect on economic or social conditions in those countries, as well as on the ownership, control and condition of our assets in those areas.

We work closely with the Management and our partners in the countries where we operate to leverage the local expertise, knowledge and ability to manage the local and socio-economic conditions and risks. This way, we ensure compliance with the laws and are better able to implement risk mitigation measures.

As Group Enterprise and Group Digital Life expand their business operations across the region and around the world, exposure to similar political and socio-economic risks may increase in the future.

# REGULATORY AND LITIGATION RISKS

## **Regulatory Risks**

Our businesses depend on licences issued by government authorities. Failure to meet regulatory requirements could result in fines or other sanctions including, ultimately, the revocation of licences.
Our global operations are subject to extensive government

regulations, which may impact or limit our flexibility to respond to market conditions, competition, new technologies or changes in cost structures. Governments may alter their policies relating to the telecommunications, IT, multimedia and related industries, as well as the regulatory environment (including taxation) in which we operate. Such changes could have a material adverse effect on our financial performance and operations.

Our overseas investments are also subject to the risk of imposition of laws and regulations restricting the level, percentage and manner of foreign ownership and investment, as well as the risk of nationalisation. Any of these factors can materially and adversely affect our overseas investments.

Consumer Australia, Consumer Singapore and Group Enterprise are impacted by the implementation of national broadband networks in both Australia and Singapore. In Singapore, the Infocomm Media **Development Authority of Singapore** (IMDA) has, in its implementation of the Next Generation Nationwide Broadband Network (Next Gen NBN), designed a structure to level the playing field to make the benefits of the Next Gen NBN available to all industry players. Under the structural separation rules laid down by IMDA and in compliance with an undertaking, Singtel divested its stake in NetLink Trust (NLT), which designs, builds, owns and operates the passive infrastructure for Next Gen NBN, to less than 25% in July 2017. The Next Gen NBN structure has significantly altered the existing cost model of the industry and increased the level of competition from new entrants.

In Australia, the government is currently undertaking a significant reform of the fixed-line telecommunications sector, including the rollout of a national broadband network by the government owned entity, NBN Co, to be operated on a wholesale-only open access basis. It is possible that the Australian government's policy decisions relating to the national broadband network or commercial decisions taken by NBN Co could ultimately lead to a sub-optimal or negative outcome for Optus.

Our operations are also subject to various other laws and regulations such as those relating to customer data privacy and protection, antibribery and corruption, workplace safety and health, cyber security and national security. Failure to meet these regulations may affect our business and/or our capacity to operate in line with our business objectives.

We have access to appropriate regulatory expertise and staffing resources in Singapore and Australia and we work closely with the various stakeholders and our partners in the countries we operate in. We closely monitor new developments and regularly participate in discussions and consultations with the respective regulatory authorities and the industry to propose changes and provide feedback on regulatory reforms and developments in the telecommunications and media industry.

#### **Access to Spectrum**

Access to spectrum is critically important for supporting our business of providing mobile voice, data and other connectivity services. The use of spectrum in most countries where we operate is regulated by government authorities and

requires licences. Failure to acquire access to spectrum or new or additional spectrum on reasonable commercial terms or at all could have a material adverse effect on our core communications business, financial performance and growth plans.

#### **Taxation Risks**

Our Group has operations across a large number of jurisdictions and we are subject to the tax regulations, or changes in regulations, in the respective jurisdictions in which we operate. The tax legislations or changes may increase our compliance obligations and business costs.

We are committed to comply with applicable tax laws in countries where we operate. We have skilled staff in taxation matters and work with external tax advisors where necessary. Material tax disputes and risks are escalated in accordance with the risk management framework, and appropriate disclosures are made in our financial statements.

# **Litigation Risks**

We are exposed to the risk of regulatory or litigation action by regulators and other parties. Such regulatory matters or litigation actions may have a material effect on our financial condition and results of operations. Examples of such litigation are disclosed in Notes to the Financial Statements under "Contingent Liabilities".

We have put in place master supply agreements with vendors, master services agreements with customers, and implemented contract policies to manage contractual arrangements with our vendors and customers. The policies also set out the necessary risk empowerment framework and principles for the Management Committee, CEOs, and management

to approve deviations from the standard terms.

#### **COMPETITIVE RISKS**

We face competitive risks in all markets and business segments in which we operate.

## **Group Consumer Business**

The telecommunications market in Singapore is highly competitive. As competition further intensifies with the entry of a fourth mobile network operator and mobile virtual network operators (MVNOs), our market share may decline and be exposed to more intense price competition. The competitive pressure in the fixedbroadband segments continues to be high among the Retail Service Providers (RSPs), with the ongoing migration of customers from asymmetric digital subscriber line (ADSL) to fibre plans. Singapore's Next Gen NBN regulations allow the RSPs equal and open access to NetLink Trust's fibre network. The replacement of our ADSL services with fibre services may also subject us to the risk of loss of customers to the competition.

In the Australian mobile market, in addition to the incumbent operator, a number of participants are subsidiaries of international groups and operators, and have made large investments which are now sunk costs. We are, therefore, exposed to the risk of irrational pricing being introduced by such competitors. The consumer fixed-line services market continues to be dominated by the incumbent provider, which can leverage its scale and market position to restrict the development of competition. With the deployment of the Australian national broadband network, competition is expected to increase as new operators enter the market.

The operations of our regional associates' businesses are also subject to highly competitive market conditions. Their growth depends in part on the adoption

of mobile data services in their markets. Some of these markets have and could continue to experience intensifying price competition for mobile data services including from new competitors and/or smaller scale competitors, leading to lower profitability and potential loss of market share for our associates.

Our business models and profits are also challenged by disintermediation in the telecommunications industry by handset providers and non-traditional telecommunications service providers (including social media networks and over-the-top (OTT) players) which provide multimedia content, applications and services directly on demand.

We continue to invest in our networks to ensure that our networks have the coverage, capacity and speed that will provide our customers with the best mobile experience. Group Consumer is focused on driving efficiencies and innovation, via new technologies, products and services, processes and business models to meet evolving customer needs and enhance customer experience.

# **Group Enterprise Business**

Business customers enjoy wide choices for many of our services, including fixed, mobile, cloud, managed services and hosting, IT services and consulting. Competitors include multinational IT and telecommunications companies, technology companies that introduce new communication services as well as other non-traditional players, while in Australia, the enterprise market is dominated by the incumbent. The quality and prices of these services can influence a potential business customer's decision. Prices for some of these services have declined significantly in recent years as a result of capacity additions, technology innovations and price competition. Such price declines are expected to continue.

Group Enterprise continues to focus on offering companies comprehensive and integrated infocomm technology (ICT) solutions and initiatives to strengthen customer engagement. This includes broadening our solution portfolio to cover new areas of customer need, such as cloud computing, cyber security and Internet of Things (IoT) solutions for smart cities.

# **Group Digital Life Business**

The digital products and services we offer are primarily in the areas of digital marketing, OTT video and data analytics. Competition is intense, with many OTT operators offering these services and facing low barriers to entry.

Group Digital Life aspires to become a significant global player in these areas by delivering distinctive products and services in the target markets and launching them quickly to capture market share. We will continue to scale our digital businesses, leveraging on our valuable assets, such as extensive customer knowledge, touch points, intelligent networks and the scale of our customer base.

# **EXPANSION RISKS**

Given the size of the Singapore and Australia markets, our future growth depends, to a large extent, on our ability to grow our overseas operations in both traditional and new digital services. This comes with considerable risks.

# **Partnership Relations**

The success of our strategic investments depends, to a large extent, on our relationships with, and the strength of our partners. There is no guarantee that we will be able to maintain these relationships or that our partners will remain committed to their partnerships.

#### **Acquisition Risks**

We continually look for investment opportunities that can contribute to

our expansion strategy and develop new revenue streams. Our efforts are challenged by the limited availability of opportunities, competition from other potential investors, foreign ownership restrictions, government and regulatory policies, political considerations and the specific preferences of sellers. We face challenges arising from integrating newly acquired businesses with our own operations, managing these businesses and talent in markets where we have limited experience and/or resources and financing these acquisitions. We also risk not being able to generate synergies from these acquisitions, and the acquisitions becoming a drain on our management and capital resources.

The business strategies of some of our regional associates involve expanding operations outside their home countries, as well as in-country mergers and acquisitions. These associates may enter into joint ventures and other arrangements with other parties. Such joint ventures and other arrangements involve risks, including, but not limited to, the possibility that the joint venture or investment partner may have economic or business interests or goals that are not consistent with those of the associates. There is no guarantee that the regional associates can generate synergies and successfully build a competitive regional footprint.

We adopt a disciplined approach in our investment evaluation and decision-making process. Members of our management team are also directors on the boards of our associates and joint ventures. In addition to sharing network product innovation and development and commercial experience, best practices in the areas of corporate governance and financial reporting are also shared across the Group.

#### **PROJECT RISKS**

We incur substantial capital expenditure in constructing and maintaining our networks and IT systems infrastructure. These projects are subject to risks associated with the construction, supply, installation and operation of equipment and systems.

The projects that we undertake as contractors to operate and maintain infrastructure are subject to the risks of increased project costs, disputes and unexpected implementation delays, any of which can result in an inability to meet projected completion dates or service levels.

Group Enterprise is a major IT service provider to governments and large enterprises in the region. We face potential project execution risks such as under-estimation of efforts or technical complexities which can result in cost overruns, project delays and losses.

We have a project risk management framework in place for systematic assessment, monitoring and reporting of key project risks. Risk profiling of the projects are performed for project monitoring and governance, so that appropriate attention and focus are given to high risk projects including those involving new and/or complex technology.

# **NEW BUSINESS RISKS**

Beyond our traditional carriage business in Singapore and Australia, we are venturing into new growth areas to create additional revenue streams, including mobile applications and services, pay TV, regional premium OTT video, content, managed services, cloud services, cyber security, ICT, data analytics and digital marketing. There is no assurance that we will be successful in these ventures, which may require substantial capital, new expertise, considerable process or systems changes, as well as organisational, cultural and mindset changes. These businesses may also expose us to

new areas of risks associated with the media and online industries such as media regulation, brand safety, intellectual property infringement, content rights disputes, online falsehood, and data protection regulations and legislation.

As new businesses place new demands on people, processes and systems, we respond by continually updating our organisation structure, talent management and development programme, reviewing our policies and processes, and by investing in new technologies to meet changing needs.

## **TECHNOLOGY RISKS**

Rapid and significant technological changes are typical in the telecommunications and ICT industry. Technological changes may reduce costs, expand the capacity of new infrastructure, bring new sources of revenue, and/or result in shorter periods for investment recovery, all of which present both opportunities as well as disruption and challenges. These changes may materially affect the Group's capital expenditure and operating costs, as well as the demand for products and services offered by our business divisions.

The rapid advancements in new technologies such as Artificial Intelligence (AI), Digital Application Programming Interfaces (APIs), cloud, and blockchain are driving development of entirely new ecosystems and business models. This may leave us with infrastructure and systems that are technically obsolete before the end of their expected useful life and may require us to replace and upgrade our network and systems infrastructure to remain competitive, and as a result, incur additional capital expenditure. On the other hand, these changes also present opportunities for us to build upon our connectivity advantage, depending on our ability to apply these technologies to relevant services.

In the emerging markets in which our associates operate, regulatory practices, including spectrum availability, may also not necessarily synchronise with the technology progression path and the market demand for new technologies.

Each business unit faces the ongoing risk of market entry by new operators and service providers (including non-telecommunications players) that, by using newer or lower cost technologies, may succeed in rapidly attracting customers away from established market participants. Our business may also incur substantial development expenditure to gain access to related or enabling technologies to pursue new growth opportunities in the business, e.g. the ICT industry. The challenge is to modify our existing infrastructure and processes in a timely and costeffective manner to facilitate such implementation, failing which this could adversely affect our quality of service, financial condition and operational performance.

We continue to invest in upgrading, modernising and equipping our systems with new capabilities to ensure we are able to deliver innovative and relevant services to our customers.

# **VENDOR/SUPPLY CHAIN RISKS**

We rely on third-party vendors and their extended supply chain in many aspects of our business for various purposes, including, but not limited to, the construction, operations and maintenance of our network, the supply of handsets and equipment, systems and application development services, content provision and customer acquisition. Accordingly, our operations may be affected by third-party vendors or their supply chain failing to perform their obligations. In addition, the industry is dominated by a few key vendors for such services and equipment, and any failure or refusal by a key vendor to provide

such services or equipment, or any consolidation of the industry, may significantly affect our business and operations.

We monitor our relationships with key vendors closely and develop new relationships to mitigate supply risks. We have in place a Sustainable Supply Chain strategy and framework to manage risks that may exist in our extended supply chain.

# INFORMATION TECHNOLOGY RISKS

Our businesses and operations rely heavily on information technology and we have established the Cyber Security Resiliency Committee to provide oversight of all IT and network security risks, including cyber security threats and data privacy breaches. The committee is chaired by CEO Group Enterprise and comprises senior members from the businesses, various IT and network domains and meets on a regular basis. The committee develops appropriate policies and frameworks to ensure information system security, reviews the projects and initiatives on IT and network security, reviews IT security incidents, and establishes overall governance by performing audits and cyber security drills.

We have established a Group Cyber Security Policy for managing risks associated with information security. The policy is developed based on industry best practices and is aligned with international standards such as ISO 27001. The policy covers holistically various aspects of IT risk governance, including change management, user access management, database configuration standards and disaster recovery planning, and provides the cornerstone for driving robust IT security controls across the Group.

We have also established a Project Management Methodology to ensure that new systems are developed with appropriate IT security controls and are subject to rigorous acceptance tests, including penetration testing, prior to implementation.

## **CYBER SECURITY RISKS**

The scale and level of sophistication of cyber security threats have increased with the changing tactics and tools by cyber attackers, ranging from terrorist attacks, state-sponsored hacking, black-hat hacking or even internal threats and ransomware. As our business is heavily dependent on the resiliency of our network infrastructure, and supporting systems, we are exposed to cyber security threats which can result in disruptions to our network and services provided to customers, and leakage of sensitive and / or confidential information. The exposure is further intensified with the growing dependency on uninterrupted connectivity and smart devices by our customers, and can lead to impact on our reputation, litigation from customers and/or regulatory fines and penalties.

Group Enterprise is growing our cyber security business globally. The failure to keep up with and counteract increasing cyber security threats can materially and adversely affect our reputation, cyber security business and growth strategy.

To combat these threats, we adopt a holistic approach by keeping abreast of the threat landscape and business environment as well as implementing a multi-layered security framework to ensure there are relevant preventive, detective and recovery measures. This includes training our people to adopt a security first mindset and be vigilant to the latest cyber threats. This mindset translates to a security by design principle when we create our products and services from idea, inception to launch.

We have been building our capabilities organically, through investments as well as partnerships

with best-of-breed technology partners. To date, we have 2,000 cyber security professionals, global security operations and engineering centres as well as a specialised team of ethical hackers and forensic experts in assisting various businesses to manage vulnerabilities and threats, achieve compliance with regulations and implement secure solutions. The Group's Cyber Security Institute conducts training programmes to enhance the cyber security skills and preparedness of our staff as well as our customers, including businesses and governments in Asia Pacific. The Group has also invested in a research and development lab to drive innovation in this area.

# DATA PROTECTION AND PRIVACY RISKS

We seek to protect the data privacy of our customers in our networks and systems infrastructure. Significant failure of security measures may undermine customer confidence and result in litigation from customers and/or regulatory fines and penalties. We may also be subject to the imposition of additional regulatory measures relating to the security and privacy of customer data.

We continue to ensure data privacy by protecting personal data of our customers and staff. We also ensure compliance with applicable privacy laws, and perform regular reviews in order to refine our practices. We have implemented security policies, procedures, technologies and tools designed to minimise the risk of privacy breaches. We have also established an escalation process for incident management, which includes security breaches to ensure timely response, internally and externally, to minimise impact.

# **FINANCIAL RISKS**

The main risks arising from our financial assets and liabilities are foreign exchange, interest rate, market, liquidity, access to financing

sources and increased credit risks. Financial markets continue to be volatile and this may heighten execution risk for funding activities and credit risk premiums for market participants.

We are exposed to foreign exchange fluctuations from our operations and through subsidiaries as well as associates and joint ventures operating in foreign countries. These relate to the translation of the foreign currency earnings and carrying values of our overseas operations. Additionally, a significant portion of associates and joint ventures purchases and liabilities are denominated in foreign currencies, versus the local currency of the respective operations. This gives rise to changes in cost structures and fair value gains or losses when marked to market.

We have established policies, guidelines and control procedures to manage and report exposure to such risks. Our financial risk management is discussed further on page 227 in Note 34 to the Financial Statements.

# NETWORK FAILURE AND CATASTROPHIC RISKS

The telecommunications industry faces a continuous challenge of providing fast, secure and reliable networks to an increasingly digital and connected world. The provision of our services depends on the quality, stability, resilience and robustness of our networks and systems. We face the risk of malfunction of, loss of, or damage to, network infrastructure from natural or other uncontrollable events such as acts of terrorism.

Some of the countries in which we and/or our regional associates operate have experienced a number of major natural catastrophes over the years, including typhoons, droughts and earthquakes. Some of these catastrophes have also increased in intensity and frequency

due to climate change factors, causing prolonged and exacerbated impact on our infrastructure and operations. In addition, other events that are/are not within our control and/or our regional associates' control, such as fire, deliberate acts of sabotage, vendor failure/ negligence, industrial accidents, blackouts, terrorist attacks or criminal acts, could damage, cause operational interruptions or otherwise adversely affect any of the facilities and activities, as well as potentially cause injury or death to personnel. Such losses or damage may significantly disrupt our operations, which may materially adversely affect our ability to deliver services to customers. Sustained or significant disruption to our services can also significantly impact our reputation with our customers. Our inability to operate our networks or customer support systems may have a material impact on our business.

We continue to make our networks robust and resilient, and continually review our processes to prevent any network disruptions and to have an effective communication process for timely updates to our stakeholders during any incidents and/or crisis. There is a defined crisis management and escalation process for our CEOs and senior management to respond to emergencies and catastrophic events. Additional to key network infrastructure, we have business continuity plans and insurance programme and policies in place.

# **TALENT MANAGEMENT RISKS**

As we seek new avenues of growth, a key differentiator alongside access to innovation will be the ability to attract and sustain talent including new skills and capabilities. The loss of some or all of our key executives or the inability to attract or retain key talent, could materially and adversely affect our business.

We continue to invest in the skills of

our existing workforce and build up our current and emerging capabilities through external professional hires and targeted campus recruitment. In order to develop and retain talent, we conduct regular skills assessment into the critical business areas and set out structured developmental roadmaps to fill new and emerging skills gaps. We have a targeted development approach to develop young, emerging and future technical and business leaders through formal learning activities, coaching and mentoring as well as providing critical experiences such as international assignments, rotations and special projects.

#### **ELECTROMAGNETIC ENERGY RISKS**

Health concerns have been raised globally about the potential exposure to Electromagnetic Energy (EME) emissions through using mobile handsets or being exposed to mobile transmission equipment. While there is no substantiated evidence of public health risks from exposure to the levels of EME typically emitted from mobile phones, perceived health risks can be a concern for our customers, the community, and regulators. Perceived health risks in terms of environmental exposures from mobile base station equipment can impact and cause concerns for the local communities on the implementation of new or upgrading of existing mobile base stations. This may impact the mobile coverage at that locality and also our mobile business. In addition, government legislations and industry requirements may be introduced to address this perceived risk, affecting our ability to deploy the mobile communications infrastructure.

We design and deploy our network to comply with the relevant government mandated standards for exposure to EME. Our standards are based upon those recommended by the International Commission on Non Ionizing Radiation Protection (ICNIRP), which is a related agency of the World Health Organisation (WHO). The ICNIRP standards are adopted by many countries around the world and are considered best practice. We continue to monitor research findings on EME, health risks and their implications on relevant standards and regulations.

#### **CLIMATE CHANGE RISKS**

Climate change is one of the key long-term global risks that has the potential to impact our operations, infrastructure and supply chain. There are also other energy security and regulatory risks associated with climate change, which could result in stricter emissions standards, carbon taxes or accompanying infrastructure investments for adaptation or mitigation. To address this concern, we adopted a two-pronged approach i.e. science based carbon reduction target and the upgrading of our infrastructure to adapt to long term climate change.

We have agreed to the Science Based Target initiative (SBTi) to address the continued impact of carbon and increasing temperatures. This approach progressively aligns our 2030 carbon contribution and reduction target with the agreements made at Paris COP 21. We adapt our infrastructure design and standards progressively to long-term scenarios related to climate change, such as increased risk of inundation and stronger cyclonic activities, rising temperatures and higher frequency of bush fires in Australia. We have also committed towards aligning our climate-related risks and financial reporting with the recommendations of the Task Force for Climate Related Financial Disclosures.