Business Overview

For more than three decades, AIS has been providing telecommunication infrastructure to Thai society. Starting in 1990 under collaborative contract or concessionaries, Operators were 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), government agency in regulating broadcasting and telecommunication, was established and began permitting frequency license. The licensing scheme was a major turning point for the telecommunications industry in Thailand and supports fair competition as well as the development of new technologies.

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

Deliver superior products and services to enrich people's daily lives and to 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 to all stakeholders.

AIS, the Digital Life Service Provider

We are a "Digital Life Service Provider" operating three core businesses, namely

2

Fixed Broadband Services

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

3

Digital Services

extends from mobile phone and high-speed internet services, focusing on creating value-added digital services and aiming to be new revenue source in the medium and long term in anticipation of a change in consumer behaviors and technology.

1

Mobile Phone Services

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

As of 31 December 2020, AIS's total assets were valued at Baht 350,171 million with a market capitalization of Baht 523,346 million, ranked 4th on the Stock Exchange of Thailand.

Leading the mobile business

Revenue market share in 2020

46%

Subscriber Market Share in 2020

46%
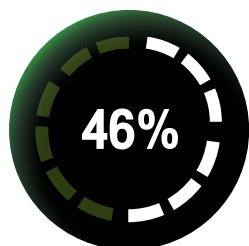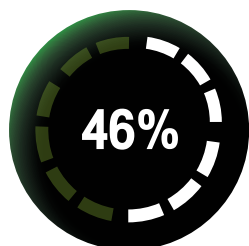
"Other operators are DTAC and True Move"

As of ending 2020, AIS remained the largest mobile operator in Thailand, with a revenue market share of 46%, and a total of 41 million subscribers nationwide. The mobile phone services revenue still accounting for more than 68% of total revenue. AIS provides quality services on 5G, 4G, 3G and 2G technology using frequency bands of 2600, 2100, 1800, 900 MHz for a total of 220 MHz (2x60 MHz on FDD technology and 100 MHz on TDD technology) which 190 MHz is under license granted by NBTC and another 2x15 MHz is under a TOT partnership agreement. Currently, AIS's mobile network covers over 98% of country's population.

Participating in the NBTC spectrum auction in Feb 2020, AIS was able to secure the largest additional bandwidth in the industry, which will shore up its leadership both in terms of service quality and capability to provide 5G. AIS has launched 5G service and is expanding the coverage across all 77 provinces of Thailand, initially emphasizing areas with high demand for data and prioritizing industrial estates as to meet the various demands of industrial customers.

Growing in the Fixed Broadband market

Subscriber market share in 2020

12%
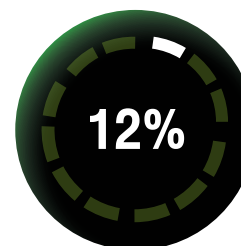
"Other fixed broadband operators are TRUE, TOT and 3BB"

AIS started its fixed broadband business under the brand "AIS Fibre"in 2015, with the goal of creating a new source of revenue by leveraging the established fibre network and the subscriber base from the Company's mobile business. 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 2020 accounting for 4% of total service revenue. Currently, the total number of subscribers is 1,336,900, accounting for more than 12% of the fixed broadband subscriber market share.
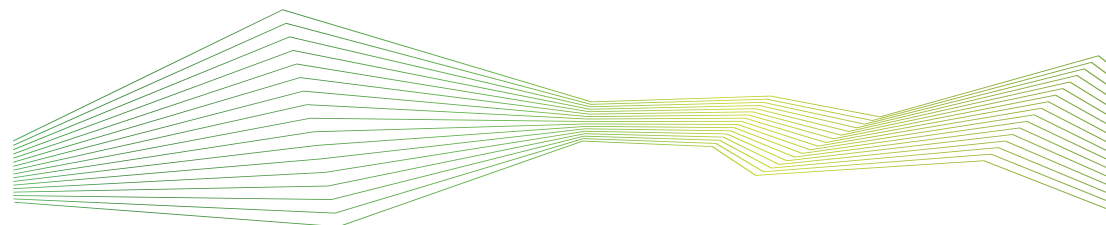
Building on Core Businesses with Digital Services

Digital Services involves the development of services using digital technology in a variety of formats, including networks, service platforms and solutions, in order to create digital services for both enterprises and consumers. This is achieved via cooperation with our partners and the development of an integrated business ecosystem in which we grow and succeed together. AIS is currently focused on 5 main areas of business. These are VDO Platform, Business Cloud, Mobile Money, Internet of Things (IoT), and other digital platform services. Our digital services are an important propeller enabling AIS to access new sources of revenue in the future in addition to current mobile internet charges. It also allows AIS to be an integrated player via the convergence of products and services from our three core businesses.

Operating Under Licenses Regulated by the NBTC

The majority of AIS's 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, such as 2600, 2100, 1800 and 900MHz spectrum licenses with an average license life of 15 years. At the end of spectrum license, NBTC will redistribute 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

	2018*		2019		2020	
	Million Bt	Percent	Million Bt	Percent	Million Bt	Percent
1. Service revenue	**144,005**	**84.3**	**150,129**	**83.0**	**143,316**	**82.9**
1.1 Mobile phone business revenue	124,784	78.0	126,341	69.8	118,082	68.3
1.2 Fixed broadband business revenue	4,436	2.0	5,722	3.2	6,959	4.0
1.3 Other services revenue	4,208	1.6	4,509	2.5	4,552	2.6
1.4 Interconnection (IC) and equipment rental revenue	10,576	2.8	13,557	7.5	13,722	7.9
2. SIM and device sales revenue	**25,851**	**15.7**	**30,765**	**17.0**	**29,574**	**17.1**
Total revenue	**169,856**	**100.0**	**180,894**	**100.0**	**172,890**	**100.0**

*The operating performance shown in 2018 does not include the effect of TFRS15

Type of products and services

AIS is operating 3 core businesses, the key products and services of which can be summarized as follows:

Mobile Business
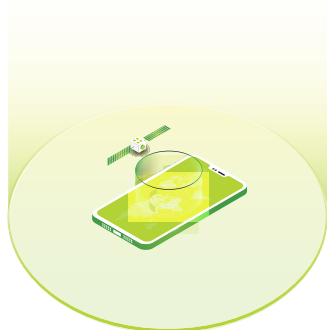
5G/4G/3G/2G mobile network service on prepaid and postpaid

Mobile phone and IT related accessories sales

International roaming and international calls

Fixed Broadband Business

Fibre broadband for households and SMEs

Digital Service Business

Video Platform

Internet of Things

Enterprise service

Other platforms

Mobile money

1. Mobile Business

AIS operates 5G/4G/3G/2G mobile services on telecommunications spectrum licenses granted by the NBTC, with a total of 220MHz spectrum bandwidth, consisting of 2600, 2100, 1800 and 900MHz. Additionally, AIS was allocated 700MHz spectrum for 30MHz capacity and expects to obtain the licenses during 1st half of 2021 while the allocated 26GHz for 1200MHz capacity is scheduled to obtain license within February 2021.

Currently, AIS's mobile network covers 98% of Thai population. In 2020, AIS launched 5G service with more than 5,700 base stations, covering 16 percent of the country's population and more than 60% population in Bangkok. AIS 5G service is available in key area of the 77 provinces in Thailand and covers more than 60% of the Eastern Economic Corridor (EEC) area which complies with 2600MHz license condition stated by NBTC.

AIS provides mobile voice and data services under both prepaid and postpaid plan. Currently, AIS has a total customer base of 41 million subscribers nationwide, with 10 million postpaid subscribers and 31 prepaid subscribers. In 2020, AIS launched a comprehensive online postpaid service under the "GOMO" brand to penetrate through young generation segment focusing on service via online channels. Additional information on GOMO can be found at https://gomo.th

2. Fixed Broadband Business

AIS has been offering fixed broadband service under the AIS Fibre brand since 2015 with fibre optic technology. As an extension of fibre optic networks on existing mobile networks, AIS Fibre could rapidly grow its network coverage. In 2020, AIS Fibre has expended its services area to covers over 8 million households in all 77 provinces nationwide and serving over 1.3 million subscribers. AIS Fiber continues to ensure its leading service quality and differentiate itself with new services; for example, Speed Toggle - a feature for users to alter their download and upload speeds online, and MESH WiFI devices for providing better coverage across large homes with up to eight MESH devices in a network. Apart from fiber-optic internet, AIS Fibre also provides world-class entertainment contents i.e. movies, sports and other entertainment

contents via the AIS PLAYBOX. Moreover, AIS Fibre seeks to provide convergence solution for customers with its home internet, mobile internet, content and AIS Super WiFi in a single package. For more details, please visit www.ais.co.th/fibre. AIS has also begun rolling Fixed Wireless Access (FWA) service using 5G technology, a development that allows high-speed internet service in areas previously inaccessible by fiber optic while lowering costs and installation times.

3. Digital Service Business

AIS continues to develop its digital services in response to rapid change in consumer demand and behavior, especially as the COVID-19 pandemic triggered heightened need on digital services in the New Normal. As a leader in the telecommunications industry with 5G readiness, AIS strives to become a comprehensive digital lifestyle service provider through cooperation with partners in different areas of expertise. The company's Digital Service Business focuses on the following five areas:

⊕ Video Platform

AIS provides TV, video distribution services, including various type of entertainment such as movies, series, music, karaoke, games and E-Sports via AIS PLAY application, available on mobile and tablet, as well as through AIS PLAYBOX for AIS Fibre, the home internet subscribers.

Through cooperation with various partners, AIS offers Over-the-Top (OTT) services encompassing a wide variety of content such as Hollywood movies and series on Netflix, Korean series and programs on ViU, NBA broadcasts and free TV channels presented both live and as Video-On-Demand. All the content is selected by AIS for its customers to view on the AIS PLAY and PLAYBOX platforms.

AIS has also expanded the variety of content on 5G technology with the AIS 5G AR/VR application, which utilizes the high-speed and low latency capability of 5G to present virtual realities for futuristic lifestyles. Four types of content are available through the application

1. Star Dating & music – users get up close to their favorites celebrities

2. Travel – domestic and international tourism experience

3. Wellness – virtual exercise routines and

4. Education – knowledge on historical attractions in Thailand.

More information on the service can be found at http://www.ais.co.th/aisplay/ and https://www.ais.co.th/5G.

⊕ Cloud and data centers for enterprises

To enhance IT operation efficiency and consistency during COVID-19 situation and undergoing a digital transformation, AIS provides complete cloud solutions and data centers responsive to the specific needs of its enterprise clients in various industries, working with specialized world-class partners such as IBM, Cloudian and Microsoft to enhance services including:

- Cloud Managed Services – providing consultation, installation and transfer to cloud services as well as 24/7 monitoring on remote to ensure business continuity plan.

- Microsoft Licensing Solution Provider – providing digital solutions such as Modern Workplace and Azure to enhance the capabilities of businesses.

- Enterprise Object Storage – 5 or 10-year large scale off-site backup storage that reduces company maintenance costs and ensures effective care, a responsive service for the growing need for data storage in the digital era.

AIS (CSL) received the 2020 Thailand Data Center Competitive Strategy Innovation and Leadership award from Frost & Sullivan in acknowledgement of the global standard of its nationwide data centers and data center services.Further information on cloud services provided by AIS and CSL are available at http://business.ais.co.th/cloud/index.html and https://www.csl.co.th/

Mobile Money

In supporting the national policy on the development of national E-Payment infrastructure towards achieving a cashless society, AIS joined with both domestic and international partners to provide cross border mobile payment, allowing customers travelling abroad to transact based on local currencies, effectively eliminating concerns over exchange rates or the need to carry cash during travels.

AIS also provides the mobile money service platform for both corporate clients via mPay (B2B) and for consumers via a joint venture company, Rabbit LINE Pay (B2C). mPay provides a comprehensive mobile payment platform for corporates who seek to have a mobile electronic wallet offered to their customers, while bypassing the hassle operation of mobile payment system and operating license. More details can be found at www.ais.co.th/mPAY/gateway

IoT or Internet of Things

In building the IoT services, AIS focused on creating an IoT ecosystem covering equipment, networks, platforms, business solutions and developer communities from public and private alliances formed through the AIS IoT Alliance Program (AIAP) and AIS playground. This responds to the rising growth of large, medium and small enterprises transitioning to the digital era and looking to incorporate IoT capabilities into their businesses such as finance, logistics, real estate and Smart Cities.

The AIS IoT network is widely regarded for its coverage and technological diversity, which allows it to meet a range of demands and usages, from high-efficiency wireless networks like 3G and 4G to NB-IoT, which uses low energy. The number of IoT devices connected via AIS network for businesses grew to over 900,000 devices. In 2020, AIS began 5G service, sending its IoT technology network for the industrial sector to leap forward. The 5G characteristic of high speed, low latency, and allows for massive connectivity enables new use cases for the future factory in which robots, machines, vehicles and drones

can be automated or remote controlled. AIS has also developed partnerships with leading industrial estate developers such as Amata, WHA, Sahapat and Bangkadi as to jointly foster a 5G ecosystem supportive of the industrial sector in the future. AIS was awarded 2020 Thailand IoT Services Provider of the Year by Frost & Sullivan, marking the third consecutive year it received a Best Practices Award in IoT. More information about our IoT services can be found on our website http://business.ais.co.th/iot

⊕ Other platform

Cybersecurity

AIS has brought its experience in cybersecurity on safeguarding the data of over 40 million customers to enhance cybersecurity system for corporate clients, serving businesses with cyber-attacks risk that have grown in severity in the digital era, and to preparing to comply with the Cyber Security Act of B.E. 2562 and Personal Data Privacy Act of B.E. 2562 that came into effect in 2020.

Given its nature of business with high exposer from cyber threats, AIS operates the Cyber Security Operation Center (CSOC) with high standard that can respond to a threat immediately with expert personnel 24/7. The company also works with world-class partners specializing in cybersecurity such as

Trustwave, which allows AIS to provide extensive cybersecurity services from protection of terminal devices, networks and the cloud to assessing risk and providing consultation on cybersecurity enhancement.

Extensive cybersecurity services are provided under AIS Cyber Secure, which operates a CSOC under the same technology, personnel and processes that AIS utilizes for its own protection alongside services from specialized partners. More about AIS cybersecurity services is available at https://business.ais.co.th/solution/security.html

ICT Solution

COVID-19 pandemic has changed traditional work approaches and in pushing organizations to adopt the New Normal accelerated their digital transformation. CSL brings its expertise in ICT project management services to provide ICT solutions for enterprise clients, empowering business of the production, logistics and distribution as well as educational institution and state agencies to adapt to the New Normal in digital era. Focusing on solution for Digital Workplace, it provides various type of services from network infrastructure to WiFi solutions and secure connectivity, supporting work from anywhere and on an array of devices.

For businesses impacted by COVID-19 that need to slow down investment and cut costs, CSL also offers Managed Service, a complete solution to extend usage life of IT systems, covering inspection, repair and replacement of equipment, reducing the burden of IT maintenance.

CSL also elevated its partnerships to reach under Cisco Gold, Dell Platinum and Fortinet Expert as to strengthen client confidence and enhance its ability to design and deliver solutions and provide after sales service providing by international standard certified team.

Service for Small and Medium Enterprise (SME)

AIS supports small and medium enterprises (SMEs) with products and services that are responsive to their needs, providing quick and convenient services along with expert advice and support. Offerings include mobile phone services, services for online businesses, AIS Fibre for SMEs, digital marketing services, IoT solutions and business software.

AIS also offers special privileges specific to SMEs under the AIS Biz Up program, which presents privileges based on the particular lifestyles of business operators and that are supportive of business operation. Combining products and services from AIS and its partners, AIS is able to offer discounts from leading firms, free trials or special privileges and a range of knowledge for businesses.

Investors can learn about AIS services for SMEs at http://business.ais.co.th/sme/ and Biz Up at https://business.ais.co.th/bizup/

Digital Marketing

In cooperation with AD Venture and Teleinfo Media (an affiliate of AIS' subsidiary CS Loxinfo), AIS utilizes AD Venture's online advertisement capabilities, and leverage upon AIS' 42 million customer base to provide digital marketing solutions for corporate clients in enhancing their accessibility to consumers in digital era. Our digital marketing platform includes location base SMS platform that allows for advertising of targeted areas, and Thailand Ads Network, or THAN, a collection of ad space on Thailand's 100 most popular websites offering a major digital marketing tool to client. The digital marketing solutions comprises of digital content creation, website & mobile application development, social media management, digital advertising media management and turnkey marketing campaign solutions.

Distribution and sale channels

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

| AIS Shop | Distributors | Wholesaler | Direct Sales and Telesales | Online Channel |

1. AIS Shop - Service centers operated by AIS and selected high potential distributors, in total of 201 locations. AIS Shop offers the most comprehensive range of products, services and after sales services among the different distribution channels. AIS Shop strategically locates in densely populated urban areas and focus on maintaining a superior brand image of AIS products and services.

2. 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 404 locations in city areas and serves under AIS brand. "AIS Buddy" accesses district and sub-district areas through more than 1,158 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.

3. Wholesaler - AIS appointed Advance Distribution Partnership (ADP) wholesalers by area across the country. The ADPs facilitate efficient distribution of products such as SIM cards and mobile phones to more than 16,000 retailers across the country.

4. Direct Sales and Telesales - Focusing on postpaid customers acquisition, this channel makes products offering faster and more efficient while providing direct approach to target groups. Examples of direct sales are sales booths or activities in targeted areas. Supporting sales is the "AIS Easy App", which allows sale teams to immediately sell products and services and complete customer registration with better efficiency. In 2020, Telesales has been introduced to provide direct sale channel via the Call Center, a particularly convenient channel for customers during the COVID-19 pandemic.

5. Online Channel – 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 as wide range of services as an AIS Shop while its AI assistant Aunjai provides personalized End-to-End support 24 hours a day. The myAIS application also retails SIM cards and facilitates application for AIS Fibre home internet, providing convenient channel for existing customers to take on further AIS services.

Customer Relations Management

Committed to being a leading digital service provider, AIS serves its customers with the concept **"Number 1 service from our heart for digitizing Life"**, combining understanding and care for customers with technological services presented with a human touch. Service at AIS focuses on speed, convenience, personal data privacy, self-service and personalization to deliver the best customer experience and is distinguished by technological enhancement. Customer relations management is carried out in the following five ways:

1. Serving customers with digital technology is mainly conducted through the myAIS application available for Android and iOS smartphones, which as of end 2020 was downloaded by more than 20 million users with over 8 million monthly active users. Over the course of 2020, myAIS was enhanced from its basic functions into an Everyday Lifestyle Application with a wider array of services provided under the concept "Knowing You Better, Special Every Day". Services via the application are easier to access, convenient and come with special privileges that make daily usage worthwhile. Highlights include:
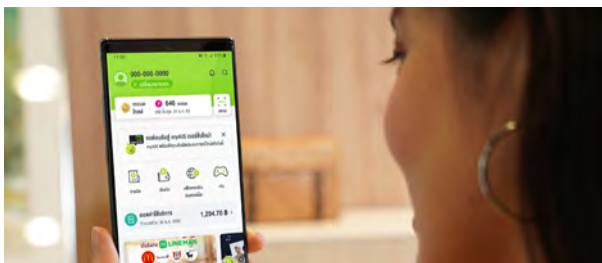
- Express Service – All the services of an AIS store made available through the myAIS application with the added functionality of Aunjai, an AI powered personal assistant providing 24-hour end-to-end service with a query accuracy rate of 84%
- Extra Personalization - Targeting customer needs using machine learning technology that analyzes each customer's behaviors to present them with the best suitable service package at the time.
- Exclusive Privileges - Quick and convenient access to privileges using the Points & Privileges function of the myAIS application. Users can access information on privileges, their AIS Points and exchange points for rewards of products and services from AIS and its partners, all in one place. Digital engagement is also developed with the user through the Coupon and Game functions, which attract users and increase their frequency of use by offering entertainment and rewards.

2. "AIS Privileges" is another channel for customer relations management carried out by AIS in cooperation with its partners. AIS seeks to be responsive to customer lifestyles across seven segments, Coffee Time with popular local cafe's across Thailand, Dining Time with discounts on popular restaurants, Family Time for fun with the family, Entertaining Time for screening new film releases with discounts, Shopping Time for deals at popular department stores and shops, Traveling Time for privileges on travel and Lucky Time where only 4 points give a chance for prizes from AIS. AIS currently has 29,000 partner stores providing privileges across the country and sees 14 million privileges redeemed annually. Customers can also use their AIS Points collected from use of services for discounts on call packages and internet packages, to win prizes, Line stickers and for discounts on mobile phones among others. At present, over 17 million subscribers apply and collect AIS Points and over 61 million redemptions take place each year.

In 2020, AIS added "Well-Being" privileges in response to the New Normal lifestyle that focuses on preventative health. In cooperation with the Ministry of Public Health, leading hospitals and insurance firms and telemedicine applications, AIS connected its customers to medical services with convenience.

4. In our striving for the best customer experience, we build-in analysis and insight of consumer behaviors into our marketing tools, an approach to build value for our customers called customer value management (CVM). Such customer data analytic allows us to customize product and service presentation to each customer and increase consumer satisfaction.

5. AIS observes customer satisfaction across numerous platforms, including rating via telephone call, surveys in our service shops, as well as questionnaires arranged by contracted external agency. These ratings refer to the quality of services from AIS, whether in our shops, at our dealerships, or through our automated service machines, as well as measuring the likelihood of our customers suggesting AIS and our services to others. These data are used to constantly develop every facet of the services we provide. From our survey, the customer satisfaction levels are as follows:

3. Privilege program "AIS Serenade" is presented to customers with a high spending or with long service year. The program aims to furnish premium service under the concept "Always Exclusive, Always on Top" and has been commenced by AIS for 16 years. The program focuses on 1. Attention to customer demands 2. Partnership building to respond to emerging demands and 3. Application of technology to all dimensions. Based on regular study of customer demands, AIS divides its privileges across four groups 1. Special Experiences (Serenade Club, Personal Assistant, Parking, Airport Privileges) 2. Digital Life (Discounts on smartphones, gadgets) 3. Motivation and Inspiration (Entertainment activities such as concerts and theater shows, inspirational activities for business persons) and 4. New Experiences (tourism and dining). These approaches have led to AIS having 5.5 million Serenade customers and being able to more accurately address their needs. In the 5G age, under the concept "Digital Urban Lifestyle", AIS unveiled a Serenade Club Flagship Store that on top of providing a range of services to customers also presents them with IoT gadgets and the latest in technological lifestyle enhancements attuned to AIS Serenade members of all generations. The store is slated for expansion to major cities in every region.

Customer satisfaction scores

2020 Target 89%

Year	Score
2020	90%
2019	89%
2018	88%

Procurement of Products and Services

Spectrum

Currently, AIS operates mobile business with a total spectrum of 220MHz (2x60MHz on FDD technology and 100 MHz on TDD technology). 190MHz of spectrum licenses are granted by the NBTC to Advanced Wireless Network Co.Ltd. (AWN), a subsidiary, while another 30MHz is under the partnership agreement between the TOT and AWN.

Moreover, AWN had been allocated 20MHz bandwidth of 700 MHz spectrum from NBTC in June 2019 and had obtained the license on 15 Jan 2021. In February 2020, AWN had won the spectrum auction and had been allocated 10MHz bandwidth of 700MHz spectrum and 1200MHz bandwidth of 26GHz spectrum. The 700MHz license from the auction is expected to obtain within 2nd quarter of 2021, while the Company has an obligation to obtain 26GHz license within February 2021.

Detail for spectrum licenses provided in topic 4. Assets used in operations, Part 1 Page 39

Network equipment procurement

AIS deploys "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 on time delivery of equipment. To select suppliers, AIS appoints committees to evaluate and assess the most suitable options. Many factors are taken in to account, such as investment and operating cost, 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 networks are supplied by CISCO, Juniper and etc.

Procurement of Mobile Phones, Equipment and Digital Services

AIS markets mobile phones spanning a range of qualities and price points in satisfaction of 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 needs for communication devices to support Work-from-home and Learn-from-home during COVID-19 situation. Procurement of mobile phones and IT products is done through collaboration with leading manufacturers as to secure a variety of products. 5G mobile phones were also presented upon the official launch of 5G service, allowing users to access the latest technology and able to effectively utilize the AIS network.
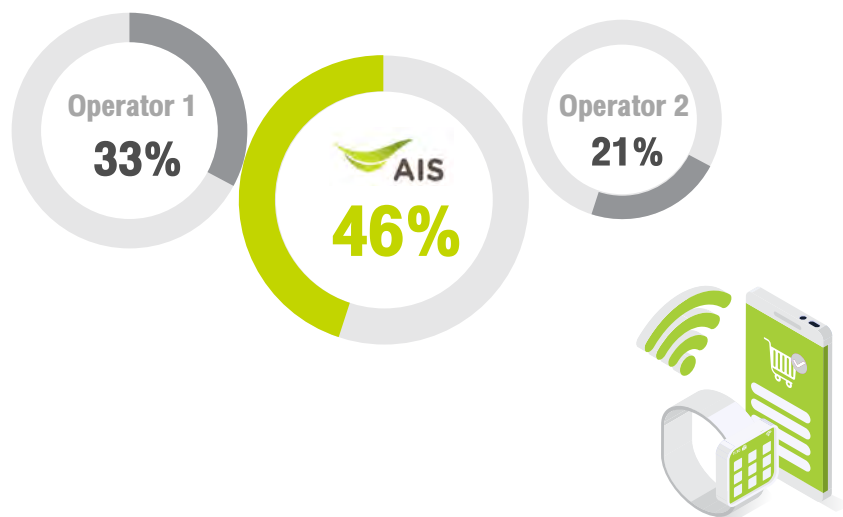
Work under progress

-None-

Industry competition in 2020 and Outlook for 2021

Industry competition in 2020

Subscriber market share in mobile and fixed broadband businesses

Mobile Business

Operator 1
33%

AIS
46%

Operator 2
21%

Fixed Broadband Business

Operator 1
38%

Others
19%

AIS Fibre
12%

Operator 2
31%
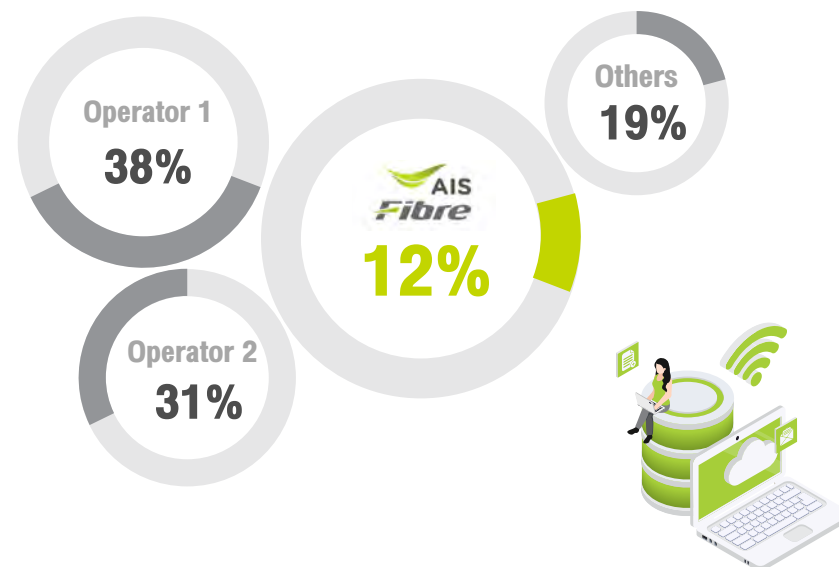
Mobile business pressured by slowdown economy and impacts of COVID-19

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The spread of COVID-19 since February 2020 resulted in a lockdown of Thailand in 2Q20 and cross-border travel restriction measures were maintained until the end of the year, conditions that impacted the country's economy, in particular its tourism and export sectors but also the consumer spending. Overall, the Gross Domestic Product contracted by 6.1%. The telecommunications sector's revenue was also hit as mobile service shrinking due to a loss of tourists and lowered purchasing power among domestic consumers, who turned to value-for-money packages to reduce spending. Mobile phone sales also dropped, while the industry revenue contracted by 6% in 2020 compared to the previous year, which saw growth by 4%. Total mobile subscribers were 91 mn., 3% decreased due to the loss of tourists, with mobile phone penetration rates for Thailand at approximately 140% of the population. While the majority of mobile phone users continued to be on prepaid plans, comprising 72% of all subscribers, postpaid subscribers grew in line with a trend towards adoption of monthly plans to satisfy a demand for continuous data.

Competition in the mobile industry remained intense since late 2019. Operators continued to offer fixed-speed unlimited packages for prepaid and postpaid customers to acquire and maintain customer

bases. Although the industry was able to uplift the price of these packages to alleviate contracted revenue, dampened purchasing power and a loss of tourists still resulted in a lowered Average Revenue per User (ARPU)for the industry.

Officially launch 5G service for consumers

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Following the spectrum license auction on 16 February 2020, operators have begun expanding their 5G networks to serve customers and corporate clients, focusing on strategic locations with a high density of demand, particularly the Eastern Economic Corridor (EEC) and the key cities that are leading economic zone. In October 2020, operators began to unveil their 5G packages alongside content based in 5G such as augmented reality/virtual reality (AR/VR), cloud gaming and high definition video streaming in order to generate additional revenue and presenting a new experience to customers. Given an early stage of 5G technology and limited number of 5G handset models with a high starting price of Bt10,000, the adoption rate for 5G subscribers in 2020 was still limited.

Robust growth in fixed broadband following demand for work and learn from home

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The fixed broadband market continued to grow robustly over the past year, reaching a total value of approximately Bt61mn, up 4% from last year. The necessity to "Work from Home" and "Learn from Home" during the lockdown rapidly expanded demand for home internet and prompted all service providers to compete on price and new services responsive to new customers. By the end of 2020, the total fixed broadband subscribers exceeded 11.2mn households from 10mn in 2019, with a penetration rate increasing to 51% from 47 % in 2019.

Competition was intensified this year with service providers trying to attract customers using pricing strategies, lowering the starting price of a package to Bt299/Month for 100 Mbps from Bt599/Month a year earlier. Packages for 1 Gbps were priced from Bt590/Month, within reach of all households and now the standard price. Half price discounts were used as a strategy to attract customers from other providers and were the main reason for the decrease of the industry's ARPU. Nonetheless, service providers could add value by presenting value added services such as higher speeds, and equipment upgrades. Convergence packages including home internet, mobile phone sim cards and content were another strategy for growing and maintaining customer bases.

Outlook for 2021

Revenue from mobile business continues to be pressured by sluggish economic recovery

The COVID-19 pandemic situation this past year was a catalyst for rapid change in consumer behavior, forcing people to work and study online from home and hiking demand for data. With the COVID-19 situation still uncertain, the tourism revenue that is a major driver of the Thai economy remains hampered and has in turn hindered domestic purchasing power, slowing economic recovery. Due to these factors, competition in 2021 is expected to remain high with operators to continue to deploy pricing strategies to attract customers while fixed speed-unlimited data packages are expected to be offered for consumers with limited purchasing power. These key factors will pose a challenge to raise revenue for the telecommunication industry.

Positive factors for revenue in the telecommunication industry will include widespread access to a vaccine for COVID-19, quicker than expected economic recovery and a softening of competition in terms of price and handset discount campaigns. A lower price of smartphones that support 5G will promote 5G adoption and would allow operators to increase revenue from 5G related services.

5G network expansion to offer value-added services to consumers and penetrate enterprise clients

The trend towards 5G adoption among both general consumers and enterprise clients will be apparent in 2021 as more brands and models of smartphone begin to support 5G. Over 90 models of 5G smartphones with a starting price under Bt10,000 are expected to enter the Thai market. A more diverse array of 5G content also becomes available from leading domestic and international creators. Content will encompass travel, sports, news, concerts and online games and provide new experiences to drive demand. Providing 5G will become an important tool for attracting customers, especially those with high purchasing power and operators will compete to be the leader in providing 5G by strengthening their networks, expanding 5G coverage and enhancing 4G capacity. In 2021, operators are scheduled to receive the 700MHz and 26GHz licenses that was earlier auctioned in 2020. The 700MHz being low band provides wider coverage to support 5G and IoT devices while the 26GHz, millimeter-wave band, will support massive network capacity and allows for Gbps speed data transfer. With these combined characteristics, operators can effectively apply 5G technology to both the industrial sector i.e. engaging in industrial partnership on remote machinery control, security, Smart Home solution and more, as well as the consumers i.e. deploying Fixed Wireless Access technology for home broadband internet.

Fixed broadband expected to maintain growth in 2021

The year 2021 should see consumers further adapting to the digital lifestyle, altering their daily and work lives, and increasing demand for services using online platform, including online content and online games, leading to higher demand for home internet service. Households with fixed broadband connectivity remain at a medium level of 51 percent, so the fixed broadband sector is expected to continue delivering growth potential in 2021. 5G will bolster high-speed internet by providing Fixed Wireless Access (FWA) service in remote areas previously hindered by cost effectiveness while lowering costs and installation times.

Competition in the fixed broadband market is likely to remain high in 2021. However, service providers are expected to use value added services to grow and maintain their customer bases with the strategy to include increasing internet speeds and upgrading client equipment while selling additional services such as more routers for better home coverage or convergence packages that includes different services for higher revenue and to sustain ARPU.

Business Direction over three years

Technological advancements in the digital era have triggered a rapid change in consumer behaviors and demands while the COVID-19 pandemic caused consumers to further augment their work and lives by using digital technology to adapt to the New Normal. The business and industry sectors similarly had to undergo a digital transformation for better efficiency and had to develop their products and services to match evolving consumer demands.

The telecommunications industry serves a key infrastructure for national development and will be even more important as technology is deployed to recover the business and industries to grow in the New Normal. In particular, 5G technology will serve as a fundamental for business collaborations that will enhance efficiencies across the sectors and allow for innovative products and services.

AIS is committed to its vision of being a Digital Life Service Provider and focuses its core businesses in mobile phone service, fixed broadband internet and digital solutions. We work to build innovation and technologies that can serve both individual consumers and well as business customers, with an aim to enhance people lifestyle and capabilities, build business competitiveness for sustainable growth.

Reinforce core business and maintain leadership with quality service and operational excellence

Internet usage on mobile phones in Thailand continues to be on an uptrend with smartphone prices continuing to adjust downward leading to higher smart phone usage on mass population. The spread of COVID-19 also triggered a rapid change in consumer behavior, necessitating the need for internet to access digital platforms that circumvent the disease such as e-Banking, e-Commerce, Mobile Payment, Food Delivery, Parcel services and Video Streaming. The role of these services has grown in importance to daily life and amplified demand for internet connectivity moving forward.

AIS, as the leading telecommunications service provider in Thailand, is committed to investing and development of its network to provide service on 4G and 5G technology. The multi-band and multi-technology network equipment will support both 4G and 5G enabling efficient investment to serve increasing 4G data demand in short term and capturing the raising adoption of 5G in medium term. Moreover, AIS is determined to be a leader in bringing richer contents and entertainment, serving at a more personalized level through enhanced data analytics. AIS aims to maintain its industry's leadership with service and operational excellence as well as network quality

At the early stage of 5G, AIS has given priority to building up its technological knowledge and working with business partners in various industries to build potential use cases and commercial solutions, hence serving to develop a robust 5G ecosystem. The 5G characteristic of high speed, low latency and massive connectivity implies various potential for services to individual consumers as well as corporate clients i.e. three-dimensional video conferencing, cloud operations, industrial automation, mission critical software and Smart Cities/Smart Homes/Smart Cars. For corporate clients, in particular, AIS is prepared to develop 5G technology to enhance industrial automations and data analytics, building on AIS expertise in network knowledge to help businesses evolve and create new revenue streams.

Grow access to home broadband leveraging mobile infrastructure

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Quality home internet connectivity has become an essential part of living in the digitally connected world. The growing demand of video streaming, high definition online gaming and a trend toward working from home due to the new normal triggered by COVID-19 has necessitated home internet to be ever more reliable at faster speed to support a growing data stream. AIS aims to expand the broadband internet network into urbanizing areas, building on to its mobile network infrastructure. With the capability of 5G technology, home broadband can benefit from deploying 5G as Fixed Wireless Access (FWA), which enable connectivity in areas where fiber is prohibitively expensive or where there are geographic limitations in building and maintaining the infrastructure. FWA can reduce the setup cost and time as it does not require physical fiber optics layout as last mile, but rather connected via mobile equipment.

With growing access to home, AIS aims to provide more services to family in the future being home entertainment, home security and automation, etc. Consumers tend to be more connected relentlessly and seamlessly on multiple devices. AIS believes in providing consistent service availability and quality both indoor and outdoor for customers and their families. Today, AIS continue to reach out to the existing mobile subscriber base to offer home broadband offering bundled package of mobile, home internet, AIS PLAY, which offers video contents and OTT programs.

Drive new value added digital services to customer's changing lifestyle and strengthen enterprise's competencies

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While connectivity has become a necessity, platforms has become the focus of user utility. The importance will no longer be on the means to connect, but rather the destination or the services that customers need to reach. AIS aim to expand its offerings and be customer's Digital Life Service with added new services that are personalized, real-time and predictive including services like video, mobile money, IoT, Cloud, game online, digital marketing, online insurance and other services. By building strong partnership, increasing convenience and platform usability, AIS targets to grow its digital service user base. Revenue model will range from subscription base, fee base to advertising model.

For corporate clients, AIS seeks to assume a crucial role in fulfilling the demand of businesses undergoing digital transformation to adapt to the new normal. The focus will be on building new ICT services and cloud service. Working with leading ICT service providers, AIS has positioned itself to assist organizations in effectively managing their operational costs leveraging secure and solid ICT and network technology. With the potential of 5G technology, AIS will also collaborate with business partners in diverse industrial sectors to create product solutions and industry solutions that will to enhance operational efficiency and business competitiveness, contributing to further economic development.

Integrating technology to improve business processes and uplift people development

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AIS aims to leverage digital technologies to reinforce its competitive services. For example, deploying data analytics to create and offer targeted offerings. Technologies such as Robotic Process Automation (RPA), Artificial Intelligence (AI), and Machine Learning (ML) are being deployed to enhance customer services and internal processes by reducing time and cost to serve while responding on-demand to customers. Deployment of digital technologies will also allow AIS to achieve cost optimization. Lastly, People has been one of the key focuses in achieving long-term and sustainable success especially amid the radical changing business landscape. AIS encourages its employees to be active with growth mindset and open to rapid changes. AIS Innovation Center and digital learning platform, which gives on-demand and variety digital courses, have been introduced to shape personnel knowledge and skills. Reinforcing such programs, AIS aims for its people to be able to employ technologies and innovation in their work process and; therefore, collectively move toward its vision of being 'Digital Life Service Provider'.

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 2020 as follows;

1) Fixed assets of AIS and subsidiaries

	Type of Ownership	Estimated Useful Life (years)	Unit: Million Baht
Tools and equipment for providing telecommunication network and fixed broadband services	Ownership	2 - 20	244,533
Right-of-use assets	Right-of-use	1 - 12	70,503
IT equipment	Ownership	5-10	11,934
Network under construction and installation for rendering telecommunication and fixed broadband services	Ownership	-	4,266
Other fixed assets			5,774
Total			**337,010**
Less accumulate depreciation/ amortization			(155,769)
Net Book value			**181,241**

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 has 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 Spectrum License granted by NBTC

Spectrum license	License Fee	Grant date	Grant Period	Expiration
The right to use 2.1 GHz spectrum • Bandwidth of 2x15MHz • Provide telecommunication network covering at least 50% of population within 2 years and at least 80% of population within 4 years	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 • Bandwidth of 2x10MHz • Provide telecommunication network covering at least 50% of population within 4 years and at least 80% of population within 8 years		30 Jun 2016	15 years	30 Jun 2031
The right to use 1800 MHz spectrum • Bandwidth of 2x15MHz • Provide telecommunication network covering at least 40% of population within 4 years and at least 50% of population within 8 years		25 Dec 2015	18 years	15 Sep 2033
The right to use 1800 MHz spectrum • Bandwidth of 2x5 MHz • Provide telecommunication network covering at least 40% of population within 4 years and at least 50% of population within 8 years		21 Sep 2018	15 years	15 Sep 2033
The right to use 2600MHz spectrum • Bandwidth of 100 MHz • 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. • 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 $2^{nd} - 7^{th}$ installment starts in year 5 - year 10		21 Feb 2020	15 years	20 Feb 2035
The right to use 700MHz spectrum • Bandwidth of 2x10 MHz		15 Jan 2021	15 years	14 Jan 2036
The right to use 26GHz spectrum • Bandwidth of 1200 MHz		Tentative in Feb 2021[1]	15 years	15 years from license granted date
The right to use 700MHz spectrum • Bandwidth of 2x5 MHz		Tentative in 2Q2021[1]	15 years	15 years from license granted date

[1] The license granted date may be changed subjected to NBTC.

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.

8. Nomination and Appointment of the External Auditor and the Annual Audit Fee: The Audit and Risk Committee took into consideration the nomination and appointment of the external auditor and the annual audit fee for 2021 based on bidding and the assessment of qualification, competency, experience in auditing, independence in auditing according to the Code of Ethics for Professional Accountants and requirements of the SEC, and the audit fee. After careful consideration, the Audit and Risk Committee therefore proposed to the Board of Directors to seek approval to appoint the external auditor from Deloitte Touche Tohmatsu Jaiyos Audit Co., Ltd. as the external auditor for the year 2021 at the Shareholder Meeting. In addition, the Audit and Risk Committee has reviewed non-audit services in terms of independence provided by the said audit firm.

9. Performance Assessment: The Audit and Risk Committee's self-performance assessment has been conducted annually, as an individual and group assessment, according to the SET guidelines. The result showed that the Audit and Risk Committee has performed its duties and responsibilities, according to the Audit and Risk Committee Charter, with a commitment to accuracy, prudence, transparency, and independence. The Audit and Risk Committee has full access to all pertinent information from management, employees and associated parties. The Audit and Risk Committee has given beneficial and practical comments and recommendations benefiting all stakeholders.

10. Revision of the Audit and Risk Committee Charter: The Audit and Risk Committee has reviewed the revision of the Audit and Risk Committee Charter annually by taking into consideration best practice in accordance with the SEC's regulations and international standards.

In summary, the Audit and Risk Committee concluded that the Board of Directors, Management, and Executive Directors could perform their duties with integrity and diligence in pursuit of the Company's goals and in preparation for new challenges, and that the Company could demonstrate commitment to effective, transparent Corporate Governance including prudent risk management and internal control system.

Mr. Krairit Euchukanonchai
Chairman of the Audit and Risk Committee

Mr. Surasak Vajasit
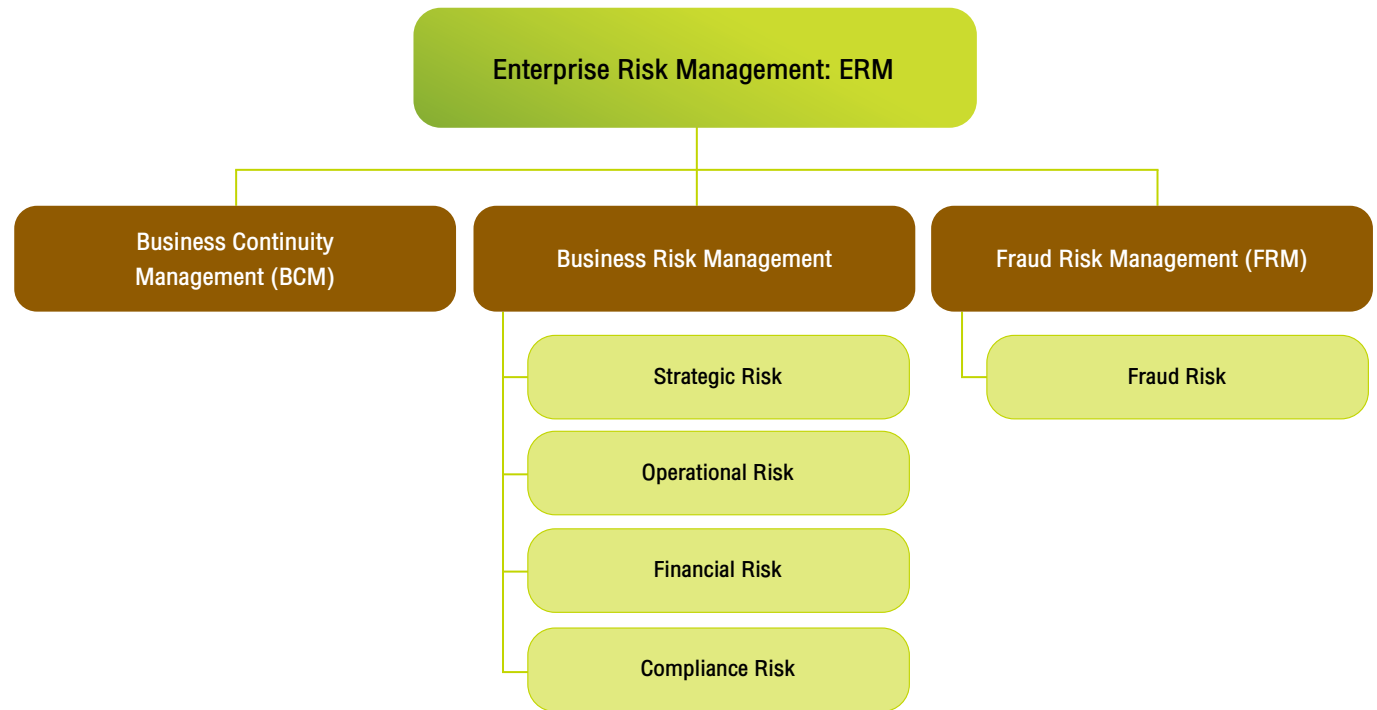Audit and Risk Committee Member

Mr. Prasan Chuaphanich
Audit and Risk Committee Member

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 respond to the expectations of various stakeholders properly. 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.

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              Enterprise Risk Management: ERM

Business Continuity    Business Risk Management    Fraud Risk Management (FRM)
Management (BCM)
                          Strategic Risk              Fraud Risk

                         Operational Risk

                          Financial Risk

                         Compliance Risk
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AIS fully considered different significant business risks in line with its risk management guidelines, namely Strategic Risk (S), Operational Risk (O) Financial Risk (F) and Compliance Risk (C), 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 is an important topic that the Company considers part of operational risks.

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 is applied to business risk management and fraud risk management. The 7 steps in the risk management process are:

AIS Enterprise Risk Management Framework and Processes

7 Monitor and Report
6 Control Activities
5 Risk Response
4 Prioritize Risk
3 Assess Risks
2 Identify Events
1 Set Objective

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; in addition, the correlation between the impact of any risk and how it could affect another risk.

4. **Prioritize Risks** with consideration to each risk's degree of importance and the potential damage to the Company.

5. **Plan risk response measures** with consideration to the level of risk involved and 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 should 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.

Audit and Risk Committee

The Audit and Risk Committee, appointed by the Board of Directors, is responsible for performing risk oversight to ensure accordance 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.

Executive Committee

The Executive Committee is responsible for ensuring that 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 Committee

The Risk Management Committee is chaired by the Chief Executive Officer and comprises heads of 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.

The Risk Management Committee reports the results of its risk management 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 In 2020, 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.

Risk Management Section

The Risk Management Section is responsible for providing advice to 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 with 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 it 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 Section, 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 fraud matters. The policy established the following three practical guidelines:

1. Prevention – proactively identify, assess, review and respond to all possible fraud in the organization and communicate such issues to employees at all levels to build awareness and an understanding of the importance of fraud, corruption and misconduct reporting.
2. Detection – check or investigate any misconduct or fraud case 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 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.
- 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.
- Providing knowledge of Risk Management principles to employees via user-friendly presentations published on the intranet.
- Emphasizing the importance of the integration of risk management processes and strategic planning. When a new strategy
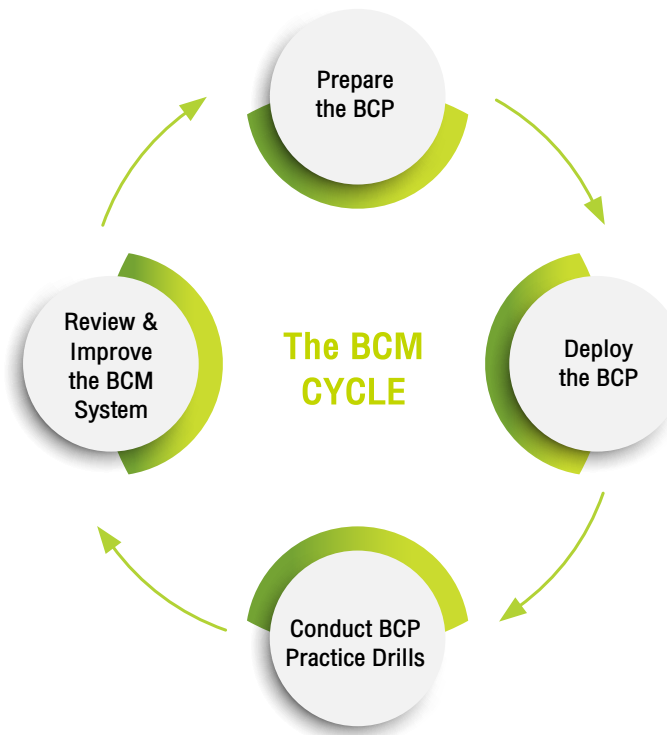
is being developed, relevant personnel must analyze related activities against any potential risks that may occur and report results to the Head of their Business Unit, so that responsible persons can develop measures to prevent or reduce risks to an acceptable level and enhance the possibility to achieve goals. The Company plans to integrate risk management into its business plan approval process and performance appraisal.

Business Continuity Management

The Company has set in place a business continuity management system in accordance 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 an 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 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 was 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

The BCM CYCLE

- Prepare the BCP
- Deploy the BCP
- Conduct BCP Practice Drills
- Review & Improve the BCM System

1. Prepare business continuity plan:
A business continuity plan must be prepared to direct coping in the event of a disaster with accordance to the objectives of business continuity management. The plan is based on consideration of both a business impact analysis and risk assessment to determine the critical business process of each unit and must define the period of time after which outages of the business process become 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 to implement the business continuity plan.

3. Conduct business continuity plan practice drills:
Arrange to conduct business continuity plan practice drills according to a defined schedule and targets. Update the plan to make it current and report results of practice drills to the commander accountable for the business continuity plan; gain acknowledgment from the Crisis Management Committee.

4. Review & improve business continuity management system:
Review and improve the business continuity management system to ensure its effectiveness and alignment with the risk level currently faced by the organization.

Overview 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 has also 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 the 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, such as the preparation of the business continuity plan; the allocation of resources according to the business continuity plan, to carry out practice drills and to review the plan to ensure the effectiveness of business continuity management.

Performance results in 2020 and goals for 2021

For its Business Continuity Management System (BCMS), AIS received ISO 22301:2012 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 and further enhancing its sustainability. AIS has continued to conduct business continuity practice drills for the continuation of critical business processes. In 2020, the drill scenario was a ransomware and Denial-of-Service or DOS attack at the Company's main data center resulting an interruption to the AIS network and services to test responsiveness of the business continuity plan in ensuring the continuity of service. In 2021, The Company has proposed to apply the ISO 22301:2012 framework to all business processes and ensure that AIS is ready and able to respond to and manage a variety of situations in times of crisis.

For its Risk Management System, AIS established a risk management process and reported results regularly, with a focus on emerging risks. 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 may manage risks in a timely manner.

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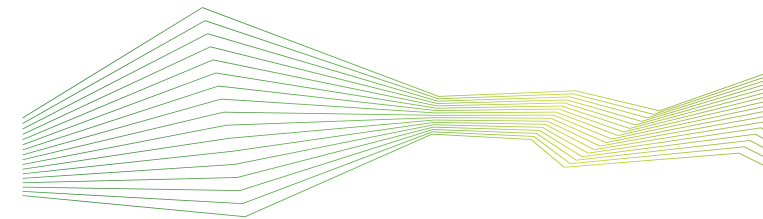
Risk factors

Towards 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 effect AIS and its group's business operations.
4. Significant movements in the economy, society and environment in both the short term and long term.
5. The causes of potentially adverse events which may effect 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.

1. Risk identification process

Management and employees identify risks at both the corporate and functional level

A Risk Management Working Group considers and selects identified risks and proposes them to the Risk Management Committee as corporate risks

The Risk Management Committee considers the proposed risks and prioritizes them based on their likelihood and potential impact. The process includes the definition of acceptable risk levels, (Risk appetite and tolerance), as well as the identification of mitigation and risk management actions.The Risk Management Committee then proposes its plan to the Board of Directors for acknowledgement.

Significant risk factors that arise from the changing environment can be classified as follows:

2. 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 which is 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, would be 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 2019
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 license or concession agreement with State Enterprises. This required the transfer of assets in 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 an impact to AIS business operations or concerns for compliance to an 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 2019
Financial status and company reputation	No significant change

Operational Risks

1. 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.
- Cyber-attacks, e.g. DDoS attacks, website phishing, malware/viruses, etc, 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:
- Applying suitable international standards and alignment with the Cybersecurity Act and Personal Data Protection Act.
- Extending and expanding security tools to cover significant systems.
- Enhancing information security measures, e.g., by reviewing the access control procedure; maintaining a closed working environment; and building IT awareness across the entire Company.
- Enhancing staff competencies related to Cybersecurity.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue, business or IT systems disruption and company reputation	Increasing in likelihood

2. 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:
- Strive to gain innovation leadership in providing products and services.
- Introduce Fixed Mobile Convergence (FMC) products by continually expanding the Company's Fixed Broadband network to enhance network quality and coverage.
- Enhance the quality of after sales services to maintain the customer base and attract new customers, in particular through the Serenade Privileges program. Strategies to develop the benefits of Serenade members include expanding the Serenade Club, focusing on Serenade device offerings and expanding privileges from Top-Trend partners such as dining, travel, and entertainment.
- Enhance the quality of customer services via self-service channels and the myAIS application, enabling customers to carry out various transactions by themselves. At the same time, enhancing the AIS points program so that customers can fully enjoy benefits.
- 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 2019
Financial revenue, market share and company reputation	No significant change

3. Risk from Changes in Customer Behavior from Technological Developments

Changes and advances in technology, especially digital technology, have enabled service providers to launch new products under new business models and more digital and online channels have been employed to access customers. New business models have lower cost structures compared with traditional models. These developments have also changed consumer behavior as they have more choice from new services in the digital world. In light of this, the Company has found it necessary to adapt and develop its business plan to tackle these challenges, to maintain its existing customer base, generate revenue growth, and ensure long-term sustainability.

AIS has thus 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.
- Enhance the digital customer service system, e.g., increase engagement with customers via a fully online system, build AI/Chatbot capabilities and implement Robotic Process Automation for customer services.
- 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.
- Improve customer insight acquisition using Data Analytics to provide customers with products and services according to their needs and at the right price.

- Develop the network infrastructure, customer service systems and support systems by incorporating new technology such as cloud technology.
- Grow the corporate business and content business, e.g., by expanding the IoT business and creating and driving a complete Cloud Business Ecosystem.
- 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 seeking trends and changing direction of the relevant technology world. Build partnerships with external organizations and business partners to research and develop innovation.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue, market share and company reputation	Emerging risk

4. Risk from Equipment Adaptability for Digital Capacity
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 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.

The Potential Impact of Risks	Risk Movement from 2019
Company reputation and market share	No significant change

5. Supply Chain Risk
The Company purchases network and base station equipment including maintenance services from a small number of vendors/suppliers which have the relevant technology. If those vendors/suppliers are unable to deliver the products or services, it may affect business operations.

Moreover, in the past year, trade disputes between the People's Republic of China and the United States of America intensified and now pose the possibility of impact on the Company's operations as a number of AIS business partners are private companies in China. These business partners may not be able to deliver products and services to AIS as agreed.

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.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue, business or IT system disruption, and company reputation	No significant change

6. Economic and Political Risk
Changes in economic and political circumstances create both business risks and opportunities for AIS. Such changes could cause adverse effect to demand and supply and to the purchasing power of customers. However, as communication via voice or data service is now a common part of daily life and is at an affordable price, impacts from economic and political shifts to The Company remain at an acceptable level.

The Potential Impact of Risks	Risk Movement from 2019
Cost and /or revenue	No significant change

7. 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 and Company revenue.

Towards ensuring the Company's continuity in delivering services to customer, AIS has set up redundancy for several key operating systems required to provide service. The Company also 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. AIS applies a Business Continuity Management (BCM) policy at both the corporate and departmental levels and conducts an Annual Review and carries 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 completion and implementation of the Company's Business Continuity Management System to cope with crisis situations.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue, company reputation and unachieved operations	No significant change

8. Climate Change Risk

Climate change is a global issue with the potential to impact AIS business operations, infrastructure and supply chain, including through economic and social impact, as changes in global temperatures affect living conditions, food and agriculture systems. In addition, world government's are pushing for the adaptation of businesses to achieve a decarbonized society, which creates a transition risk that affects both the cost of doing business and the value of property.

Towards reducing long-term impacts, the Company is incorporating the following steps into its risk management plan:

- Reduce greenhouse gas (GHG) emissions by setting direct and indirect business operations greenhouse gas emissions targets.
- Select and upgrade various equipment to improve energy efficiency and reduce electricity expenses.
- Increase the proportion of renewable energy usage e.g. using solar energy at data centers and base stations.
- Eliminate obsolete network equipment and recycle in a sustainable manner; manage electronic waste from customers and enter their discarded devices into the recycling process.
- Encourage customers to use electronic services e.g. e-statement, e-payment, e-top up and e-receipt.

The Potential Impact of Risks	Risk Movement from 2019
Business disruption, maintenance cost, cost of doing business in the long term	Emerging risk

9. Risk from the COVID-19 pandemic

The 2019 Coronavirus (COVID-19) epidemic resulted in widespread changes in economic and social conditions in Thailand. The "New Normal" way of life resulted in a decrease in consumer spending but increased demand for communication and information applications. AIS sought new formats of products and services to be offered to consumer and as a result saw its financial revenue directly affected. In addition, the COVID-19 outbreak had a direct impact on the Company's operations, which had to be changed in line with the new lifestyle. While the safety of employees is the main priority, it is necessary for AIS to maintain the quality of products and services in order to provide customers with maximum satisfaction.

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

- Provide full digital service to customers, e.g., increase engagement with customers via a fully online system, build AI/Chatbot capabilities, and implement Robotic Process Automation for customer services.
- 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, 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.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue, business interruption and employee safety	New risk in 2020

10. Risks from substitution of products and services

The rapid growth of data transmission via text, voice or video (Over the Top: OTT), where no investment is required has resulted in lower cost for service providers and has also enabled consumers to enjoy more alternative services from OTT services with low fees or in some cases for free. 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, even as the Company incurs higher cost compared to OTT and/or new service providers.

AIS has thus 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.
- Develop the network infrastructure, customer service systems, and support systems by incorporating new technology such as cloud technology.
- Grow the corporate business and content business, e.g., by expanding the IoT business and creating and driving a complete Cloud Business Ecosystem.
- Transform the organizational structure and develop the competency of employees to support key strategies of the Company.
- Study new business investment guidelines to create new sources of revenue for the Company.

The Potential Impact of Risks	Risk Movement from 2019
Financial revenue and competitiveness	Emerging risk

11. 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 comply 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.