

# Business and Performance

## Business Overview

Over the course of 31 years of providing telecommunication infrastructure to Thai society, starting in 1990 under collaborative contract or concessionaires, AIS was granted the right to utilize state frequencies under the 25-year Built-Transfer-Operate (BTO) agreement. In 2010, the National Broadcasting and Telecommunications Commission (NBTC), the government agency regulating broadcasting and telecommunication, was established and tasked with granting spectrum licenses. The licensing scheme, which is a major turning point for the telecommunications industry in Thailand, supports fair competition as well as the development of new technologies.

### Vision

AIS remains committed to its vision of **"To become the most-admired Digital Life Service Provider in Thailand"** through the following missions

### Missions

- Deliver superior products and services that enrich people's daily lives and improve enterprise capabilities and efficiency.
- Enhance customer intimacy through the best customer experience.
- Drive intrapreneurship and employees' professionalism, and promote a positive, lively and agile work culture.
- Build win-win growth for all stakeholders.



## AIS, the digital life service provider



We are a "Digital Life Service Provider" Operating the Following 4 Core Businesses:

### Mobile Phone Service



with 5G, 4G, 3G and 2G technology under the brand "AIS" provides a monthly subscription service, top-up service as well as international calls and roaming with network partners in over 229 nations worldwide.

### Fixed Broadband Service



provides high-speed home internet utilizing FTTx fiber optics under the brand "AIS Fibre".

### Enterprise Business Service



offers cloud service, data center, cyber security, Internet of Things (IoT), and ICT solutions to corporate clients in collaboration with multiple partners.

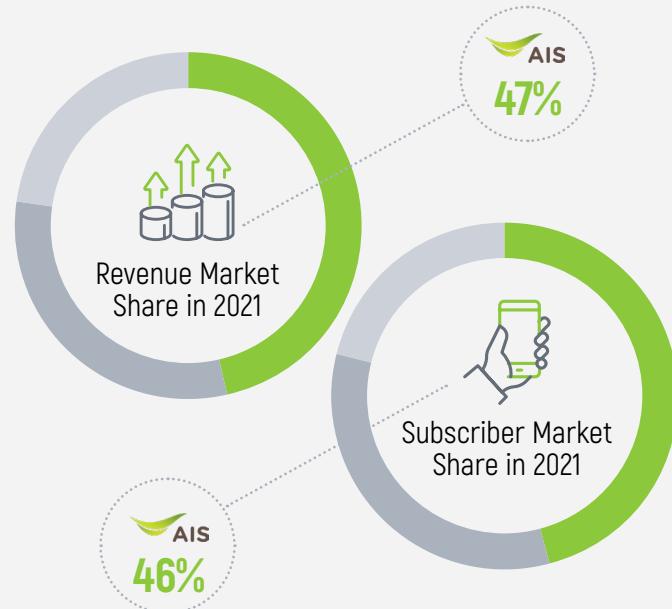
### Digital Service



includes mobile phone and high-speed internet services, focusing on creating value-added digital services and serving as a new revenue source in the medium and long term in anticipation of a change in consumer behaviors and technology.

**In 2021, AIS's total assets were valued at Baht 356,222 million with a market capitalization of Baht 684,003 million, ranked 3 on the Stock Exchange of Thailand.**

## Leading the mobile market

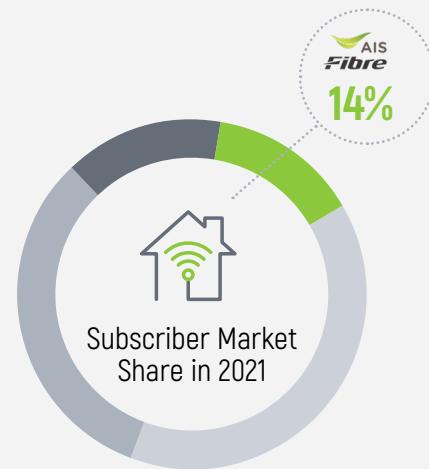


As of the end of 2021, AIS maintained its position as the leading mobile operator in Thailand, with a revenue market share of 47%, and a total of 44.1 million subscribers nationwide. The mobile phone service revenue accounted for more than 90% of total service revenue. AIS provides quality services on 5G, 4G, 3G and 2G networks, using frequency bands of 26 GHz and 2600, 2100, 1800, 900 MHz for a total of 1450 MHz (2x75 MHz on FDD technology and 1300 MHz on TDD technology). The 1250 MHz is under the license granted by NBTC and another 2x15 MHz is under a TOT partnership agreement. Currently, AIS's mobile network covers over 98% of the country's population.

AIS won the most additional spectrums in the industry, enhancing its potential as the leader in service quality and enabling AIS to offer new 5G-based services which were officially launched in 2020. The Company has since continued to expand its 5G network to cover key areas in 77 provinces. As at year end 2021, the network reached 76% of the total population in Thailand. In the initial phase, the service covered areas with intense demand for data usage with the focus on the industrial estate areas to cater to the diverse application needs of corporate clients.

\*Other operators are DTAC and True Move\*

## Growing in the fixed broadband market



\*The other fixed broadband operators are TRUE, TOT and 3BB\*

AIS started its fixed broadband business under the brand "AIS Fibre" in 2015 with the intent to increase a new revenue source, building on the existing fiber network for its mobile business and the mobile customer base. Currently, AIS Fibre is available in 77 cities, covering 8 million households. AIS Fibre has penetrated the market using its strength in providing FTTH technology to connect households to the internet and is ready to support existing ADSL users wishing to upgrade to higher quality technology and the superior speed of up to 1 Gbps. Fixed broadband revenue in 2021 accounted for 6% of total service revenue. At present, the total number of subscribers is 1,772,000 accounting for more than 14% of the fixed broadband subscriber market share.

## Enhancing potential in the corporate client business

Building on the enterprise data service, offering mobile phone service and internet links to corporate clients, AIS has expanded the service to small-, medium-, and large-sized businesses. Its end-to-end service encompasses cloud service, data center, cyber security, Internet of Things (IoT), and ICT solutions. In 2018, AIS acquired CS Lox Info Public Company Limited to strengthen its capabilities to provide integrated service to enterprise clients. For 2021, revenue from the Corporate Client Business (excluding mobile phone revenue) accounted for 3% of total service revenue. The distinctive features of the 5G technology has enabled AIS to use this advanced technology to support the services for the industrial sector efficiently through collaboration with partners in various industries. Currently, AIS offers a variety of 5G-enabled services such as 5G Fixed Wireless Access, 5G network slicing, 5G private network, and smart factory development among others.

## Building on core businesses with digital services

The digital service business involves the development of a diverse range of services incorporating digital technology encompassing networks, platforms, and digital solutions to deliver digital services to customers and corporate clients through the collaboration and development of a connected business environment with partners to

grow together. AIS' digital service focuses on three areas, namely, video platform, mobile money, and other platforms such as digital marketing, insurance, digital loans, and the like. The digital service business is expected to play a key role in creating a new revenue source for AIS in the future apart from revenue from data connection and mobile internet fees. This will enable AIS to become an integrated service provider by converging products and services from its four core businesses.

## Operating under licenses regulated by the NBTC

The majority of AIS' businesses, particularly the mobile phone and fixed broadband businesses, operate under the regulation of the National Broadcast and Telecom Commission (NBTC), which is the regulatory authority formed in accordance with the Frequency Allocation Act 2010. AIS, through a subsidiary, was granted a telecommunications business license, including 26 GHz, 2600, 2100, 1800, 900 and 700 MHz spectrum licenses with an average license life of 15 years. At the end of the spectrum license, NBTC will redistribute a spectrum license through auction.

AIS is mandated to pay the license fee, Universal Service Obligation (USO) fees, and numbering fees to the NBTC amounting to around 4% of service revenue per year.

# Nature of Business

## Revenue structure by service type



	2019		2020		2021	
	Million Bt	Percent	Million Bt	Percent	Million Bt	Percent
<b>1. Service Revenue</b>	<b>150,129</b>	<b>83.0</b>	<b>143,316</b>	<b>82.9</b>	<b>144,791</b>	<b>79.8</b>
1.1 Mobile phone business revenue	126,341	69.8	118,082	68.3	117,244	64.7
1.2 Fixed broadband business revenue	5,722	3.2	6,959	4.0	8,436	4.7
1.3 Other services revenue	4,509	2.5	4,552	2.6	5,291	2.9
1.4 Interconnection (IC) and equipment rental revenue	13,557	7.5	13,722	7.9	13,820	7.6
<b>2. SIM and device sales revenue</b>	<b>30,765</b>	<b>17.0</b>	<b>29,574</b>	<b>17.1</b>	<b>36,542</b>	<b>20.2</b>
<b>Total Revenue</b>	<b>180,894</b>	<b>100.0</b>	<b>172,890</b>	<b>100.0</b>	<b>181,333</b>	<b>100.0</b>

## Types of products and services

AIS's core business can be divided into four areas as follows.

### Mobile Telecommunication Service



- Prepaid and postpaid mobile phone services on 5G, 4G, 3G, and 2G networks
- Mobile phone and accessory sales
- International roaming and international calls

### Home Broadband Internet Service



- Home broadband internet through fiber optic technology for household and SME customers

### Enterprise Business



- Data network services for corporate customers
- Cloud computing and data centers for corporate customers
- Cybersecurity services
- Internet of Things or IoT
- ICT solutions
- AIS 5G for businesses
- Services for SMEs

### Digital Service Business



- VDO platforms
- Mobile financial services
- Other platforms

## Mobile telecommunication service

AIS provides mobile telecommunication services on 5G, 4G, 3G, and 2G networks under the telecommunications spectrum licenses granted by the NBTC. AIS currently holds a total of 1450 MHz spectrum bandwidth, comprising 26 GHz and 2600, 2100, 1800, 900, and 700 MHz.

At present, AIS's networks reach over 98% of the Thai population. In 2021, AIS continually extended its 5G network of more than 18,700 base stations covering over 76% of the population and more than 99% of those in Bangkok. AIS also launched its 5G service in key areas across the 77 provinces of Thailand, including over 90% of the Eastern Economic Corridor (EEC), in accordance with the 2600 MHz license conditions stipulated by the NBTC.

AIS offers both mobile voice and data services under prepaid and postpaid plans. At present, AIS has a total customer base of more than 44 million subscribers, divided into 11 million postpaid subscribers and 33 prepaid subscribers. In addition, AIS has launched a comprehensive online postpaid service under the 'GOMO' brand to penetrate the younger generation segment looking for services provided through online channels. More information on GOMO is available at <https://gomo.th/>



## Home broadband internet business

AIS has been providing its home broadband internet services through fiber optic technology under the 'AIS Fibre' brand since 2015. Leveraging upon the core fibre optic infrastructure of the mobile network AIS Fibre rapidly grows its network coverage reaching over eight million households across all 77 provinces nationwide with over 1.77 million subscribers in 2021. AIS Fibre strives to lead in service quality focusing on setting a new 'timely service within 24 hours' standard that seeks to satisfy fixed broadband customers by 1) identifying a solution within 24 hours, 2) installing devices within 24 hours, and 3) ensuring service punctuality and delivering the best possible service. AIS also offers the 'Speed Toggle' service, a feature allowing users to alter their download and upload speeds online, and a MESH wi-fi service permitting the connection of up to eight devices with better coverage in a large home. Apart from fiber-optic internet services, AIS Fibre also provides its customers with variety of global contents from movies, sports, and entertainment content through its AIS Playbox as well as all-in-one service covering fixed broadband internet, mobile data, world-class content, and unlimited super wi-fi.

More information is available at <https://www.ais.th/fibre/en/>



## Enterprise business

### • Data network services for corporate customers

AIS provides a comprehensive data network service to corporate customers, including the AIS Fibre broadband connection, suitable for general use by SMEs, and corporate internet for enterprises requiring high internet quality with guaranteed performance, as well as private network service based on multiprotocol label switching (MPLS), an international private leased circuit (IPLC) service and a wireless connection service through wi-fi and 4G technologies.

Beyond the fundamental data network services, AIS also offers enhanced solutions with advanced technologies, such as SD-WAN, which optimizes the use of applications, the managed network service, which involves AIS experts in network management, and the utilization of 5G in the business sector through the 5G FWA service, which improves network stability and quality to be on par with those achieved by a wired connection but allows for more convenient and faster installation.

More information is available at <https://business.ais.co.th/solution/en/network.html> and <https://business.ais.co.th/5g/en/fwa.html>



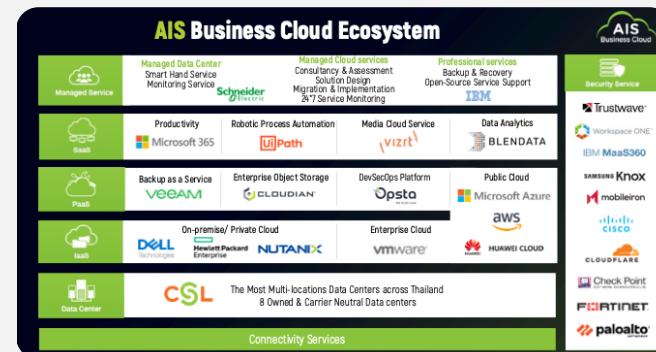
## • Cloud computing and data centers for corporate customers

Focusing on supporting our corporate customers to improve their IT operations efficiency and continuity amid the COVID-19 pandemic and the digital transformation, AIS provides the comprehensive cloud computing solutions, with broaden partners' collaboration. In the past year, AIS Business Cloud joined with our key partner, VMware, to differentiate service from a cloud infrastructure service toward 'anything as a service' (XaaS) as well as expand and strengthen its cloud ecosystem through three brand-new solutions, namely AIS Big Data as a Service, DevSecOps Platform as a Service, and AIS Media Cloud Services.

AIS also established a strategic partnership with Microsoft (Thailand) Limited as a Microsoft Licensing Solution Provider (LSP), enhancing the capability to fulfill a wider range of enterprise business demands with a comprehensive range of solutions from Microsoft such as Modern workplace, Azure, and solutions for IT Infrastructure, as well as supporting innovation around 5G and digital skill development for enterprise.

In data center business, AIS provides multi-location data centers across Thailand in total of 11 data centers, positioning as carrier neutral to best serve our customers, with certified international standard on cyber security, operation and environment.

More information is available at <https://business.ais.co.th/cloud/en/index.html>



## • Internet of Things (IoT)

AIS provides a suite of IoT services that encompasses various elements in the IoT ecosystem ranging from R&D to ready-made business solutions. AIS emphasizes on building the network foundation for all IoT solutions, such as the 3G and 4G networks for highly efficient broadband devices, the NB-IoT network for devices needing less power consumption, and the 5G network for solutions requiring high reliability and low latency. AIS also offers IoT device management platform as well as IoT network for high security solutions such as for finance and banking, distribution and logistics, and the manufacturing industry.

In addition, AIS provides a wide type of devices and development tools, ranging from the DEVIO Series, which supports connection

through an NB-IoT network, to the AIS 4G Board, which supports the 4G connection widespread in Thailand. The devices and tools offered are compatible with the Microsoft Azure IoT Suite that help accelerate and safeguard application development and improve the ability to manage data on the Microsoft Cloud platform.

Additional is available at <https://business.ais.co.th/iot/en/>

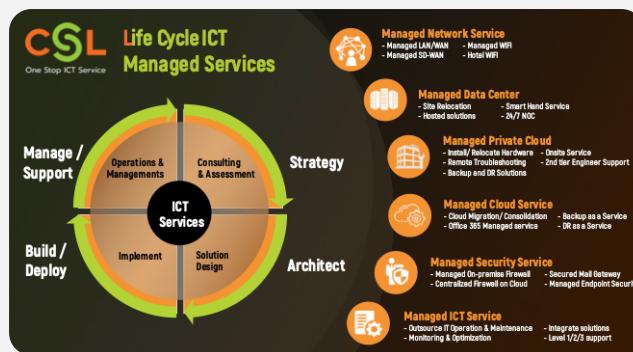


## • ICT solutions

AIS provides ICT solutions through CSL, a subsidiary who has long-standing experience in serving various enterprises in public, private, industrial, commercial, or educational sector. CSL offers services on the digital workplace, network infrastructure, wi-fi, hybrid office security, as well as managed service that covers consultation, maintenance, problem-solving, device replacement, and planning.

Through its collaboration with leading business partners and technology providers, such as CISCO, Dell, Fortinet, and HPE, CSL is able to deliver end-to-end solutions to corporate customers, including after-sales services provided by certified engineers.

More information is available at <https://csl.co.th/Web/index.aspx>



#### • AIS 5G for businesses

AIS 5G serves as a digital infrastructure for businesses with new capabilities that can address the unique requirements of different industries and for the purpose of digital transformation. AIS offers various 5G services including 5G mobile broadband, 5G infrastructures and platforms, such as the 5G FWA wireless broadband, network slicing, MEC, and private networks for the development of applications for businesses. Other services

include 5G Horizontal Solutions, such as AR/VR, robotics, and video analytics, and 5G Vertical Solutions, which can be customized for specific industry such as manufacturing industry, distribution and logistics, property development, healthcare services, and



AIS focuses on establishing collaboration with partners to create an ecosystem for the development of 5G solutions that meet various needs of the business sector and offer practical application. AIS has formed partnerships with technology experts at both national and international levels for joint development on the 5G platform and with industry experts to gain a deeper understanding of the business needs and to trial, assess, and modify a technology or solution in order to build a business model that supports feasible application over the long run.



More information is available at <https://business.ais.co.th/5g/en/>

#### • Services for SMEs

AIS promotes and supports small and medium enterprises, or SMEs. Under its 'AIS SME 7S' or 'Trusted Companion for All SMEs' concept, AIS 'facilitates' business expansion with various offerings responsive to all types of SMEs, build 'confidence' with solutions delivered through first-rate networks, and provides' comprehensive' services managed by experts in tandem with special privileges to enable continuous growth.

AIS SME 7S comprises seven strands. **1) SME Mobile Service** enables smooth, uninterrupted communication with complete coverage of all 5G and 4G frequencies across all areas and caters to the needs of different businesses with various packages. **2) SME Internet Service** reaches all areas and is available in great variety of options to support business operations, including broadband fiber-optic internet equipped with a MESH wi-fi service to optimize signals and a wi-fi log to store user data in accordance with the law and for the purpose of future data analytics. **3) SME Digital Marketing Service** provides comprehensive digital assistance across all marketing communication media, such as outsourced contact centers and professional online ads. **4) SME IT & Digital Solutions** offers overarching, reliable IT services and special solutions, such as SME Smart MPBX, SME Cloud PBX, and ICT Solutions. **5) SME Digital e-Service** serves businesses in the digital era through such offerings as AIS e-Biz shops, e-Bill, e-Withholding Tax, and e-Payment, among others. **6) SME Special Privileges** includes AIS Biz Up for SME businesses, AIS Points for all AIS customers, and

AIS Serenade for loyal AIS customers. **7] SME Strategic Partnership** promotes and coordinates the establishment of partnership with AIS to boost business potential, sales volumes, and organizational growth.

Additional information on services for SMEs is available at <https://business.ais.co.th/sme/en/index.html>



## Digital service business

AIS is committed to developing its digital services to respond to fast changing consumer demand, especially in the new normal era stemming from the COVID-19 pandemic. Through collaboration with partners specializing in different types of digital services, AIS's digital service business focuses on the following five areas.

### • VDO platforms

AIS' VDO platform offers various services covering free TV and on-demand streaming services with variety of entertainment content, such as movies, series, music, karaoke, games, and e-sports. The platform is broadcasted via the AIS Play application, available on mobile and tablet devices, and the AIS Playbox, available to AIS Fibre home internet subscribers.

Through our collaboration with various partners, AIS provides an over-the-top (OTT) service renowned for its rich content variety. AIS is the sole authorized Disney+ Hotstar partner in Thailand, streaming Hollywood movies and series on a monthly or discounted yearly package basis. Also, AIS delivers both live and on video-on-demand (VOD) platform content from Netflix, CNN, BBC World News, BBC Lifestyle, VIU, BeIN Sports, and free digital and satellite TV channels.

In the past year, AIS further enhanced customer experience with integrated 5G technology through its AIS 5G AR/VR application, which utilizes the high-speed and low-latency property of 5G to enhance viewers' virtual reality (VR) experience. The application offers six types of content: 1) music, auditory experience with VR 180/360-degree, 2) star dating, allowing customers to be up close and personal with the celebrity through VR, 3) travel, for trips locally and abroad, 4) wellness, bringing virtual workout classes to home, 5) education, widening knowledge on the history and background of important landmarks in Thailand, and 6) Play News, featuring the 'Reporters on the Ground' special scoops reported through VR technology.

More information is available at <http://www.ais.co.th/aisplay> and <https://www.ais.co.th/5G>.



## • Mobile Financial Services

In support of the public policy on the development of national e-payment infrastructure to promote and build towards a cashless society, AIS has allied with both domestic and international partners to diversify into cross-border mobile payment services. Such services allow customers traveling to Asian destinations to settle bills in their own currency through e-wallets, addressing the concerns over exchange rates or cash carry.

In addition, AIS offers mobile money platform services to both corporate customers through its Advanced mPAY Company Limited (B2B) and general consumers through investment in its joint venture, Rabbit-LINE Pay Company Limited (B2C). For corporate customers, mPAY offers a comprehensive mobile payment platform that enables corporate to have an e-wallet for customer payment, without owned investment in the system or the need to process an operating license approval.

For more information, log on <https://www.ais.co.th/mpay/en/>



## • Other Platforms

### o Digital lending

AIS entered into an agreement with Siam Commercial Bank Public Company Limited or SCB, a leading listed company in the finance and banking industry, to establish a joint venture with a registered capital of THB300 million under the name 'AISCB' to offer digital financial services, initially in digital lending prior to expanding into other financial services. The joint venture combines AIS's strength in terms of digital technology, extensive network coverage, and service excellence with SCB's long-standing experience and expertise in the finance and banking industry to introduce innovative solution for digital financial services that will enhance customers' access to financial services amid the changing dynamic of the society. AISCB expects to launch its digital financial services within 2022, initially penetrating AIS's customer base, comprising 44 million subscribers, with the focus on those who has fair level of affordability but may encounter difficulties in accessing financial services.

### o Digital Marketing

Leveraging its collaboration with AD Venture Public Company Limited and Teleinfo Media Public Company Limited (CS Loxinfo's subsidiary) and its large customer base of 44 million subscribers, AIS provides digital marketing solutions to corporate customers to enhance their access to consumers in the digital age, including the location-based SMS platform, which permits directing ads at customers in target areas, the Thailand Ads Network (THAN), which assembles a collection

of ad spaces from Thailand's 100 most popular websites. AIS's digital marketing solutions comprise a wide array of services, ranging from digital content creation, website and mobile application development, social media management, and digital advertising media management, to turnkey marketing campaign solutions.

### o Insurance

With the trend of consumer moving toward online purchase of products and services through social networks on mobile devices, AIS sees the opportunity to facilitate its customers in acquiring insurance products by diversifying into an insurance broker business under the name 'AIS Insurance Service', operated by Advanced Digital Distribution Company Limited. AIS Insurance Service guarantee greater convenience, safety, and simplicity throughout the purchase process, and also provides a wide variety of offerings, including domestic and international travel insurance, accident insurance, health insurance, car insurance, and life and health insurance. To bring further convenience, AIS Insurance Service offers the option of mobile insurance purchase and accepts premium payment through top-ups, monthly installments, credit/debit cards, and e-wallets. Also, insurance plan pricing is designed to suit the purchasing power of different consumer groups to ensure their access to insurance products.

## Distribution and sales channels

AIS distribution channels are divided into 5 main categories as follows:



**AIS Shop**



**Distributors**



**Wholesaler**



**Direct Sales and Telesales**



**Online Channel**

- AIS Shop** – The service centers are operated by AIS and selected high potential distributors in a total of 206 locations. AIS Shop offers the most comprehensive range of products, services, and after sales services of all the distribution channels. It is strategically located in densely populated urban areas and focuses on maintaining the superior brand image of AIS products and services.
- Distributors** – AIS cooperates with a variety of distributors to meet the needs of a wide range of customers throughout the country. **"AIS Telewiz"** is a high competency distributor with over 419 locations in city areas and serves under the AIS brand. **"AIS Buddy"** accesses district and sub-district areas through more than 1,141 branches. AIS also distributes our products and services through other retail outlets and modern trade retailers

such as JAYMART Group, TG Fone Group, and Central Retail. Over the past year, AIS opened temporary shops outside shopping malls to provide more convenient access for customers in the wake of the COVID-19 outbreak.

- Wholesaler** – AIS appointed Advance Distribution Partnership (ADP) wholesalers by area nationwide. The ADPs facilitate the efficient distribution of products such as SIM cards and mobile phones to more than 16,000 retailers across the country.
- Direct Sales and Telesales** – Focusing on postpaid customers acquisition, this channel makes product offering faster and more efficient while providing a direct approach to target groups. Examples of direct sales include sales booths or activities in the targeted areas. On top of this is the **"AIS Easy App"**, which is designed to support sales, allowing sales teams to promptly sell products and services and complete customer registration with

better efficiency. In 2021, telesales was introduced to provide a direct sales channel via the Call Center, a particularly convenient channel for customers during the COVID-19 pandemic.

- Online Channel** – The channel is dedicated to promoting customers self-service via the AIS website, AIS Online Store, myAIS application, Kiosks, Chat and Shop, Social Commerce and E-Marketplace. MyAIS has been upgraded to provide greater convenience as a one-stop application, its Express Service function provides the same range of services as an AIS Shop while the AI assistant Aunjai feature provides personalized End-to-End support 24 hours a day. The myAIS application also retails SIM cards and facilitates applications for AIS Fibre home internet, providing a convenient channel for existing customers to take on further AIS services.

## Customer relations management

Committed to being a leading digital service provider, AIS manages the customer service with the concept “Number 1 service from our hearts for digitizing your life”, combining an understanding and care for customers integrating the use of both technologies and human touch. Our customer service places focus on speed, convenience, personal data privacy, self-service and personalization to differentiate our customer experience. AIS’ customer relations management combines the following tools and programs:

**1. Enhanced customer service, using digital technology** via myAIS application, combining the services provided at physical AIS Shop and AIS Call Center to online platform. As at year end 2021, there were over 26 million downloads from AIS customers with more than 33 million transactions per month, up 35% from the previous year. myAIS was further developed toward being an everyday lifestyle application that offers comprehensive services with convenience, and privileges as follow.

- Express Service – All-in-one service platform empowered by AI personal assistant providing 24-hour end-to-end service with a query accuracy rate of 84.5%
- Extra Personalization – Targeting individual needs using machine learning technology to customize product offering
- Exclusive Privileges – Enhanced simple access to privileges via myAIS application including privileges information, AIS Points accumulation, and award redemption. The application is designed to fosters digital engagement with users through coupons and games to increase the frequency of visits which allows for improved ongoing engagement.



**2. “AIS Privileges”** is customer engagement tool incorporating benefits provided by both AIS and its partners, addressing customer lifestyles across seven segments e.g. dining, coffee, entertainment, shopping, travelling, etc.: At present, AIS has over 30,000 partners across Thailand, enabling wide range of point redemption. AIS also offers the “Well-being” privilege in response to consumer trends shifting toward healthier lifestyles by upcooperating with the Ministry of Public Health, leading hospitals, insurance companies, Telemedicine application to provide easier access to medical services to AIS customers. Currently, users of 19 million AIS numbers have registered for AIS Points with 50 million redemptions per year, an increase of 4% from the previous year.

**3. AIS Serenade membership** is an exclusive privilege for AIS customers who have high spending or long service period as prescribed. The program is designed to deliver a service under the concept “Always Exclusive, Always on Top” and has continued for 17 years.

AIS categorize privileges based on customer lifestyle; 1. Special Experience (Serenade Club, personal assistance, parking, airport privileges); 2. Digital Life (discounts for smart phones and gadgets); 3. Inspirational Activities (entertainment such as concerts, stage plays, and inspirational activities to build on business); and 4. New Experience (traveling and dining places). This enables us to better serve the various lifestyle of our 5.9 million Serenade members. In the wake of the COVID-19 pandemic, AIS has expanded its privileges for Serenade members to better serve changing lifestyle such as food delivery, health & wellness e.g. telemedicine service, discounts at drug stores, and free COVID-19 vaccination insurance, and special price for mobile phones, tablets, or gadgets at AIS online channels.



**4. Customer analytics** We conduct analysis and insights of consumer behaviors using customer value management (CVM) tool which allows us to customize product and service offering, better retain high value customers, as well as upsell and cross-sell relevant products and services services.

**5. Customer satisfaction measurement** AIS observes customer satisfaction across numerous platforms, including rating via telephone call, surveys in our service shops, questionnaires arranged by a contracted external agency. These ratings assess the quality of services at our shops, dealers, and automated service machines, measures the likelihood of our customers suggesting AIS and our services to others, and are used to continuously improve our services.



## Procurement of products and services



### Spectrum

Currently, AIS operates its mobile business with a total spectrum of 1450 MHz (2x75 MHz on FDD technology and 1300 MHz on TDD technology). 1420 MHz of spectrum licenses are granted by the NBTC to Advanced Wireless Network Co.Ltd. (AWN), a subsidiary, while another 2x15 MHz comes under the partnership agreement between the TOT and AWN.

Details for the spectrum licenses are provided under the topic "Assets used in operations", Page 41.

### Network Equipment Procurement

AIS adheres to a "multi-vendor policy" to avoid dependency on any single supplier. Equipment vendors and AIS work together to align plans for equipment and service development for the optimum solutions and mitigate procurement risk and ensure the on-time delivery of equipment.

To select suppliers, AIS appoints committees to evaluate and assess the most suitable options. Many factors are taken into account such as investment and operating costs, technical assessment and vendors' technological development plan to make sure that AIS will be able to operate sustainably through evolving technology in the future. AIS selected key network equipment from the leading international vendors including Huawei, Nokia, and ZTE. Other parts in the network are supplied by CISCO, Juniper among many others.

### Procurement of Mobile Phones, Equipment and Digital Services

AIS markets mobile phones spanning a range of qualities and price points to satisfy the varied needs of its customers. Most brands purveyed by AIS are well-known in the market and include iPhone, Vivo, Oppo, Samsung, Realme, Huawei and Xiaomi. AIS also markets other IT products, including tablets and accessories in support of digital communication and the varying lifestyles of its customers

as well as to serve the needs for communication devices to support work-from-home and learn-from-home during the COVID-19 situation. Procurement of mobile phones and IT products is done through collaboration with leading manufacturers so as to secure a variety of products. In the last year, AIS has begun sourcing and offering 5G devices at more affordable price levels for customers such as the RUIO brand, as well as providing special equipment such as AIS VR4K supported for the usage of AIS 5G Play VR, in order to reach the target customer of 4K content enthusiasts. This was aligned with our 5G services, enabling consumers to access the latest technology and to effectively utilize the AIS network.

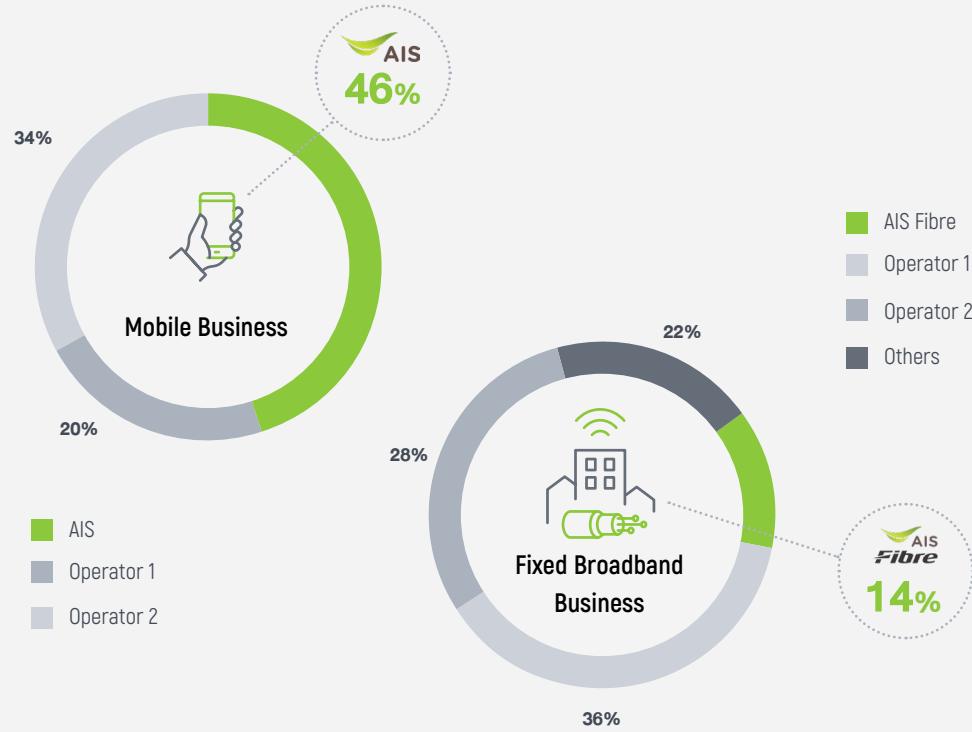
### Work under progress



-None-

## Industry competition in 2021 and outlook for 2022

### Industry Competition in 2021



Subscriber market share in mobile and fixed broadband businesses

#### Mobile Business Recovered Amid Intense Price Competition

Despite the COVID-19 impact to various industries stemming from a decline in economic activity and weaker purchasing power, the mobile telecommunication industry tended to be less affected than many other industries as it is considered a basic need for consumers. In 2021, the mobile telecommunication industry encountered multiple challenges since the beginning of the year through to the third quarter, and yet it managed to record a total revenue of Bt 320,000 million, up 2% from the previous year, thanks to the government's economic stimulus to promote consumer spending. This coupled with the easing of COVID-19 restrictions resulted in an increase in the number of mobile subscribers to 96 million, a growth of 6% year-on-year. Nevertheless, the damped purchasing power prompted operators to focus on price competition to maintain their customer bases and expand market shares, offering unlimited data plans at lower prices for prepaid

and postpaid customers, resulting in a lower average revenue per user (ARPU) for the industry.

#### Providing 5G Service and Expanding 5G Network to Support Economic Growth

In 2021, mobile operators were competing to build awareness around 5G technology and expanding network in key areas with a high density of demand including the major cities in 77 provinces and the Eastern Economic Corridor (EEC). This year saw 5G adoption reaching 4 million subscribers, propelled by the growing demand for advanced and high-speed technology and the rollout of new 5G handset models at more affordable prices as well as the AR (augmented reality) and VR (virtual reality) services that deliver the superior 5G experience to customers. In the meantime, B2B clients were also keen to embrace 5G technology in different applications including smart manufacturing & smart factory, smart property, and smart transportation & logistics among others.

## Home Broadband Business Witnessed Solid Growth Following Demand for Work and Learn Online From Home

The home broadband market grew 13% over the past year with the penetration rate reaching 57% of the total population in Thailand following demand for work and learn online from home in response to the changing consumers' behaviors and lifestyles. Nevertheless, the subdued economy during the COVID-19 outbreak pressured service providers to continue offering low price packages, starting at B400/month. Discounts were also offered to new customers or those switching service provider, resulting in a decrease of the industry's ARPU from the previous year. Their strategy to maintain customer bases also extended to providing a variety of contents, value-added services, and a long-term 24-month service contract. Emphasis was also placed on enhancing service quality to ensure customers' maximum satisfaction through multiple services such as 24-hour customer care and fast installation service within 24 hours.

## Expanding to Other Digital Businesses for Customers and Enterprise Clients

The enterprise market has demonstrated a high potential of growth as businesses from small to large-sized enterprises are rushing to undergo digital transformation, opening up growing opportunities to generate more revenue from cloud services, cyber security solutions, and Internet of Things-(IoT). As a score of international players are eyeing entry into Thailand's cloud market, they are likely seeking to form a strategic partnership with a local telecom service provider already with a large customer base to push new

technologies to the enterprise client market more quickly. Moreover, opportunities abound for driving new product offerings to accommodate customers' adapting to a new normal life that incorporates digital technology into their day-to-day activities such as digital financial services and online medical and healthcare services.

## Outlook for 2022

### The Mobile Business Expected to Recover Following Relaxation of Restrictions and Reopening to Foreign Tourists

Thailand's economic outlook for 2022 shows signs of steady recovery following the relaxation of lockdown restrictions. In December 2021, the Bank of Thailand announced a GDP growth forecast of 3.4% for 2022 due to the easing of restrictions and reopening to foreign tourists without requiring quarantine, starting on November 1, 2021. The moves are expected to help reboot the tourism sector, a key driver of the country's economy. This coupled with consumers' feeling less concerned about the spread of COVID-19 because of the lower rate of coronavirus infections and deaths toward the end of 2021 and the rising rate of COVID-19 vaccinations has culminated in a pickup in consumer confidence. Such favorable factors could help drive the overall revenue of the mobile industry.

As the COVID-19 uncertainties with any new coronavirus variant have a downward pressure on the country's economy and purchasing power, price competition could be strongly influenced by the mobile phone spending of consumers since they will look for the best value-for-money packages.

## 5G Technology Growing Continuously in Terms of Network Expansion and 5G Packages

In 2022, 5G adoption is expected to expand more toward mid-tier customers as 5G-enabled smartphone models with more affordable prices are entering the market in numbers, fueling the growth of the 5G market. In response, service providers are likely to roll out more 5G packages that suit the needs of mid-tier customers, leading to an increase in the industry's ARPU among 5G subscribers.

Aside from individual customers, 5G technology has played a key role in facilitating the business operations of enterprise clients in various industries such as health care, agriculture, transportation and logistics, and production, thereby maximizing their operational efficiency and productivity. This provides lucrative business opportunities for 5G services in the corporate client market. For their part, 5G operators are anticipating introducing a diverse range of 5G-related services and solutions to better address the needs of enterprise clients such as 5G private network, 5G MEC, 5G network slicing among many others.

## Home Broadband Anticipating Sustained Growth

The home broadband market in Thailand is expected to sustain its growth amid the spread of COVID-19. Currently, households with fixed broadband connectivity in Thailand is at 57%, demonstrating high growth potential especially in suburban areas. Multiple favorable contributing factors include the more affordable starting price of the home internet package and the offering of a variety of value-added packages. Central to this are home internet packages

bundled with IoT devices and home solution packages that control the security of the home or control and monitor electrical appliances, all to accommodate a new normal lifestyle. The operators also attach significance to building an image of offering excellent service quality to attract and boost customer confidence. Given these positive factors, the home broadband business is expected to sustain robust growth in 2022.

Price competition in 2022 is expected to remain unchanged from the previous year. The package price still starts at Bt 399/Month, triggered by the subdued economic situation and dampened purchasing power. The market will also see service providers compete on delivering services with unique and valuable characteristics. Examples include offering a 24-month service contract at an affordable price as well as a diverse range of products, and a higher discount rate to attract new customers while protecting the customer bases as a means to maintain market share.

### **Expansion of Cloud and ICT Businesses**

There is a growing trend of numerous industries incorporating digital technology into their businesses to enhance competitiveness and corporate management efficiency. In addition, the work from home trend that necessitates the need for employees to connect online to the organization's systems has propelled the growth of cloud business, cyber security service, Internet of Things (IoT), and IT solution service over the year. Other contributing factors include the enactment of Thailand's Personal Data Protection Act and Cyber Security Act that has raised awareness about the importance of technological data among organizations, fueling more investment in cyber security systems. At the same time, the relaxation of lockdown restrictions and reopening to international tourists have enabled businesses to regain momentum and resume their business operations which had stalled amid the pandemic. It is anticipated that in 2022, the strategy employed by service providers to consolidate their cloud and ICT business is to form a strategic partnership with other companies, both domestic and foreign, to deliver services that better answer the needs of clients, driving the cloud and ICT businesses to accomplish sustainable growth.

## 3-Year business direction

The advancement of digital technology has fuelled a rapid change in consumer behaviors and needs. At the same time, the pace of change has been accelerated by the prolonged COVID-19 situation having continued for two years, prompting consumers to adopt technology to support their work, study, and daily activities. Likewise, the business and industrial sectors have come to realize the importance of digital transformation to enhance efficiency and drive the development of a diverse range of products and services in response to the evolving needs of consumers.

The telecommunications industry provides critical infrastructure for the development of the 5G technology ecosystem which is instrumental to the digital economy, enabling the delivering of innovative products and services that better reach consumers together with connecting people in society and boosting the growth of the business and industrial sectors, empowering them to compete in the international arena. The swift transformation in the digital era has propelled AIS to drive the Company toward becoming a Cognitive Telco with a three-pronged goal as follows:

### 1) Enhancing the Strength of Business with 5G Technology

AIS strives to strengthen its core mobile business by leading the market into 5G. We aim to create a new variety of 5G-enabled services through an investment in the network infrastructure

that accelerates network intelligence and IT automation enabling autonomous monitoring, maintenance, predictive data analytic & artificial intelligence capabilities. These efforts allow AIS to deliver distinctive customer experience and drive the development of excellent quality 5G-enabled services to boost revenue growth.

### 2) Driving Growth in Home Broadband and Enterprise Businesses

AIS intends to expand its home broadband network with fiber technology to the increasingly urbanized areas, leveraging on the mobile network infrastructure. The broadband service will also be enhanced by 5G technology to enable fixed wireless access (FWA) connection, expanding the coverage of AIS' home internet service to broader areas. This nurtures new opportunities for AIS to offer a magnitude of new services that address the family lifestyles such as home entertainment as well as home security and automation systems.

For the enterprise business, AIS aim to be an enabler and accelerator to push digital transformation and increase the competitiveness of the business and industrial sectors with the focus on the development of cloud service, cyber security, and 5G technology. This will be accomplished through partnership

with world-class technology service providers and maximizing AIS capabilities in providing digital technology to enterprise clients backed by AIS' powerful, resilient, and highly secure digital infrastructure and expertise.

### 3) Investing in Digital Business to be a New Long-Term Revenue Stream

In the long term, AIS set its sights on delivering new digital services that correspond to consumers' lifestyles in the digital era through investment and collaboration with business partners to create a new source of revenue in the long term. Leveraging upon AIS existing large customer base, we intend to provide a wide variety of digital lifestyle services such as financial and lifestyle services among many others in cooperation with business partners to offer a broad spectrum of easy-to-use services or platforms that satisfy the needs and provide convenience for customers. This will enable AIS to generate revenue from services in the forms of subscriptions, fees as well as future revenue from advertising in the future.

## Assets used in operations

The total assets used in operation of AIS business can be divided into three main groups:

- 1) Fixed assets such as network equipment, service shops, office building, and land.
- 2) License to operate telecommunication service such as spectrum license and other licenses to operate telecommunication business.
- 3) Commercial Agreement such as agreement with TOT and agreement with CAT.

The details of significant assets are as at 31 December 2021 as follows;

### 1) Fixed Assets of AIS and subsidiaries

Type of Assets	Type of Ownership	Estimated Useful Life (years)	Unit: Million Baht
Tools and equipment for providing telecommunication network and fixed broadband services	Ownership	3-20	264,707
Right-of-use assets	right-of-use	1-15	72,576
IT equipment	Ownership	3-10	12,383
Network under construction and installation for rendering telecommunication and fixed broadband services	Ownership	-	8,164
Other fixed assets	-	-	2,169
<b>Total</b>	-	-	<b>359,999</b>
<u>Less</u> accumulate depreciation/ amortization	-	-	(191,581)
<b>Net Book value</b>	-	-	<b>168,418</b>

Fixed assets of AIS and its subsidiaries had included the financial leases recognized under right-of-use assets. The significant agreements are as follows:

- Lease and related service agreements for office space, cars, computers and base station.
- Service agreement related to the national roaming service.
- Telecommunication equipment rental agreement for providing telecommunication service.
- Telecommunication tower rental agreement.

## 2) License to Operate Telecommunication Service

AIS and its subsidiaries operates 2G, 3G, 4G and 5G network service and other telecommunication services under the spectrum license granted from the NBTC which are Telecommunication business license type 1, Telecommunication business license type 2, Telecommunication business license type 3, Internet Service Provider Type 1, International Internet Gateway and Internet Exchange License Type 2 with its own network.

Moreover, the company including with subsidiaries companies, associated companies and joint venture companies have electronic money business license and electronic payment service license to operate mobile money services, including prepaid card sales on prepaid systems and electronic wallet.

### Summary of Telecommunication Service License granted by NBTC

Spectrum license	License Fee	Grant date	Grant Period	Expiration
The right to use 2100 MHz spectrum <ul style="list-style-type: none"> <li>Bandwidth of 2x15 MHz</li> <li>Provide telecommunication network covering at least 50% of population within 2 years and at least 80% of population within 4 years</li> </ul>	Pay for the license within the time period as specified by the NBTC.	7 Dec 2012	15 years	6 Dec 2027
The right to use 900 MHz spectrum <ul style="list-style-type: none"> <li>Bandwidth of 2x10 MHz</li> <li>Provide telecommunication network covering at least 50% of population within 4 years and at least 80% of population within 8 years</li> </ul>		1 Jul 2016	15 years	30 Jun 2031
The right to use 1800 MHz spectrum <ul style="list-style-type: none"> <li>Bandwidth of 2x15 MHz</li> <li>Provide telecommunication network covering at least 40% of population within 4 years and at least 50% of population within 8 years</li> </ul>		26 Nov 2015	18 years	15 Sep 2033
The right to use 1800 MHz spectrum <ul style="list-style-type: none"> <li>Bandwidth of 2x5 MHz</li> <li>Provide telecommunication network covering at least 40% of population within 4 years and at least 50% of population within 8 years</li> </ul>		24 Sep 2018	15 years	15 Sep 2033

Summary of Telecommunication Service License granted by NBTC (Continued)

Spectrum license	License Fee	Grant date	Grant Period	Expiration
The right to use 2600 MHz spectrum <ul style="list-style-type: none"> <li>Bandwidth of 100 MHz</li> <li>Provide telecommunication network coverage on major economic zone of Thailand as follows; [1] At least 50% geographical coverage of the Eastern Economic Corridor (EEC) area within 1 year, [2] At least 50% population coverage of key cities area including Bangkok Metro area, Chiang Mai, Nakorn Ratchasima, Khonkaen, Songkla and Phuket within 4 years from license granted date.</li> <li>Provide network based on IMT-2020 (5G) technology of at least 50% geographical coverage of the Eastern Economic Corridor area within 1 year to receive special conditions applied for extended payment term in which 2<sup>nd</sup> – 7<sup>th</sup> installment starts in year 5 - year 10.</li> </ul>	Pay for the license within the time period as specified by the NBTC.	21 Feb 2020	15 years	20 Feb 2035
The right to use 700 MHz spectrum		15 Jan 2021	15 years	14 Jan 2036
The right to use 26 GHz spectrum		18 Feb 2021	15 years	17 Feb 2036
The right to use 700 MHz spectrum		1 APR 2021	15 years	31 Mar 2036

### 3) Commercial Agreement

#### Commercial Agreement with TOT

##### 1. Roaming Agreement

Company	Significant terms and condition	Benefit	Agreement Period	Expiration
AWN	TOT provide roaming service on TOT's 2100 MHz spectrum to AWN with terms and conditions as specified in the agreement.	Pay the monthly roaming fee to TOT at the rate per subscriber as specified in the agreement.	7 years 5 months	3 Aug 2025

##### 2. Telecommunication Equipment Rental Agreement

Company	Significant terms and condition	Benefit	Agreement Period	Expiration
SBN	Provide equipment rental to TOT, which allows TOT to provide mobile service on TOT's 2100 MHz spectrum.	Receive rental revenue from TOT which is subjected to the rate and usage as specified in the agreement	7 years 5 months	3 Aug 2025

##### 3. Telecommunication Tower Rental Agreement

Company	Significant terms and condition	Benefit	Agreement Period	Expiration
AWN	AWN rents the telecommunication towers from TOT while TOT agrees to use the space and maintenance services from AWN.	Pay a usage base fee with an estimated total net value for 10-year period of approximately 28 billion Baht.	10 years	31 Dec 2028

#### Commercial Agreement with CAT

##### Telecommunication Tower Rental Agreement

Company	Significant terms and condition	Benefit	Agreement Period	Expiration
AWN	AWN rents the telecommunication equipment tower from CAT while CAT agreed to use the space and maintenance services from AWN.	Pay the monthly fees for tower rental and other related services.	5 years	15 Sep 2025

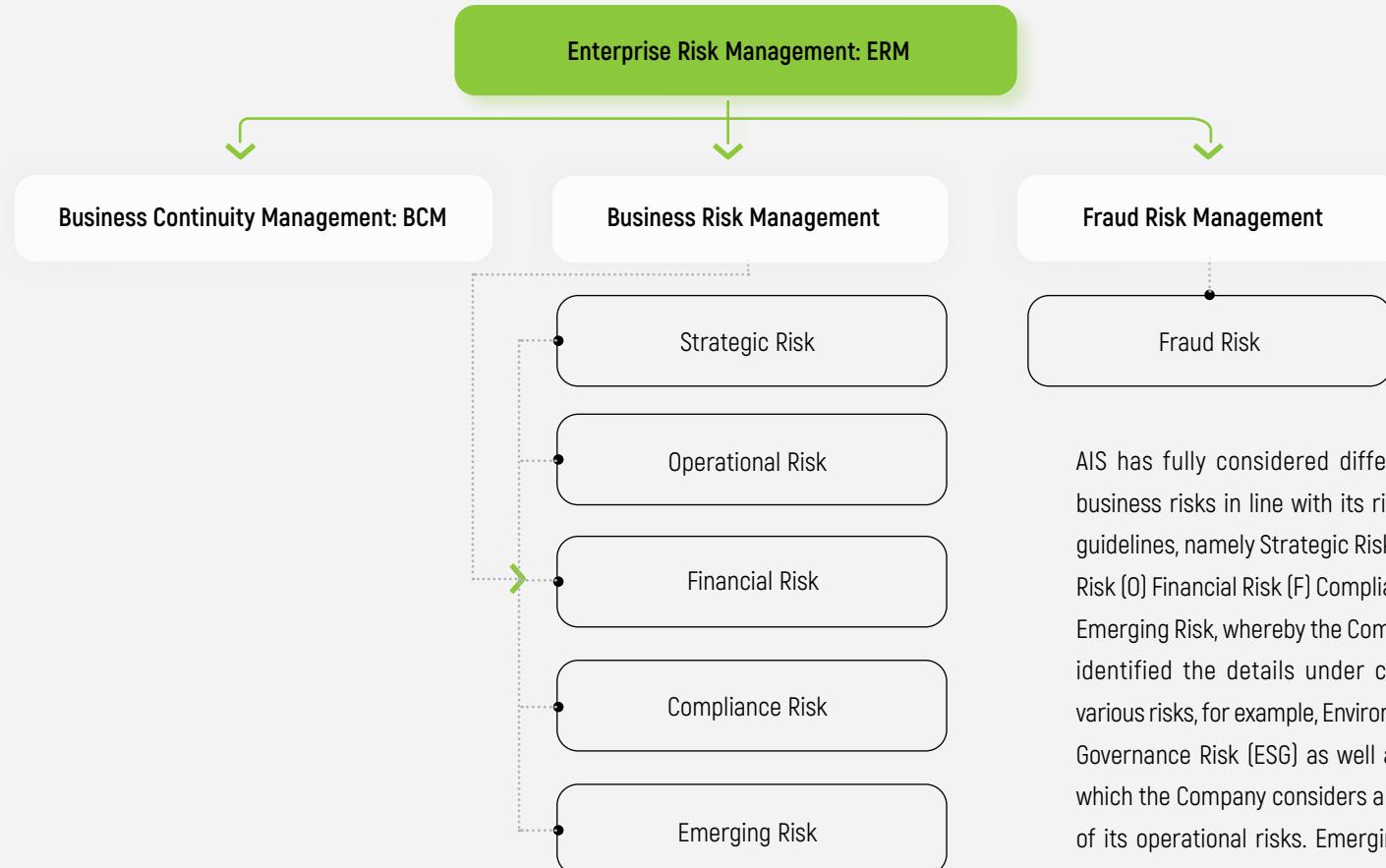
### Policy to invest in subsidiaries and associate companies

AIS currently focuses on telecom service business only. We thereby invest in subsidiaries and other companies for the purpose of supporting our main business or operating other related services which is beneficial to our business. AIS has appointed directors and executives as our representative in those companies for the purpose of shareholder's benefit and value maximization. The meeting of board of directors of those companies is scheduled to convene at least on quarterly basis. The shareholders' meeting is scheduled on annual basis.

# Risk Management

## Enterprise risk management

✓ Risk management is an important process that helps AIS and its group companies (AIS) achieve their objectives and goals as well as appropriately respond to the expectations of various stakeholders. AIS has established an Enterprise Risk Management Policy and Framework applicable to the corporate and operational levels in order to manage and maintain risks at an acceptable level (Risk Appetite). The Enterprise Risk Management framework of AIS consists of the following components:



AIS has fully considered different significant business risks in line with its risk management guidelines, namely Strategic Risk (S), Operational Risk (O) Financial Risk (F) Compliance Risk (C) and Emerging Risk, whereby the Company has clearly identified the details under consideration of various risks, for example, Environment, Social and Governance Risk (ESG) as well as sustainability, which the Company considers an important part of its operational risks. Emerging Risk which is the newly identified risk category, which is expected to have a long-term impact on the company's business.

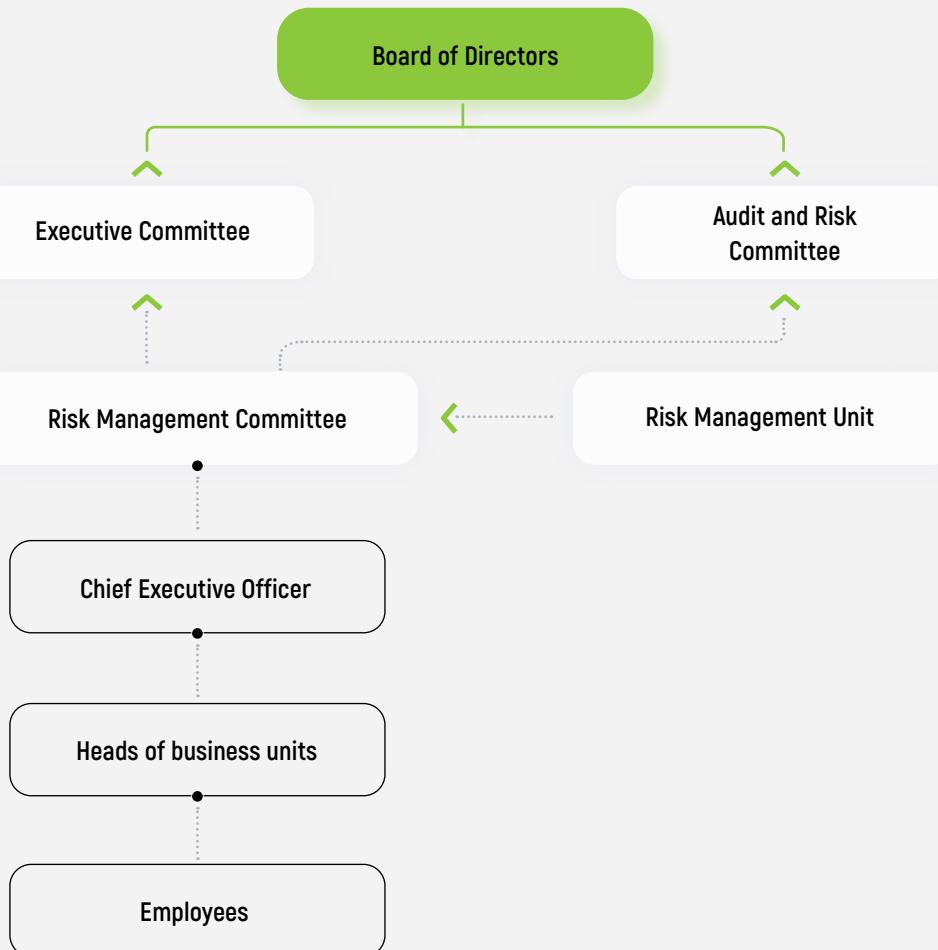
## AIS Enterprise Risk Management Framework & Processes

The AIS Enterprise Risk Management framework and process are aligned with the integrated framework of the COSO ERM 2017: Enterprise Risk Management Integrating with Strategy and Performance and are applied to business risk management and fraud risk management. The 7 steps in the risk management process are:



- 1. Set objectives at both corporate and functional levels**, with alignment to the AIS corporate strategy and are within its risk appetite as approved by the Board of Directors and reviewed annually.
- 2. Identify the events that could have a negative impact (risks)** on AIS's ability to achieve its goals and targets, considering internal factors such as operational processes and human resources, and external factors such as customers, the economy, politics, and regulations.
- 3. Assess the identified risks by considering the likelihood of the risk occurring** and the potential impact if the risk were to occur. Added to this is the correlation between the impact of any risk and how it could affect another risk.
- 4. Prioritize risks** with consideration to the degree of importance of each risk and the potential damage to the Company.
- 5. Plan risk response measures with consideration to the level of risk involved and the corresponding cost and benefit.**
- 6. Establish control activities** to help ensure that the desired risk responses are implemented as intended and are carried out effectively.
- 7. Monitor and report the status of risks and the effectiveness of the risk management process.** Reports are to be forwarded to the Audit and Risk Committee, the Executive Committee, and the Board of Directors regularly.

## Roles and Responsibilities of AIS Risk Management



### Board of Directors

The Board of Directors is responsible for overseeing overall risk management in accordance with business strategies and objectives by establishing the Company's risk management policy, risk appetite, and tolerance, considering key risks and mitigation plans and fostering a risk management culture within the Company.

### Risk Management Committee

The Risk Management Committee is chaired by the Chief Executive Officer and comprises heads of the business units. The Risk Management Committee holds quarterly meetings in order to identify and assess new risks and correlations with other identified risks as well as to review and follow up on the accomplishments of its risk management strategy by comparing action plans against their measured results.

### Audit and Risk Committee

The Audit and Risk Committee, appointed by the Board of Directors, is responsible for performing risk oversight to ensure compliance with the Company's risk management framework and guidelines. The Audit and Risk Committee is also responsible for reviewing the appropriateness and effectiveness of the Company's business processes and risk management process.

The Risk Management Committee reports the risk management results to the Audit and Risk Committee, the Executive Committee, and the Board of Directors on a quarterly basis to ensure that the Company's key risks are closely monitored and managed to an acceptable level and that the Company is able to accomplish its goals and objectives.

### Executive Committee

The Executive Committee is responsible for ensuring that the management manages risks properly at both the corporate level and operational level as well as overseeing and monitoring the status of the Company's key risks.

### Risk Management Unit

The Risk Management Unit is responsible for providing advice to the management and employees on implementing the risk management process in accordance with the established

framework. It is also responsible for integrating the risk management process into the strategic planning process and preparing and presenting a work plan to the Risk Management Committee at least once a year.

#### **Chief Executive Officer**

The Chief Executive Officer is responsible for determining key operational strategies, taking into account the Company's risk appetite. The CEO is the ultimate owner of all risk issues of the Company and is responsible for promoting a risk management culture at all levels of employees.

#### **Heads of business units**

Heads of business units are responsible for complying with the risk management policy and framework as well as communicating them to employees within their line of work to ensure understanding. They are responsible for identifying, assessing, and managing risks associated with their work line in accordance with the Company's established framework and delivering information to the Risk Management Unit as well as implementing internal control systems to manage risk to an acceptable level.

#### **Employees**

Employees are responsible for learning and having awareness of risk management and applying the risk management policy and framework to their daily operations.

#### **Fraud Risk Management**

AIS maintains a Fraud Risk Management policy to prevent, investigate, report, and manage fraudulent matters. The policy has established the following three practical guidelines:

1. **Prevention** – proactively identify, assess, review, and respond to all possible acts of fraud in the organization and communicate such issues to employees at all levels to build awareness and understanding of the importance of fraud, corruption and misconduct reporting.
2. **Detection** – check or investigate any misconduct or fraudulent cases where there is reasonable suspicion.
3. **Response** – perform investigation processes through to punishment.

The Company's objective is that directors, executives and employees are aware of fraud risk and notify the Company of any action possibly leading to fraud immediately while being ready to fully cooperate in any investigation relating thereto. The Company has appointed a Fraud Risk Management Committee (FRMC) to oversee the policy and fraud risk management process as well as support other functions relevant to developing fraud risk management, including self-management and systematic risk control.

#### **Building an Organizational Culture of Enterprise Risk Management**

In addition to the Risk Management framework and roles and responsibilities of all employees, AIS also promotes and cultivates a Risk Management culture to build awareness and understanding of the risks present in working to achieve Company objectives and goals. AIS works to foster an organizational culture of Risk Management by doing the following

- Providing Risk Management policy manuals and procedures and publishing them on the intranet so employees may understand their roles and the risk management framework.
- Developing Risk Management plans at both the corporate and functional levels covering efficient internal control processes and internal auditing.
- Promoting Risk Management Framework at department level via workshop sessions.
- Emphasizing the importance of the integration of risk management processes and strategic planning. When a new strategy is being developed, relevant personnel must analyze related activities against any potential risks that may occur and report results to the Head of their Business Unit, so that responsible persons can develop measures to prevent or reduce risks to an acceptable level and enhance the possibility to achieve goals. The Company plans to integrate risk management into its business plan approval process and performance appraisal.
- Integrating risk management with the company's new product and/or service development process. In the feasibility study process, the project owner shall identify the risk factors such as

financial risk, regulatory and compliance risk along with related mitigation plans to support the consideration of project approval.

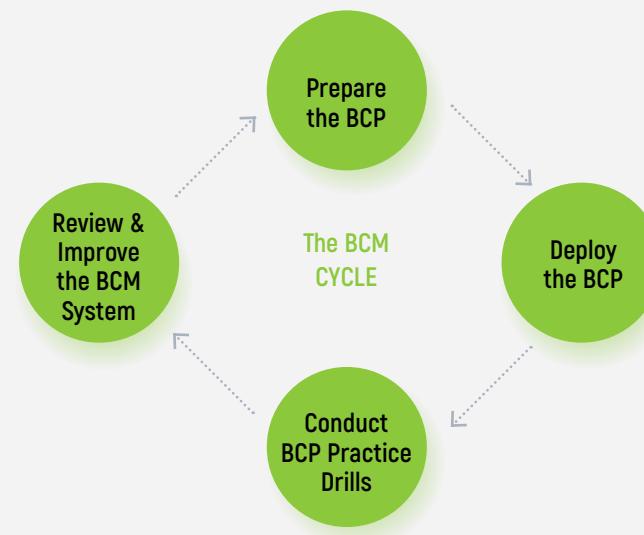
- Communicating through semi-annual performance reviews to ensure employees at all levels have the same understanding and acknowledge the direction and obstacles/challenges of the company's business operations in the short-term and long-term.
- Encouraging directors and executives to attend training and development in Risk Management related topics in various forms such as the training programs, knowledge sharing from experts and other activities.
- Providing knowledge of Risk Management principles to employees via online learning platform (AIS LearnDi).

## Business Continuity Management

The Company has set in place a business continuity management system in conformance with international standards. The objective is to continue operations in the event of natural disaster or any other situation beyond the Company's control with the potential to cause interruption to its core operating system and a loss of company property and personnel at both central and regional levels, including AIS Group and subsidiary companies.

In support of this system, the Company has established the Business Continuity Management policy and manual and appointed the Crisis Management Committee, comprising top executives from each business unit and chaired by the Chief Executive Officer. The Crisis Management Committee is given the responsibility and authority to make decisions during times of crisis, including incident response and overseeing necessary internal and external communication in an efficient and timely manner to ensure the effectiveness and sustainability of the Company's business.

The business continuity management (BCM) process comprises 4 main steps as follows:



### 1. Prepare business continuity plan:

A business continuity plan must be prepared in accordance with the objectives of business continuity management to enable the Company to cope with the potential impact of a disaster. The plan takes into consideration both the business impact analysis and risk assessment to determine the critical business process of each unit and define the time period that could be endured as a result of disruption before being deemed unacceptable.

### 2. Deploy business continuity plan:

The approved business continuity plan is to be distributed and communicated to all related parties and understanding must be

ensured. This step includes the preparation of resources, both internal and external, that are necessary for the implementation of the business continuity plan.

3. Conduct business continuity plan practice drills:
- Business continuity plan practice drills are to be arranged according to a defined schedule and targets. The plan shall be periodically updated, and the results of practice drills shall be reported to the person accountable for the business continuity plan and to the Crisis Management Committee, respectively.
4. Review & improve business continuity management system:
- The business continuity management system shall be constantly reviewed and improved to ensure its effectiveness and alignment with the risk level being faced by the organization.

## Overview of Business Continuity Management Framework

- Put in place enterprise and departmental BCP:** AIS has in place a Business Continuity Management System comprised of an Enterprise Business Continuity Plan (Enterprise BCP), and Departmental Business Continuity Plan (Departmental BCP). Risk assessment of any threat to the Company must assess both the likelihood of that threat occurring and its impact in order to prepare the Enterprise BCP for coping with the crisis or any emergencies which could adversely affect or damage working facilities or staff.
- Based on the findings of the business impact analysis,** Departmental BCPs are also in place to manage the situation in the event that any department is not able to perform any process that could directly impact the Company's products or services.

- **A Disaster Recovery Plan (DRP) of IT systems:** The plan has been established to provide a strategy and working process to recover all information technology systems that support critical processes. This includes all of the resources required to ensure business continuity within an acceptable recovery time and to an acceptable operational level.
- **BCP for critical business process:** The AIS Business Continuity Management Committee has assigned senior executives and heads of related parties to prepare the business continuity plan to ensure continuation of critical business processes that have a direct impact on the Company's ability to deliver its critical services. It is the responsibility of all management and staff to support the activities related to business continuity management. Chief among them are preparation of the business continuity plan, allocation of resources according to the business continuity plan, carrying out practice drills, and reviewing the plan to ensure the effectiveness of business continuity management.

## Performance Results in 2021 and Goals for 2022

For its Business Continuity Management System (BCMS), AIS received the ISO 22301:2019 Business Continuity Management System certifications for Cloud service and Co-Location service, certifying it as a company that developed a complete business continuity management system to cope with crisis or disaster, thereby further enhancing its sustainability. AIS has continued to conduct business continuity practice drills for the continuation of critical business processes. In 2021, a drill scenario was a malware attack at the

Company's main data center resulting in an interruption to the AIS network and services was carried out to test the responsiveness of the business continuity plan in ensuring the continuity of service.

For its Risk Management System, AIS established a risk management process and reported results quarterly, with a focus on emerging risks. AIS incorporated risk analysis and assessment together with the development of business strategies and objectives in order to enhance awareness and understanding of risk management. The Risk Management Committee presented information relevant to business operations to the Board of Directors, the Executive Committee, and the Audit and Risk Committee on a regular basis. Other relevant departments also received the information so that they can manage risks in a timely manner.

In addition, the Company focused on providing education and raising awareness on the risk management framework for directors, the management and employees on a regular basis to ensure that risk management practices are up to date and in line with current circumstances.

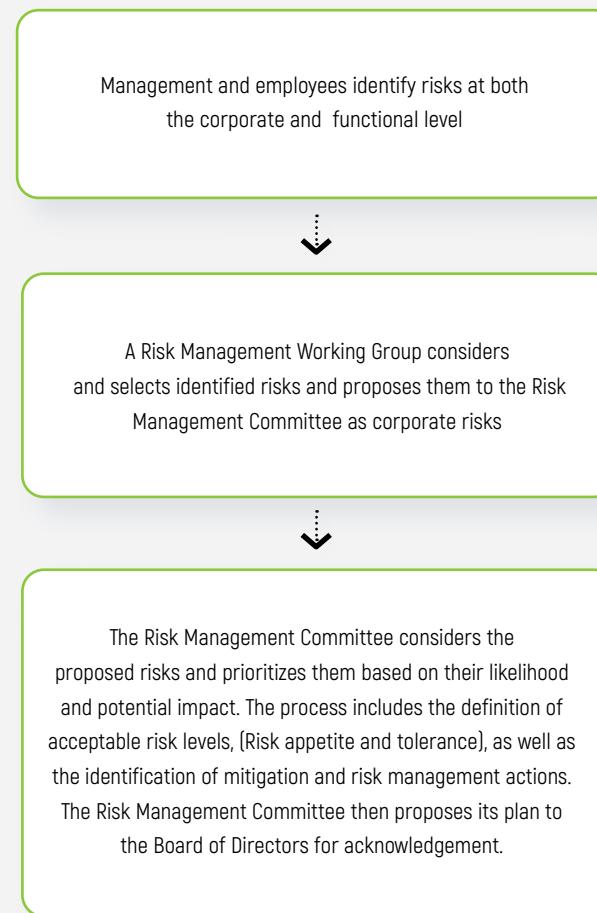
In 2022, For Risk Management System, the Company has planned to apply COSO ERM 2017: Enterprise Risk Management Integrating with Strategy and Performance to all functions. The implementation of the ISO 22301: 2019 framework for Business Continuity Management System with all business processes ensures that AIS is ready and able to respond to and manage a variety of situations in times of crisis.

## Risk factors

Toward identifying risks with the potential to impact the business objectives, goals and opportunities of AIS and AIS group companies, AIS considers the following factors:

1. Internal and external factors such as human resources, changes in technology and regulations, customer behaviors and the business environment.
2. Extreme events or ongoing conditions that have adverse effects on the Company's work practices or business competitiveness including floods, fires, natural disasters or pandemics.
3. Past events, current exposures, and future trends which may affect AIS and its group's business operations.
4. Significant movements in the economy, society, and the environment in both the short term and long term.
5. The causes of potentially adverse events which may affect AIS and its group's business operations.
6. New initiatives or new products and services that AIS is seeking to develop.
7. Opportunities to identify new value adding activities.

### Risk Identification Process



### Significant Risk Factors

#### Risks from Industry Regulation and Government Policies

##### 1. Risk from Changes in Government Policies, Rules, Regulations and Orders of Regulators

AIS operates under the supervision of government agencies such as NBTC, the organization responsible for regulating operators under granted license in the telecommunications industry and with the legal authority to issue rules, regulations and orders to regulate licensees. Rules, regulations, and orders issued in the future, such as those that relate to amending tariff structures and service fees or measures for consumer protection, have the potential to affect the Company's business operations, reduce the Company's ability to generate profit and/or increase the cost of services.

For any work directly related to government agencies, AIS has a dedicated unit responsible for regularly monitoring the issuance and change of regulations and reporting such changes to management and coordinating with relevant departments to ensure they are informed promptly and are ready to respond. The unit's role includes acting as an intermediary to coordinate with government agencies and ensuring that it is given all the necessary information on the business impact of regulations.

Through this unit, the Company also has the opportunity to make comments or suggestions and/or raise concerns or opposition to the enactment of laws, rules, regulations and/or orders in the event that they are deemed likely to have a serious impact on the Company's operations, or to have been unlawfully conducted. Furthermore, the Company, as a service provider which is a direct stakeholder, is invited to provide opinions and comments on drafts of laws, rules, regulations and/or orders which will be issued for enforcement in the future.

The Potential Impact of Risks	Risk Movement from 2020
Business operations, revenue and cost, company's reputation	No significant change

## 2. Risks Arising from Disputes with Government Agencies

In the past, AIS operated a business providing telecommunications services under concession agreement with State Enterprises. This required the transfer of assets which the Company had invested for use in its business operations to government contracting parties as well as the implementation of revenue sharing models at specified rates. Formerly, AIS encountered a number of disputes arising from disagreement in the interpretation of Agreements such as the amount of revenue to be shared. In some cases, NBTC announcements, regulations or orders resulted in impacting upon AIS business operations or concerns for compliance to the extent that it could affect business operation or operating income and/or increase service costs. In many cases, AIS exercised its right under the law to sue

the NBTC in a court of law in order to contest the legitimacy of the actions undertaken by the NBTC. (Information and additional details are shown under the topic Legal Disputes)

AIS established a department that is directly responsible for coordinating with government agencies so that the Company as a contract party can conduct its business correctly and in complete compliance with relevant contracts. In the event of a conflict, the Company would enter into negotiations with the aim of seeking a prompt settlement. In the event that the issue could not be resolved through negotiation, the dispute would be entered into the dispute resolution process by the arbitral tribunal as specified in the Agreement. In addition, the matter would be taken before a court with the jurisdiction to rule a final decision.

The Potential Impact of Risks	Risk Movement from 2020
Financial status and company reputation	No significant change

### Operational Risks

#### 1. Risk from Intensive Competition in the Market

Faced with the intense competition of the telecommunication industry, operators have continued to expand their networks to satisfy customer needs, including the provision of mobile packages bundled with various mobile devices and more prevalently, introducing unlimited data packages to attract customers. These developments have resulted in aggressive price competition.

AIS has thus incorporated the following steps into its risk management plan:

- Develop into new technologies such as 5G, which opens up opportunities for products and services that can be differentiated and are more diverse than 4G services, both for residential and corporate customers. This will help generate additional new forms of income.
- Introduce Fixed Mobile Convergence (FMC) products by continually expanding the Company's Fixed Broadband network to enhance network quality and coverage.
- Drive new digital business to offer services related to daily life in digital form to customers such as video platform services, insurance service and financial services, etc., which will help create new sources of income.
- Enhance the quality of after sales services and privileges program to build differentiation and gain customer engagement.
- Develop strategies for maintaining the customer base and offering products and services that meet the needs of customers by using Advanced Analytics Tools.

The Potential Impact of Risks	Risk Movement from 2020
Financial revenue, market share and company reputation	Increasing in likelihood

## 2. Risk from Technological Advancements and substitution of products and services

Changes and advances in technology, especially digital technology, have enabled new types of products and services, new entrants as service providers, new digital and online channels or even new business models with lower cost structure. These include platform providers (Over the Top: OTT) of various services such as messaging, music, video and social media, where no investment in telecommunication infrastructure is required and hence has enabled consumers to enjoy more alternative services from OTT with low fees or in some cases for free based on advertising model. Moreover, there has been an increase in new services that may substitute services currently provided by the Company, such as internet service via satellite. These trends directly affect the business operations of the Company, requiring it to continue to invest in and improve its network while developing and offering products and services that generate revenue and respond to customer needs. It is imperative for the Company to adapt and develop its business plan to tackle these challenges in order to retain customer base, generate revenue and sustain long term growth.

AIS has incorporated the following steps into its risk management plan:

- Define key strategies, both short-term and long-term, to respond to changing customer behavior and technologies.
- Invest in new business to create new sources of revenue over the long term focusing on new digital business in collaboration with partners and industry experts such as Cloud, IoT, Cyber security, Digital finance.

- Develop and improve existing products and services with advanced technologies to address digital lifestyle of consumer, for example.
  - Offer new value-added products and services for mobile phone, high-speed internet, and digital content to reduce complexity, save costs for customers, and increase privileges to attract customers.
  - Increase capabilities to satisfy customer needs, using Data Analytics to offer products and services that meet customer demand.
  - Digitalize customer service e.g. online product offering, build AI/Chatbot capabilities and implement Robotic Process Automation for customer services
  - Develop the network infrastructure, customer service systems and support systems by incorporating new technology such as cloud technology.
- Transform the organizational structure and develop the competency of employees to support the key strategies of the Company.
- Invest in research and development of innovation by capturing trends and new technologies as well as partnering with external organizations and business partners to research and develop innovation.

The Potential Impact of Risks	Risk Movement from 2020
Financial revenue, company reputation, and market share	No significant change

## 3. Risk from organizational adaptability toward digital transformation

Due to rapidly changing technology and customer behaviors, telecommunications service providers have had to improve their service capabilities in order to be able to respond quickly to customer needs. If the Company cannot develop the necessary skills or capabilities in a timely manner, its business advantage both in current businesses and new businesses in the future will be impacted.

AIS has thus incorporated the following steps into its risk management plan:

- Recruit employees with new abilities that meet the needs of the Company and develop the necessary skills or capabilities that can be applied in new businesses in the future.
- Collaborate with world-class institutions that have specific expertise to lay the foundations for developing the requisite knowledge and prepare high-potential employees for the digital business age including the implementation of a succession plan and a culture transformation to ensure readiness for emerging risks in the digital era.
- Plan a succession plan with a clear Career Model and open up various opportunities for growth in the organization.
- Create an organizational culture towards the digital era with agility, capability, continuous self-improvement and ethics (FIT FUN FAIR).

The Potential Impact of Risks	Risk Movement from 2020
Company reputation and market share	No significant change

#### 4. Supply Chain Risk

The Company sources its network equipment and maintenance services from a limited number of vendors/suppliers available, mainly from China and European countries. In general, telecommunication service providers tend to use only 1-2 equipment vendors to ensure technology compatibility for nationwide service as well as proper maintenance service. During the past few years, an increased tension caused by public policy and trade disputes between the People's Republic of China and the United States of America as well as the global chipset shortage situation due to the COVID-19 outbreak may cause the risk to supply disruption. If those vendors/suppliers are unable to deliver the network equipment, it may affect the network expansion plan.

AIS has thus incorporated the following steps into its risk management plan:

- Apply a multi-vendor purchasing policy for major equipment and services.
- Establish an approved vendor/supplier list of vendors/suppliers that pass the Company's quality standards (Multi-vendor).
- Maintain the equipment and spare parts inventory at a suitable level in order to avoid shortages.
- Engage in a long-term contract (Frame Contract) with main vendors/service suppliers.
- Explore new technologies to reduce dependence on a particular equipment.

The Potential Impact of Risks	Risk Movement from 2020
Financial revenue, business or IT system disruption, and company reputation	No significant change

#### 5. Economic and Political Risk

Changes in economic and political circumstances create both business risks and opportunities for AIS. Such changes could adversely affect demand and supply and the purchasing power of customers, including employment and tourism. These factors affect the income of the telecommunication industry. Consequently, the direction and growth rate of the telecommunication industry is generally consistent with the economic growth rate as measured by Gross Domestic Product (GDP).

However, as communication via voice, data service and broadband internet including data service for corporate consumers are now a common part of daily life and is at an affordable price, impacts from economic and political shifts to The Company remain at acceptable levels.

AIS has thus incorporated the following steps into its risk management plan:

- Provide products and services in a variety of price levels and formats for consumers to choose according to their

purchasing power. Including products and services that are targeted to specific customer groups to meet their needs.

- Provide various distribution channels for customer to easily access both store and online channel.
- Enhance value-added services related to daily life for a variety of customer applications such as video platforms for entertainment media, insurance service, access to public health services, etc.

The Potential Impact of Risks	Risk Movement from 2020
Cost and/or revenue	No significant change

#### 6. Risk from Major Network Failure or Interruption to Important Systems

Telecommunications services are part of the basic infrastructure for consumers and enterprises. An uncontrollable disaster, natural disaster, or crisis event could potentially lead to the interruption of the Company's network primary operating systems and business activities, directly affecting the continuity of service delivery, Company reputation and reliability, Company revenue including additional expense to compensate customers and recovery services.

Towards ensuring the Company's continuity in delivering services to customer, AIS has set up the following steps in its risk management plan

- Set up redundancy and backup for several key operating systems required to provide service.
- Set up a system and process for monitoring the quality and operation of the network and resolve problems in a timely manner.
- Schedule maintenance plan for equipment and systems in important parts.
- Adopted an infrastructure design that reduces the potential impact from disasters e.g. applying the EIA-222C standard to telecom towers to support higher wind speeds than in recorded Thai history, raising the height of base stations based on the level of heavy flooding in the year 2011.
- Establish Business Continuity Management (BCM) policy at both the corporate and departmental levels and conduct an Annual Review and carry out exercises to practice and test the Business Continuity Plan. Moreover, AIS received ISO 22301:2012 Business Continuity Management System certification in recognition of the implementation of the Company's Business Continuity Management System to cope with crisis situations.

The Potential Impact of Risks	Risk Movement from 2020
Financial revenue, company reputation and unachieved operations	No significant change

## 7. Risk of Data Privacy

The Company provides services to a large number of customers, both individuals and enterprises, making it essential to secure personal data and prevent risks arising from the leakage of customer personal data. In addition, risks may occur from the violation of human rights when the Company discloses such information upon request. The Company is also subject to compliance with relevant laws and regulations; for example, the Personal Data Protection Act (PDPA) and the General Data Protection Regulation (GDPR).

AIS has thus incorporated the following steps into its risk management plan:

- Set up the Data Protection Office (DPO) to monitor and coordinate with other relevant parties and ensure that the Company has proper processes with respect to the collection, use and disclosure personal data.
- Develop a Privacy Policy in accordance with relevant laws, regulations and announcements from the government.
- Develop procedures to access and manage personal data in a secure manner. Ensure proper internal controls are in place and subject to regular review.
- In case the Company has to disclose personal data to government bodies upon request, the Company will verify the legal authority of the requestor, determine the scope of the data as prescribed by law, and ensure that there is no violation of personal rights.

- In case of data leakage, undergo processes in place to handle customer complaints, including how to respond and mitigating actions.

The Potential Impact of Risks	Risk Movement from 2020
Company reputation and penalty from regulatory bodies	No significant change

## Financial Risks

### 1. Risk from Exchange Rate Fluctuation

The Company is exposed to the risks of foreign exchange rate fluctuation due to International Roaming revenue and expenditures in foreign currencies with certain network expenditures also in foreign currencies.

AIS has thus incorporated the following steps into its risk management plan:

- Use Forward Contracts that specify the exchange rate at the time of the contract date will apply to the future delivery of contracted services.
- Use existing foreign currency deposits (Natural Hedge) to make payments for goods and services in foreign currencies.

The Potential Impact of Risks	Risk Movement from 2020
Cost and/or revenue	No significant change

### 2. Risks from the absence of a debt covenant ratio

Due to the terms of the company's loan agreement and the absence of a debt covenant ratio in conditions for debenture issuers and holders with which the company can adhere, the company could accrue an unmitigated amount of debt impacting its repayment ability. However, the company exercises caution on debt accrual, analyzing the necessity of any debt in terms of the benefit of the resulting investment, related opportunities and the generation of revenue and profit that would support long-term growth. Analysis is also performed to appropriately

plan cash flow and ensure long-term stability, to determine financial obligation repayment capabilities, and to determine the most appropriate loan acquisition process and amount so as to avoid impact on the company's financial status. The company has long maintained a high credit rating among leading domestic and international firms and achieved an AA+[tha] rating from Fitch Ratings at the end of 2021, reflecting its high capability to settle both interest and capital obligations and its strong financial standing. The company devotes importance to maintaining its credit rating in the interest of keeping capital costs at an appropriate level and long-term financial stability, prioritizing the maintenance of financial ratios that act as key indicators for credit ratings, such as Net Debt to EBITDA, above the standard of ratings firms.

The Potential Impact of Risks	Risk Movement from 2020
Revenue / Financial Status / Cost	New risk factor in 2021

## Emerging Risks

### 1. Risks from the COVID-19 Pandemic

The COVID-19 outbreak that has continued over the past two years has brought about dramatic economic and social changes both domestically and on a global scale. In the economic facet, the latest coronavirus strain and the unpredictable evolving variants may disrupt the supply chain, triggering inflation that puts an upward pressure on the prices of products and services for consumers. Moreover, a strong increase of government,

private sector, and household debt has brought uncertainty to the economic recovery, affecting consumer confidence and purchasing power and exacerbating the problem of income inequality. The New Normal lifestyle has also instigated constantly-changing behavior and the way of thinking of consumers and the business sector, making it difficult to predict the direction of the changing momentum. The situation may have significant long-term effects on AIS business. This has been evidenced by the growing demand for the use of communication and digital technologies, consumer trends and preferences toward accessing products and services via online channels, and the needs for personalized and real-time products and services. The changing scenario has prompted AIS to look to generate income from new products and services that best address the needs of consumers and business sector. The COVID-19 pandemic has also impacted AIS business operations, forcing the Company to adjust work arrangement in response to the New Normal life with major concern for employee safety and yet maintain the same level of standard in providing products and services to maximize customer satisfaction.

AIS has thus incorporated the following steps into its risk management plan:

- Provide the full digital service to customers, e.g., online product and service offerings, build AI/Chatbot capabilities, and implement Robotic Process Automation for customer services to improve customer experience with easier access and proper cost to serve.
- Bundle product and service offerings of mobile, fixed

broadband and digital content in a new model that provides added value, reduces complexity and creates cost savings for customers, while also attracting new customers.

- Offer new formats of products and services that serve the new lifestyle of both mass and corporate customers as well as to enhance social inclusion, such as Work-From-Home, online learning/teaching.
- Improve the signal network system to accommodate the growing demand for data usage.
- Establish a COVID-19 notification center for the Company to monitor the situation, receive incident reports and coordinate with relevant parties.
- Set standard measures to prevent and respond to COVID-19 infection e.g. body temperature screening before entry to Company premises, sanitation guidelines in public areas, procedures for visitors, etc.
- Establish guidelines for employees to work from home during outbreaks to ensure employee safety while continuing to maintain service quality.

## 2. Risk from the Potential Consolidation of Main Competitors

The potential consolidation of main competitors may result in both opportunities and risks to AIS operating strategies since the number of major telecommunication operators especially the mobile phone service may drop from 3 to 2 with similar market shares. The consolidation may lead to changes in the competitor's financial status as well as competitiveness and investment. This may instigate changing market and competition scenarios and affect the regulating guidelines of

NBTC for the industry as well as the views of consumers toward the operators. It is necessary that AIS prepares itself to cope with the situations.

AIS has thus incorporated the following steps into its risk management plan:

- Arrange the Management meeting to consider the situation and prepare to adjust the Company's strategies and operations accordingly.
- Study regulations and/or relevant laws and coordinate with the government agency with oversight authority to keep up with the moves and views of the government sector, and prepare the Company to respond to changes in rules and regulations.
- Commit to developing and expanding network infrastructure continuously with emphasis on being a leader in providing high quality service to build consumer confidence.
- Work toward organizational preparedness to deliver a diverse range of products and services that address the changing needs and expectations of consumers.

## 3. Risk to Information Security and Threats from Cyber-Attack

The Company has rapidly developed a variety of products and services to serve customers' needs and increase their convenience. While technology is essential in developing and improving these products and services, the application of advanced technology also comes with the risks inherent to information technology. Such risks result from the complexity of the technology itself, gaps in the skill and knowledge levels of Company employees, the potential deficiency of the

Company's own systems, and external threats or cyber-attacks. If an information security system is insufficient or incomplete, it can have a serious impact on the company, especially if important data such as the personal data of customers is compromised. This includes cyber-attacks, e.g., DDoS attacks, website phishing, malware/viruses, etc, which may cause severe business disruption.

Ensuring the effectiveness of the Company's information security, AIS regularly reviews and revises the security policy of the Company's IT system in the following ways:

- Apply suitable international standards and alignment with the Cybersecurity Act and Personal Data Protection Act.
- Extend and expand security tools to cover significant systems such as Multi Factor Authentication (MFA) for accessing information technology systems from outside the Company, expanding threat detection capabilities (Threat Hunting), emphasizing proactive threat detection focusing on reducing detection time and time to handle detected threats and applying automation in the process of detecting and responding to threats, etc.
- Enhance information security measures, e.g., by reviewing the access control procedure; maintaining a closed working environment; and building IT awareness across the entire Company.
- Enhance staff competencies related to Cybersecurity in order to operate in accordance with the standards for personal data protection, cloud security, vulnerabilities of the system and detection of threats, etc.

- Enhance cybersecurity knowledge, understanding, awareness to employees and executives at all levels.
- Review and improve cyberthreat response processes to align with the global NIST Cybersecurity Framework and integrating with organization's crisis response plan.
- Conduct Cyber Drill every year covering relevant employees and executives.

#### 4. Climate Change Risk

Climate change is a global issue that all sectors have come to grip with. As one of the top 10 countries that were most affected by extreme weather events, Thailand has joined forces with the international community to tackle the problem, announcing a plan to pursue a net-zero carbon emissions target by 2065. The development has made climate change an emerging risk, prompting the Thai government to adjust policies. It is now in the process of drafting climate change-related bills and revising the national energy plan to prepare for operations in accordance with the target.

As Thailand's key Digital Life Service Provider, AIS must prepare for making adjustments to cope with risks that may impact the Company's long-term business operations, both directly and indirectly in terms of physical risks from natural disasters and transition risks from transitioning to low carbon economy. These risks are likely to affect AIS business and its entire supply chain. Examples include maintenance of network infrastructure and devices which may be damaged by natural disasters, resulting in higher business costs, and decreasing value of the damaged

assets. The supply chain may also be disrupted with respect to transportation and production.

AIS realizes risks and opportunities for business operations brought by climate emergency and is resolved to take part in mitigating the climate change problem. To that end, the Company has adopted the concept of defining science-based target for GHG emission reduction in devising a GHG emission reduction plan. The emphasis is placed on reducing energy consumption, a main culprit of GHG emissions, prepare to cope with the impacts of climate change, and developing businesses that help reduce GHG emissions in differing sectors through the following efforts:

- **Promote energy efficiency** AIS employs a variety of energy-efficient technologies to manage base stations, uses big data analysis to manage signal channels, and allocates servers for the data centers along with proper management of energy consumption according to customers' usage.
- **Use alternative energy** More solar panels are installed at base stations, data centers, and phone exchanges.
- **Reduce paper usage** AIS employs digital technology in its internal business transactions and with business partners as well as in providing services to customers through the Full-E concept comprising four core services: 1) My AIS application that allows customers to check and pay their invoices online as well as checking and subscribing to packages by themselves 2) e-Bill 3) e-Receipt, and 4) e-Payment. In addition to reducing paper usage, the services help reduce GHG emissions.
- **Develop smart solution services** A wide variety of smart solution services are offered to facilitate work of business

organization in the New Normal and manage work processes to enhance energy efficiency, thereby contributing to GHG emission reduction. Central to this are the highly energy-efficient Cloud Data Center service, the use of 5G & IoT to improve efficiency of work systems such as Smart Factory and Smart Property & Building which enhance energy efficiency while reducing GHG emissions at the same time.