



NO.1 NETWORK IN THAILAND



SUSTAINABILITY HIGHLIGHTS

"Thriving in a greener and inclusive digital world"

Drive Digital Economy

4.1%
of revenue generated from new digital services

Enhancing cybersecurity system
with the **zero-trust model** 



MOST
INNOVATIVE
KNOWLEDGE
ENTERPRISE

Thailand Most Innovative Knowledge
Enterprise (MIKE) Award 2022

Encouraging **1,482 employees** to gain
knowledge about the Robotic Automation Process (RPA)

Promote Digital Inclusion

Improving the socio-economic condition of
2.2 Million People

Expanding 5G network to cover
85%
of the total population



Increasing the awareness and promoting the skills needed
to be a digital citizen through **AUNJAI CYBER** program for



a total of
169,930 People



Launching the **1185** hotline
or AIS Spam Report Center

Act on Climate



Reducing GHG emissions by
25,508 tCO₂e

Installing additional solar panels at
3,186 base stations



Using blockchain technology to develop
e-waste⁺ application

Expanding e-waste drop points to over
2,500
locations nationwide

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Message from Chairman of the Board of Directors



In 2022, Thailand showed signs of recovery from the COVID-19 pandemic, with society seemingly likely to return to normal. Nonetheless, downside risks from ongoing international conflicts have set back the rebound, exacerbating inequality issues in society.

In the meantime, Thailand has to cope with increasingly frequent and intense climate risks. Reviving and developing the economy demand the creation of a better economy and society to achieve sustainable growth while leaving no one behind by building within society itself an immunity toward adverse changes that may arise going forward.

Realizing the significance of digital technology as a vital tool in driving the economy and enabling people to access a wealth of knowledge, AIS pledges to draw upon its strength as a Digital Life Service Provider to propel

mutual growth between mankind and the environment in the digital world sustainably. In the past year, we adjusted and set more challenging business strategies and sustainability targets to drive the company in developing the business in response to the changing contexts, both domestically and globally.

In pursuit of transforming itself into a “Cognitive Tech-Co”, providing digital services and creating a diverse range of innovations to add new sources of revenue, increase competitiveness, and achieve robust growth in the long-term, AIS anticipates this key transformation as also having the potential to lead everyone in Thai society to embark upon the digital economy with concern for the environment. The three-prong sustainable development framework serves as a compass showing the way to carrying on our sustainable business operation vision. The framework

comprises three dimensions: driving digital economy, promoting digital inclusion, and acting on climate. In 2022, the integrated operations and key developments were as follows:

Driving digital economy AIS resolves to create innovations to deliver products and services that help upgrade the quality of life for Thai people alongside developing potential and business growth via collaboration with partners in expanding the 5G network which currently covers 85% of total population. The collaboration also extends to driving a broad array of digital products and services for both retail and enterprise customers. Key highlights include a collaboration with AIS’ business partners to develop 5G Smart Autonomous Vehicles Solutions for logistics and our investment in startup businesses to create platforms serving as a hub to promote solutions and one-stop services. The critical infrastructure allowing



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AIS to deliver a diverse range of useful and safe digital services requires a reliable cybersecurity system and personal data protection for customers. Last year, in an attempt to elevate safety standards, AIS adopted the Zero Trust security framework to ensure higher overall levels of security, using digital technology to verify every connection to reduce human errors and improve the data access process of an organization's critical data. Also instrumental to driving the company's digital innovation efforts is quality personnel. As such, we are determined to instill the digital knowledge and skills into our personnel, empowering them to adjust to new strategies and become experts in digital technology for the future of the company and quality citizens of the digital economy as a whole.

Promoting digital inclusion AIS firmly believes that digital technology is a tool that helps reduce inequality in access to fundamental services. This gave rise to "AIS Academy for Thais," building upon the digital LearnDi platform to offerequitable diversified opportunities for personnel in the Thai education system to develop new digital skills and access a new body of knowledge anytime and from anywhere. Realizing that the increased adoption of digital technology comes with risks from internet usage, AIS was dedicated to building digital immunity for users through the AUNJAI CYBER course comprising online content and tests. The course, which reached 169,930 users, was designed to instill knowledge and awareness into users, enabling them to cope with cyber threats effectively.

Acting on climate Having been well aware of the climate change impacts and collaborative efforts of different sectors across the world to handle the climate issues, we have adjusted the targets to be more challenging and in line with key developments, both locally and on an international scale. The focus is on achieving net-zero

emissions by 2050 in compliance with the Science-based Targets initiative (SBTi) standards. In the past year, we appropriately employed technology and planned the use of network equipment to enhance energy efficiency together with promoting the utilization of renewable energy through expanding cooperation with partners that have expertise in clean energy. The efforts resulted in AIS having installed solar panels at another 3,190 locations and reducing emissions by 25,508 tonnes carbon dioxide equivalent in 2022. For waste management, we resolved to accomplish zero landfill of e-waste through proper disposal of waste from our operations and raising the awareness of Thai people about e-waste management via the "AIS HUB of e-waste" project.

AIS is dedicated to taking advantage of its strengths as a Cognitive Tech-Co in driving business sustainability with concern for all stakeholders to create business value and contribute to society and the environment in accordance with good corporate governance principles. The company also commits to supporting the UN Sustainable Development Goals to function as an exemplary model in the telecommunications industry and promote development of all sectors to grow sustainably together.



(Mr. Kan Trakulhoon)
Chairman of the Board of Directors



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AN AFFIRMATION OF OUR DETERMINATION TOWARDS SUSTAINABLE BUSINESS

Global Level



In 2022, AIS received a rating of AA in the MSCI ESG Ratings Assessment



FTSE4 Good Index Series
8th Consecutive Years

Member of
Dow Jones Sustainability Indices
Powered by the S&P Global CSA



Dow Jones Sustainability Indices (DJSI)
2022, member of DJSI World and DJSI Emerging Markets

IDC's Future Enterprise Awards 2022 in "Special Award for Sustainability" by International Data Corporation (IDC)

Advanced Info Service Public Company Limited
Telecommunication Services

Top 5%
S&P Global ESG Score 2022

90 /100

As of February 7, 2023.
Position and Score are industry specific and reflect exclusion screening criteria. Learn more at [spg.com/esg](https://www.spglobal.com/esg)

Top 5%
S&P Global ESG Score 2022



In 2022, AIS received an ESG Risk Rating From Sustainalytics.
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National Level



Thailand Sustainability Investment (THSI) 2022
8th Consecutive Years



ESG 100 8th Consecutive Years



Highly Commended, Sustainability Excellence
by the Stock Exchange of Thailand and Money and Banking Magazine



Human Rights Awards 2022 by the Rights and Liberties Protection Department, Ministry of Justice

Disclosure Standards



Global Reporting Initiative



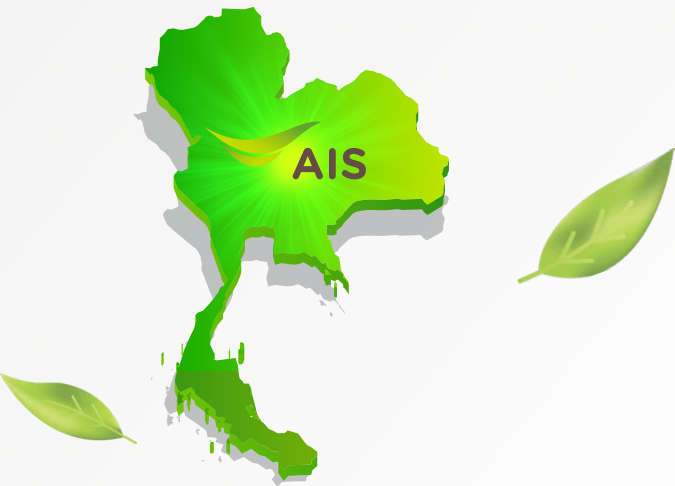
Sustainability Accounting Standards Board



Carbon Disclosure Project



Task Force on Climate-Related Financial Disclosures



Over the course of 32 years of providing telecommunication infrastructure to Thai society, starting in 1990 under collaborative contract or concessionaires, AIS was granted the right to utilize state frequencies under the 25-year Built-Transfer-Operate (BTO) agreement. In 2010, the National Broadcasting and Telecommunications Commission (NBTC), the government agency regulating broadcasting and telecommunication, was established and tasked with granting spectrum licenses. The licensing scheme, which is a major turning point for the telecommunications industry in Thailand, supports fair competition as well as the development of new technologies.

AIS remains committed to its vision of

“To become the most-admired Digital Life Service Provider in Thailand”

Through the following missions:

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



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AIS Transformation from Digital Life Service Provider Towards Cognitive Tech-Co

Delivering the excellent digital experience with our four core businesses




Mobile Communication Service

With 5G, 4G, 3G and 2G technology under the brand "AIS" provides a monthly subscription service, top-up service as well as international calls and roaming with network partners in over 240 destinations worldwide.




Fixed Broadband Service

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



Enterprise Business service

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



Digital Service

Focuses on creating value-added digital services and serving as a new revenue source in the medium and long term in anticipation of a change in consumer behaviors and technology.

In 2022, AIS's total assets were valued at Baht 337,044 million with a market capitalization of Baht 579,971 million, ranked 7th on the Stock Exchange of Thailand.



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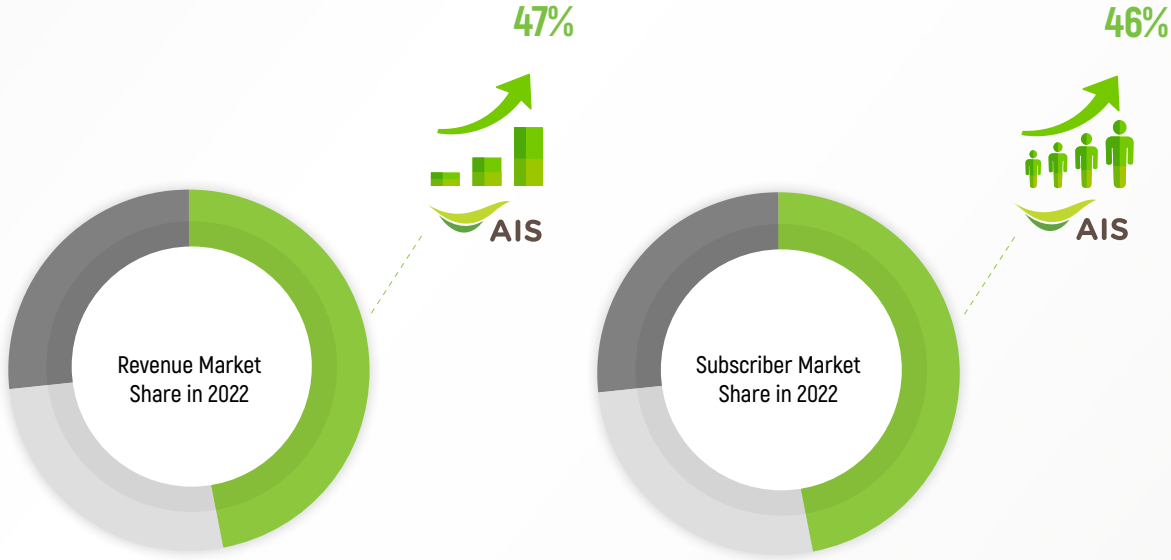
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Leading the Mobile Market

As of the end of 2022, AIS maintained its position as the leading mobile operator in Thailand, with a revenue market share of 47%, and a total of 46.0 million subscribers nationwide. The mobile phone service revenue accounted around 90% of total service revenue. AIS provides quality services on 5G, 4G, 3G and 2G networks, using frequency bands of 26 GHz and 2600, 2100, 1800, 900, and 700 MHz for a total of 1450 MHz (2x75 MHz on FDD technology and 1300 MHz on TDD technology). The 1420 MHz is under the license granted by NBTC and another 2x15 MHz is under a TOT partnership agreement. AIS's mobile network currently covers over 98% of the country's population. With the highest spectrum holding among peers, AIS remains the industry leader in both network quality and services.

Furthermore, AIS has maintained its position as the leader in offering 5G-based services in Thailand. Following the official launch in 2020, the company has continued to expand its 5G network to cover 77 provinces and reach 85% of Thailand's population as at year end 2022 backed by most spectrums in the industry. AIS has been primed to cope with the fast-growing 5G market and deliver a variety of 5G-based experience to address customer demand, both from general customers and corporate clients. Currently, AIS has a 5G customer base of over 6.8 million.



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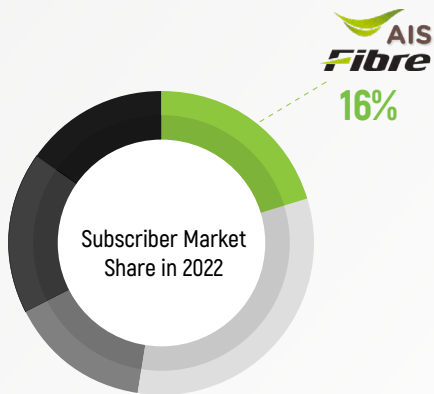
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Growing in the Fixed Broadband Market



“The other fixed broadband operators include TRUE, NT and 3BB and others”

AIS started its fixed broadband business under the brand “AIS Fibre” in 2015 with the intent to increase a new revenue source, building on the existing fiber network for its mobile business and the mobile customer base. Currently, AIS Fibre is available in 77 cities, covering 8.8 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 a superior speed of up to 2 Gbps. Fixed broadband revenue in 2022 accounted for 8% of total service revenue. At present, the total number of subscribers is 2.2 million for more than 16% of the fixed broadband subscriber market share.

Enhancing Potential in the Corporate Client Business

Building on the enterprise data service which offers mobile communication service and internet links to corporate clients, AIS has expanded more service to support digital transformation to small-, medium-, and large-sized businesses. Its end-to-end service encompasses cloud service, data center, cyber security, Internet of Things (IoT), and ICT solutions (CCIID). In 2018, AIS acquired CS Lox Info Public Company Limited to strengthen its capabilities to provide integrated service to enterprise clients. For 2022, revenue from the Corporate Client Business (excluding mobile communication revenue) accounted for 3.9% of total service revenue. The distinctive features of the 5G technology which includes high speed, low latency, and multi-device supportive features coupled with the network capabilities and partnership collaborations have enabled AIS to use this advanced technology to support the services for the industrial sector efficiently. Various industries focus include smart industry solution for manufacturing, focus cases in transportation and logistics, smart property, and retails. Currently, AIS offers a variety of 5G-enabled services such as 5G Fixed Wireless Access, 5G network slicing, and 5G private network among others.

Building on Core Businesses with Digital Services

The digital service business involves the development of a diverse range of services incorporating digital technology encompassing networks, platforms, and digital solutions to deliver digital services to customers and corporate

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

Operating Under Licenses Regulated by the NBTC

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

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



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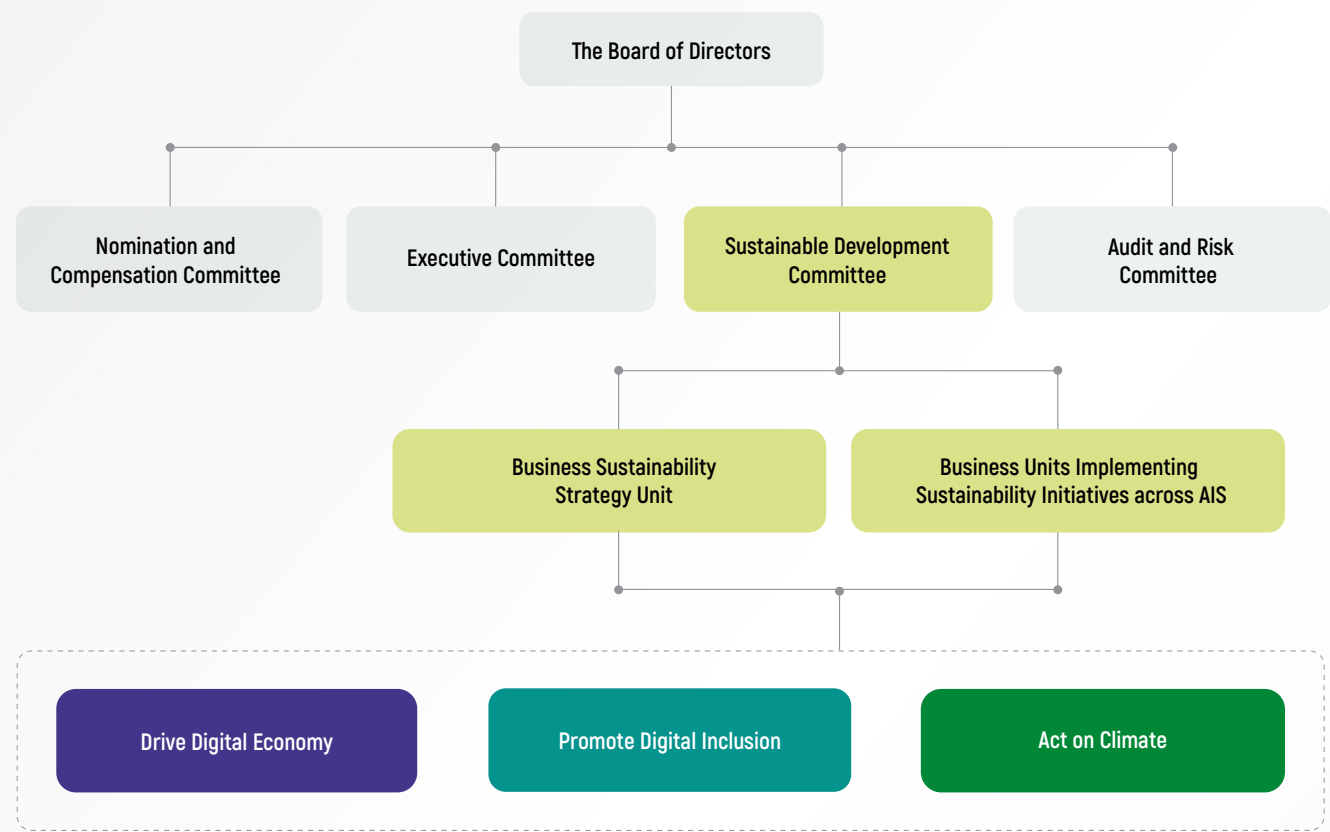
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Sustainable Development Structure



AIS' Sustainable Development Committee is tasked with considering policy, strategies, goals, and issues regarding sustainable development efforts. The Committee is also responsible for reviewing performance and assessing impacts and risks from the company's business operations on society and the environment along with overseeing compliance with the human rights policy to ensure the company's sustainable development endeavors achieve the goals. The progress and material issues are to be reported to the Board of Directors' meeting on a quarterly basis. The Committee is also charged with providing consultancy and support to the CEO on sustainable development performance as well as reviewing and approving the sustainable development report to be proposed for the approval of the Board of Directors.

AIS has incorporated the sustainable development concept into its business operations under the supervision of the Business Sustainable Development Unit. The Team is responsible for driving the overall sustainable development policy and strategies and coordinating with other related business units to materialize the sustainable development policy and strategies to achieve the targets. The Business Sustainability Strategy Unit and the heads of other related business units shall report the results, material issues, and concerns about sustainable development to keep the Sustainable Development Committee apprised of the progress, allowing them to consider the material issues on a quarterly basis. In addition, talks and lectures on insights and major trends in sustainable development have been regularly given by speakers from inside and outside the company to keep members of the Sustainable Development Committee current with key knowledge and emerging trends, both locally and internationally, allowing for more effective business management of the company to achieve sustainability.



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Material Topics for Business Sustainability

Process for Defining Material Topics

1 Identification

In 2022, AIS reprioritized the material topics for business sustainability which is carried out every 3 years and reviewed once a year. The review was compared with the changing trends and developments in the topics of business sustainability both at local and international levels. Central to these were the SETTHSI Index, sustainability assessment criteria of investors from different institutions, Global Reporting Initiative (GRI), Dow Jones Sustainability Indices (DJSI), Sustainability Accounting Standards Board (SASB), Global Risk Report 2021 of the World Economic Forum, and multiple research studies. In addition, the positive and negative impacts from business operations were analyzed, and topics pertinent to the telecommunications industry and collective opinions of stakeholders were deliberated. The information was used to devise a business plan that addressed these material topics.

2 Prioritization

AIS reviewed the priority of the material topics based on the double materiality perspectives which combine issues that internally impact the company's business operations as well as the positive and negative impacts of AIS' operations on society and the environment that actually happened or could potentially happen in the future through internal and external processes as follows:

- **Internally**
Organized meetings with executives and top management to collect opinions and receive guidance on short- and long-term material topics which must be consistent with the risk issues of the organization. In addition, operational plans, goals, and strategies are created in accordance with crucial sustainability-related issues.
- **Externally**
Collected views from stakeholders including customers, regulatory bodies, community and society, corporate customers, partners, shareholders and investors, via face-to-face discussions and by phone to uncover prioritized topics and expectations for AIS as well as to set operational guidelines for effectively responding to stakeholders.

3 Validation

A report of material topics was submitted to executives for consideration and to the Sustainability Development Committee and Board of Directors for approval as well as included in the Sustainable Business Report and online.

4 Review

AIS prepared a review process after this report had been publicized to stakeholders so that feedback and recommendations for further sustainability development as well as future reports may be collected.



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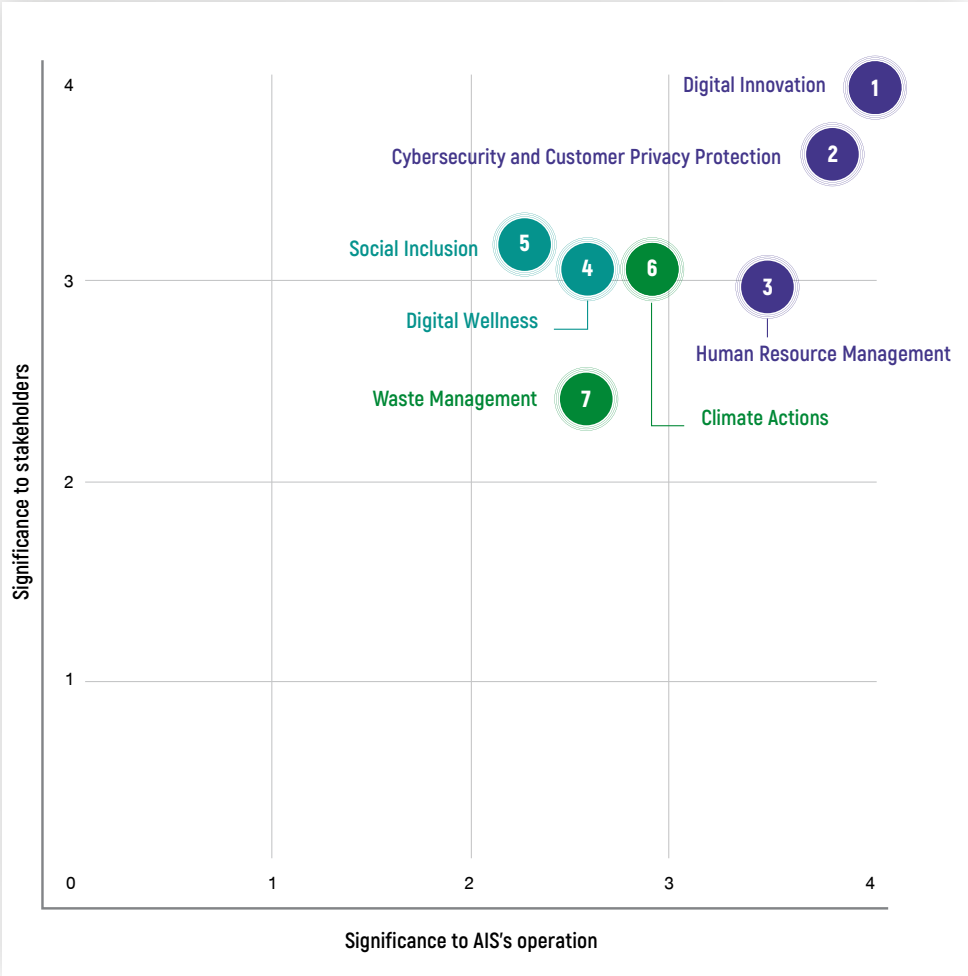
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Materiality Assessment Results



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The tables below summarize AIS's risk management, opportunities pertinent to the top 7 material sustainability topics, and contribution to one or more of the UN 13 SDG goals.

	Aspiration	Challenge	Opportunity	Contribution to UN SDGs	Management Approach
Drive Digital Economy					
Digital Innovation	Create products and services through digital innovation to improve the quality of life of Thai people and elevate the competency of the Thai business sector.	<ul style="list-style-type: none"> • Capability of streamlining business in response to changing technology and consumer behavior in the digital era • Price competition among telecommunications operators result in lower average revenue per unit (ARPU) • New players in the market such as over-the-top media services have put downward pressure on competition in digital and platform services • Higher costs due to rising energy prices and inflation 	<ul style="list-style-type: none"> • Adding value from network infrastructure and 5G technology that can be built upon to provide various digital services and solutions • Creating new sources of revenue by teaming up with multiple business partners to develop a diverse range of innovative digital products and services 		Click here to see details of the management approach.
Cybersecurity and Customer Privacy Protection	Develop a reliable system for cybersecurity and data privacy protection	<ul style="list-style-type: none"> • Compliance with relevant laws and regulations concerning telecommunications and new digital businesses as well as preparation for compliance with upgraded regulations such as criteria for the retention of computer traffic data by service providers • Customers' confidence in the security and reliability of the IT systems and protection of personal data privacy • Reputation damage and loss on trading contracts in the event of information security and cyber threat incidents • Cyber attacks by cyber criminals • Growth in technology complexity 	<ul style="list-style-type: none"> • Revenue growth from customer confidence • New revenue sources e.g. cyber security service 		Click here to see details of the management approach.



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	Aspiration	Challenge	Opportunity	Contribution to UN SDGs	Management Approach
Human Resource Management	Nurture and develop AIS human capital to support business growth particularly digital business.	<ul style="list-style-type: none"> Lack of employees with needed skills and capabilities to cater to new digital businesses to foster growth Violation of employees' human rights amid the trends in diversity, equity, and inclusion 	<ul style="list-style-type: none"> Enhancing employees' potential and capabilities in response to new business approaches Attracting new employees with new abilities Fostering relationships among employees and enhancing work performance Expanding of digital business 	   	Click here to see details of the management approach.



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	Aspiration	Challenge	Opportunity	Contribution to UN SDGs	Management Approach
Promote Digital Inclusion					
Social Inclusion	Upgrade the quality of life for the community and reduce social inequality with digital infrastructure and solutions	<ul style="list-style-type: none"> Digital divide Dispute with communities and rental contract extensions Poor signal quality due to the long distance from the base station Higher poverty rates 	<ul style="list-style-type: none"> Creating acceptance from communities and fostering good relationships with communities Establishing long-term relationship with customers via digital solutions Expanding customer base in communities Building a good image and confidence in AIS products and services 		Click here to see details of the management approach.
	Digital Wellness	<ul style="list-style-type: none"> Striving to establish a brand that promotes safe and appropriate use of the internet and social media Guarding against products and services with potential risks arising from internet use for customers Various forms of online threats that are more frequent and severe Psychological impacts from cyberbullying 	<ul style="list-style-type: none"> Creating confidence in products and services that promote appropriateness and safety in the internet and social media use Innovating products and services to promote safe online use for customers Fostering long-term relationships with customers 		Click here to see details of the management approach.



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	Aspiration	Challenge	Opportunity	Contribution to UN SDGs	Management Approach
Act on Climate					
Climate Actions	Minimizing environmental impacts with efficient management of business operation processes and supply chain	<ul style="list-style-type: none"> Compliance with the Paris Agreement on climate change and Thailand's net-zero target Conformance with new regulations e.g. Climate Change Act Impacts on biodiversity and forest ecosystems from operations across the business value chain 	<ul style="list-style-type: none"> Creating new revenue sources from cloud business and other products that reduce GHG emissions Creating new revenue sources from IoT business e.g. climate change tracking systems Creating confidence in products and services that promote biodiversity and sustain forest ecosystems Reducing resource consumption and operating costs 	    	Click here to see details of the management approach.
Waste Management	Reducing and recycling waste from operations and promoting proper e-waste disposal among Thai people	<ul style="list-style-type: none"> Compliance with Electronic Product and Equipment Disposal Act Reputation damage and payment of fines / compensation in case the waste disposal efforts adversely affect the community and the environment 	<ul style="list-style-type: none"> Fostering good relationships and image with customers and society as a whole through environmentally-responsible products and services Reducing resources consumption and increasing capability for recycling materials for reuse 	 	Click here to see details of the management approach.



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Stakeholders Engagement

Stakeholders	Channels and Frequencies	Concerns and Expectations	Operational Approaches to Addressing Concerns and Expectations
Employees	<ul style="list-style-type: none"> Communication via email and the company's online system Direct communication between employees, supervisors and the Human Resources Department Direct communication from the Management to employees via Town Hall at least twice a year 	<ul style="list-style-type: none"> Job security and career advancement opportunities for every employee Appropriate benefits and remunerations Digital knowledge and skill development Equitable treatment 	<ul style="list-style-type: none"> Follow the guidelines on recruitment of a new generation of quality employees and retain the existing personnel to grow together with the company Provide a diverse range of benefits and amenities for employees Continually develop employees' potential by organizing training together with assessment to measure the training efficiency Provide complaint channels for employees to report frauds or wrongdoings e.g. hotline, email, letter
Communities and society	<ul style="list-style-type: none"> Community complaint center via Call Center 0-2029-5555 (every day except public holidays) LINE official account: Mtr Chumchon offering knowledge and information and answer questions about radio waves, electromagnetic waves, and signals from the base stations LINE official account: @aorsormor, Facebook Fan Page, Hotline 0625201999 (every day except for public holidays) communicating and giving information about the use of AorSorMor Online application 	<ul style="list-style-type: none"> Quality telecommunications services and service channels with extensive coverage in the community Advanced technology that improve the quality of life for the community No health risks from electromagnetic waves emitted from the cell towers Receiving support or assistance for the community in times of disasters or emergencies 	<ul style="list-style-type: none"> Expand the mobile network with coverage over 98% of total population and the broadband internet network to reach 8.8 million households in 77 provinces with a wide range of packages to choose from Promote the quality of life in the community and the Thai health care and control the spread of infections by enabling access to technology through the AorSorMor Online application project Enhance knowledge and skills in using digital technology for online marketing to the community enterprises and promote safe and decent use of the internet and social media Offer knowledge and understanding to the community and community leaders about health safety associated with electromagnetic waves emitted from the cell towers and set up appropriate complaint channels Provide assistance to the community in times of natural disasters e.g. floods, extreme weather Add online channels to meet the community's expectations and call to interact with the community regularly during the COVID-19 when taking part in the community activities is difficult Open up educational opportunities by providing scholarships to young people in need



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Stakeholders	Channels and Frequencies	Concerns and Expectations	Operational Approaches to Addressing Concerns and Expectations
Customers	<ul style="list-style-type: none"> AIS Call Center functioning as a primary channel to collect customer satisfaction survey results as well as comments and recommendations on the employee's service via the automatic IVR and chatbots (every day). In addition, AIS Call Center also provides sign language services for the hearing impaired via the LINE application as a communication channel. Complaint Center 08-0000-9263 (Mon-Fri 08:30 – 17:30) Lodging of complaints through service center and dealers nationwide Conducting surveys on customer satisfaction and comments by market survey experts every quarter in real time 	<ul style="list-style-type: none"> Quality of cell phone and home internet signals as well as quality of product offering and fast, easy access to services through various channels Protection of personal data privacy at the highest level Transparency and clarity in providing information about products regarding prices and promotions to customers and employees capable of solving problems and following up through to the end within the time specified in the schedule and notify the customer of the updates Being encouraged to access call center contact channels through sign language 	<ul style="list-style-type: none"> Develop and take care of both wireless telecommunications system and home internet to ensure uninterrupted quality services backed by 24-hour monitoring and quality control processes Offer multiple channels to access the company's products and services in the forms of service centers, stores, and online shops to reach every group of customers Put in place strict policies, strategies, and processes to ensure cybersecurity and personal data privacy and set up a dedicated unit to oversee the affairs with transparency. Also provide training and test employees' knowledge about protection of personal data, allowing for efficient protection of customers' data Provide product information through diverse channels clearly and transparently to keep customers fully informed of their right to service Implement processes to monitor and evaluate the service quality regularly and develop the Interactive Voice Response (IVR) system to provide quick, efficient service to customers. Also put in place "Ask Aunjai", a chatbot/AI on myAIS application, website, social media to provide services and transactions like real employees Educate call center staff and improve work processes to ensure faster, more efficient services and allow customers to track the service status via an automation system



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Stakeholders	Channels and Frequencies	Concerns and Expectations	Operational Approaches to Addressing Concerns and Expectations
Enterprise clients	<ul style="list-style-type: none"> Channels to receive complaints and Suggestions e.g. AIS Call Center, AIS ICT Service Desk, and AIS business website (every day) Surveys of customer satisfaction in the use of different service channels e.g. enterprise client sales teams, AIS Call Center, ICT Solution installation team, ICT Service Desk (offering technical consultancy) and online channels such as e Business portal (once a month) Surveys of customer satisfaction in the use of Enterprise Digital eService (once a month) 	<ul style="list-style-type: none"> Quality of products and services such as networks with expansive coverage, high stability, high data connection speeds a wide range of business solutions that enhance business operation potential, after-sales services, quick efficient problem solution A variety of services that address customers' demand and the New Normal along with enhancing business performance amid the changing business context Enhanced service convenience via Enterprise Digital eService: service invoice, eReceipt, online payment, and appointment AIS as a withholding tax agent Protection of personal data privacy strictly in line with the standards 	<ul style="list-style-type: none"> Develop quality of 4G and 5G networks constantly, checking efficiency on a regular basis, and adopt 5G technology to develop the Internet Fibre service for high speed connections Develop new services in cloud, ICT, cybersecurity, and IoT to accommodate the needs for safe, flexible business operations to increase energy efficiency, and to contribute to the environment Offer cost-effective promotions, applications, solutions and devices as well as provide several exclusive privileges for enterprise clients Develop digital channels to facilitate sales and ensure fast, efficient service delivery such as purchasing products and services online Offer Sovereign Cloud service focusing on safe and secure data processing and storage Introduce Cyber Security Operation Center (CSOC) that provides 24 × 7 cyber threat monitoring and handling as well as data security standard certification for clients e.g. ISO27001 and Payment Card Industry Data Security Standard (PCI DSS)



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Stakeholders	Channels and Frequencies	Concerns and Expectations	Operational Approaches to Addressing Concerns and Expectations
Business partners	<ul style="list-style-type: none"> Survey of business partners' satisfaction (once a year) Employee representatives in contact with business partners (every day) Applications and websites for distribution channels (every day) Annual meeting with business partners (1-2 times a year) Interview (once a year) 	<ul style="list-style-type: none"> Growing alongside AIS in expanding services to a broad array of customers Expecting AIS' fair business dealings with all partners 	<ul style="list-style-type: none"> Support business partners to sell products through more diversified channels by offering an online training course "Learn Kan Di", enabling them to enhance their potential and increase new revenue channels Set standards in working together effectively together with appropriate and fair compensation structure Develop platforms to allow the business partners to connect and work with AIS efficiently
Shareholders and investors	<ul style="list-style-type: none"> Shareholders' meeting (once a year) Press conferences to report on operating performance e.g. conference for analysts or both Thai and foreign investors, SET Opportunity Day, and SET Digital Roadshow (5-6 times per quarter) Investor relations website, email: investor@ais.co.th, LINE@ and call (every day) 	<ul style="list-style-type: none"> Sustainable business growth Continuing payment of compensation Good corporate governance, and transparent, reliable business operations Equitable access to information 	<ul style="list-style-type: none"> Maintain leadership in the Mobile Communication Service and sustain a high level of growth in home internet and enterprise client businesses along with advancing into new businesses with high growth potential to create new sources of revenue such as video streaming, digital lending, insurance, and others Set a policy to pay dividends minimum of 70% and to be paid twice a year Achieve the level of "Excellence" in Corporate Governance Report by Thai Institute of Directors Association Communicate quarterly operating performance regularly in every channel by disclosing material information fully and in a timely basis via channels suitable for each group of investors/shareholders



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“Thriving in a greener and inclusive digital world”



Enable people and businesses to grow in the digital economy

- Expand 5G connectivity to support economic growth
- Drive digital services to both consumers & enterprise
- Maintain resiliency for data security and privacy
- Enhance human capital capabilities to support business transformation



Build inclusive and responsible digital access in our products & services

- Provide inclusive digital access to promote social & economic wellbeing
- Support consumers to be digitally responsible and promote livelihood



Shape a greener future of life for consumers and society

- Manage our own network and operation to be light to the environment
- Support our customers and supply chain to reduce environmental footprint

Targets for Sustainable Development

Drive Digital Economy

Digital Innovation

- 8% of revenue generated from new digital services that enable the digital economy by 2027

Cybersecurity and Customer Privacy Protection

- Uphold security standards equivalent or better than our peer group of companies in our industry and our region as verified by an independent third party by 2027
- Enhance cybersecurity and data privacy to protect the critical business value chains by 2025

Human Resource Management

- 90% of AIS employees is equipped with new digital skills and literacy by 2025

Promote Digital Inclusion

Social Inclusion

- Improve the socio-economic condition of 5 million people by 2027

Digital Wellness

- Empower digital citizenship by providing digital solutions and tools for 3 million people by 2027

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Climate Actions

Short term target (2023)

- Reduce GHG emissions intensity as calculated from the ratio of direct and indirect emissions to data traffic by 90% compared to the baseline in 2015
- Increase renewable energy usage to 5% of total energy consumption

Long term target

- Net-zero emissions by 2050

Waste Management

Short term target (2023)

- Zero e-waste to landfill

Long term target

- Maintain zero e-waste to landfill



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- ➔ Digital Innovation
- ➔ Cybersecurity and Customer Privacy Protection
- ➔ Human Resource Management

Digital Innovation

Create products and services through digital innovation to improve the quality of life of Thai people and elevate the competency of the Thai business sector.



Target

8% of revenue comes from new digital services that enable the digital economy by the year 2027

Key highlights in 2022

Topic	2022	Target 2027
Revenue from new digital services	4.1%	8%

➔ 5G Smart Autonomous Vehicles Solutions

AIS partnered with SCG and Huawei; Yutong and Waytous also offered expertise in developing and pioneering the 5G technology in the market to increase market value. The 5G Smart Autonomous Vehicles Solutions improved the logistics of industrial areas to be more efficient and safer. It increased the manufacturing productivity to achieve Industry 4.0.

and solution to improve our 5G network to be a smart digital network, which greatly assisted the business and industrial sectors in Digital Transformation.

➔ Launch of the 5G A-Z Center to Develop the Smart 5G network

AIS and ZTE Corporation pushed forward the 5G A-Z Center to develop the 5G innovation. We aimed to establish the infrastructure

➔ Joint Innovation Center (JIC)

AIS and Huawei developed new technology in IT, networks, additional services, broadband internet, and the Internet of Things. We established the Joint Innovation Center (JIC), which enabled AIS to effectively deliver new digital products and services to serve the various needs of our customers in the digital era.



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➔ **e-waste+ Application**

AIS launched an application to encourage our customers to properly dispose of e-waste. They could track the status of the e-waste on a blockchain. The system calculated the e-waste and the amount of greenhouse gas emissions the users managed to reduce. Then the users received the carbon scores, which could be shared on social media.

➔ **Adopting Technology for process improvement**

AIS employed the Robotic Automation Process (RPA) to improve the working process. We trained and coached our staff members with their different backgrounds in knowledge and who worked in different fields besides IT or technology. We managed to create 1,482 RPA-knowledgeable Citizen Developers, who conducted over 1,000 projects to improve the working process.

Opportunities, Challenges, and Impacts

The post-COVID 19 economic recovery during the past year required digital technology to drive the economy by unlocking the potential of business sectors through smart-solution services. Moreover, we focused on improving the wellbeing of people in terms of work and new knowledge acquisition in the new normal via online channels. In the Asia Pacific region, 1.2 billion people used mobile internet and it is expected that this number will increase to 1.5 billion in 2025. While customers use more internet, the service fee is cheaper because of price competition. The market has become saturated because more than 140% of the population has access to mobile phones, resulting in reduced growth. Therefore, the service providers need to improve technology to increase added value products and services and find a new market to compensate for traditional businesses under fierce price competition.

As the digital services market has evolved, over-the-top media service providers who do not own networks have emerged. They have been able to increase the added value of the digital market while exploiting the existing infrastructure. They did not have to invest in creating networks. The services provided by OTT increased the amount of internet usage. On the one hand, it benefited the telecommunication businesses. On the other, the emergence of OTT pressured telecommunication companies to invest more in creating networks to accommodate the dramatically increased usage. The capital of building networks across the country is huge and the payback period is long. Furthermore, economic recession and increased interest rates, and increased costs of production and business management including the price of energy, were factors which challenge the company's profits over the short and long term.

Aware of these changes, AIS underwent major business strategy transformation. We had to be more than a network provider, whose ability to make profits from the connectivity business has decreased and with the market becoming saturated experienced a downturn. Instead, we moved towards becoming a "Cognitive Tech-Co" and new sources of revenues from various digital services to ensure long-term growth.

Concerning business opportunities, AIS has leveraged existing customers in the connectivity business and provided them with increased added value by offering new services including the improved 5G technology, which offers high speed, low latency, and can be connected to many devices. 5G technology is a high-quality mobile network; it also is an infrastructure which can be developed into new digital services and smart solutions.

Also, AIS has adjusted our business sustainability strategies and targets. We set targets to gain revenue from the new digital services, which is more challenging and aligned with our new business vision. The targets reflect our determination to provide digital services and smart solutions for the various experiences of our customers. We improve the quality of life of people and maximize the potential of Thailand's business and industrial sectors. Besides, we prioritize safe product and service designs for our customers and protect the right to privacy. We express social responsibility to our customers and society. They can efficiently use our services and we aim to minimize negative impacts upon society.

Management Approach

AIS is determined to achieve our mission to deliver products and services to improve the quality of life of the Thai people while enhancing potential and business growth. Our goal is to be the leader of sustainable innovation, so we are determined to improve our ability to welcome business opportunities and challenges, which constantly change. We handle challenges with our management principles in the areas of human resources, investment, and innovation development.

AIS Open Innovation Framework

AIS is determined to build an ecosystem conducive to innovation in line with the AIS Open Innovation Framework. Aiming to achieve a flexible management structure that supports new business development and set out guidelines for driving and promoting innovation compatible with AIS's business goals and future direction based on the body of knowledge of both internal and external sources, the AIS Open Innovation Framework comprises the following elements.



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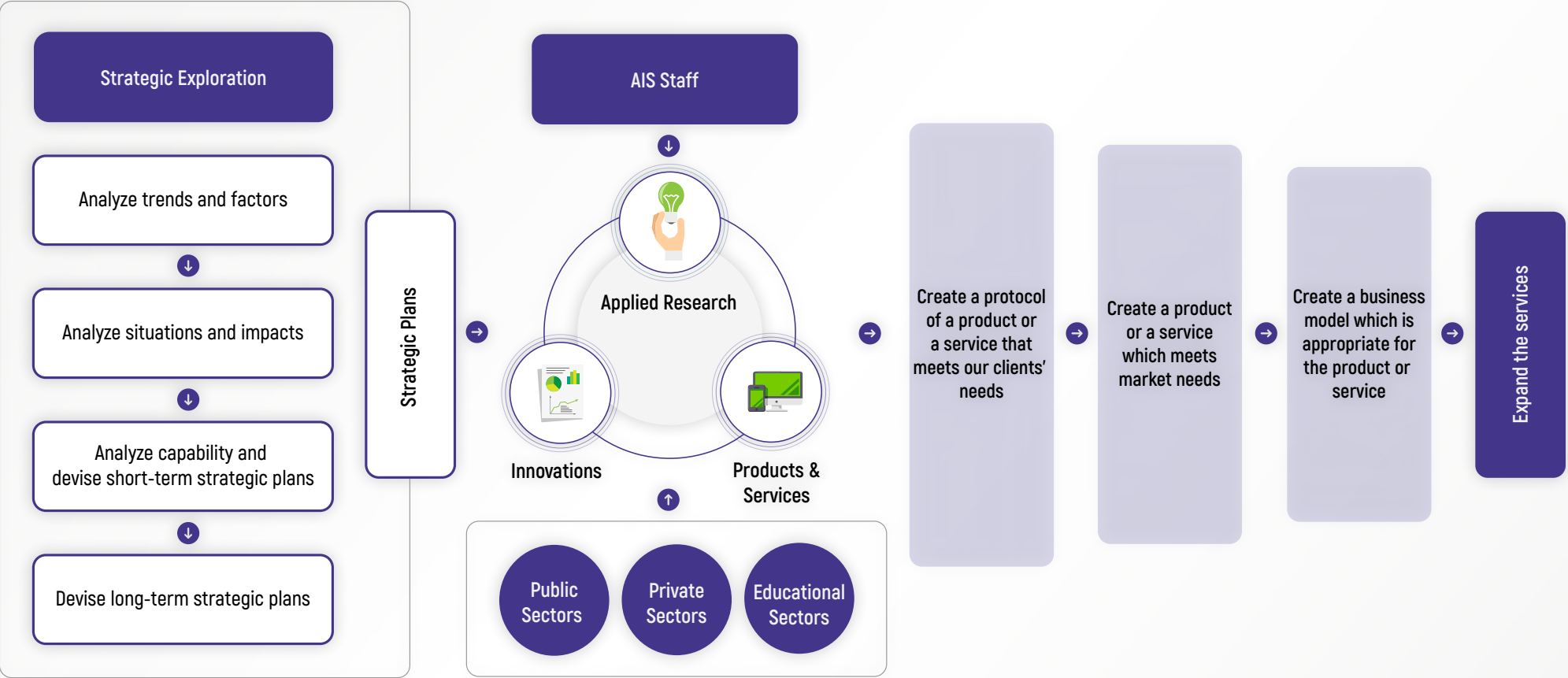
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Innovation Management Strategies



AIS sets strategic projects and analyzes the capacity gap to respond to the demands of the digital era and foster both medium- and long-term business growth. Based on analysis of the current situation, market tendencies, and global circumstances, short-term projects and a framework for long-term innovation are determined. In addition, the strategic projects provide

guidelines for directing, selecting, and building upon new business ideas to be pursued through internal capacity and collaboration with partners in the public, private, and educational sectors. To appropriately allocate resources, provide support, and ensure flexibility and timeliness, the management of and support for each business idea are divided into three phases according

to start-ups' development cycles, namely Problem-Solution Fit, for ideas requiring problem-solving, Product Market Fit, for product and service prototypes that need to be trialed and refined, and Business- Model Fit, for products and services ready to be launched onto the market on a wide scale.



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Management flexibility to drive innovation in digital life products and services

AIS strives to achieve management flexibility to support our expansion from the strong connectivity business to innovation development to derive new income generation sources from digital life business in line with consumer behavior and industry development tendencies in Thailand in the digital era. AIS also constantly collaborates with a multitude of partners to develop products and services for markets closely connected to its business and other markets. The digital life business categories of special interest to AIS include services relating to digital financing, digital lifestyle, and digital marketing.

People and Culture Transformation

AIS aspires to become an innovative organization, setting up an innovation development unit to take the lead in driving cultural transformation and an innovative mindset at the organizational level and continually promoting internal innovation through activities and training programs that aim to sharpen the knowledge and skills related to innovation of employees. With such a process, AIS is able to reinforce innovation strength both internally through its own people's potential, knowledge, and capacity, and externally through its collaboration with partners to more efficiently garner resources.

Adopting Technology for process improvement

AIS devised a 3-year transformation plan to adopt technologies and innovation to the working processes. For example, we apply DevSecOps to our software development process so that the development and operation departments work together seamlessly. It also increases cybersecurity and protects the right to privacy of our customers. Furthermore, we use Robotic Process Automation (RPA) to improve the working process to be more concise, reduce unnecessary workload, and lessen the mistakes made

by manual work. Technology-driven internal management plans save time, reduce expenses, and increase work efficiency. Therefore, we are able to develop products & services and launch them faster while maintaining safety standards. We are also able to reduce the workloads of our staff, especially the repetitive work. The technology-driven management plans allow out staff to have time to invent more innovations.

Innovation Ecosystem Development

Since the development of an efficient and practical innovation ecosystem requires the collaboration of relevant parties, AIS strives to join forces with partners in the public, private, and educational sectors to share knowledge and technologies and to jointly innovate solutions from product and service prototypes and launch products and services onto the market. As a result of this, AIS successfully built a partnership platform serving as a center for producing and promoting end-to-end solutions and services that fully integrate advanced technology, tools and equipment, and software to effectively respond to consumer behavior trends and market demands both at present and in the future. Furthermore, AIS channels efforts into creating an innovation space that aids in the capacity development of start-ups, developers, university students, and those interested in innovation development, whom AIS regards as potential business partners that will grow together with the company from the collective involvement of all in devising solutions responsive to new market demands.

Placing great emphasis on partner relations management, AIS applies the 'collaboration diamond' principle in determining the criteria and designing the procedures for establishing partnerships, from the formation of a common understanding based on a goal that will benefit all the parties involved in terms of resource utilization and trust building processes to the promotion of management and innovation collaboration over the long run.

Consequently, AIS has earned the confidence of 10 universities, 9 public agencies and non-government organizations, and 55 private enterprises, which have come on board to collectively develop innovations that will help lay the groundwork for a digital economy.



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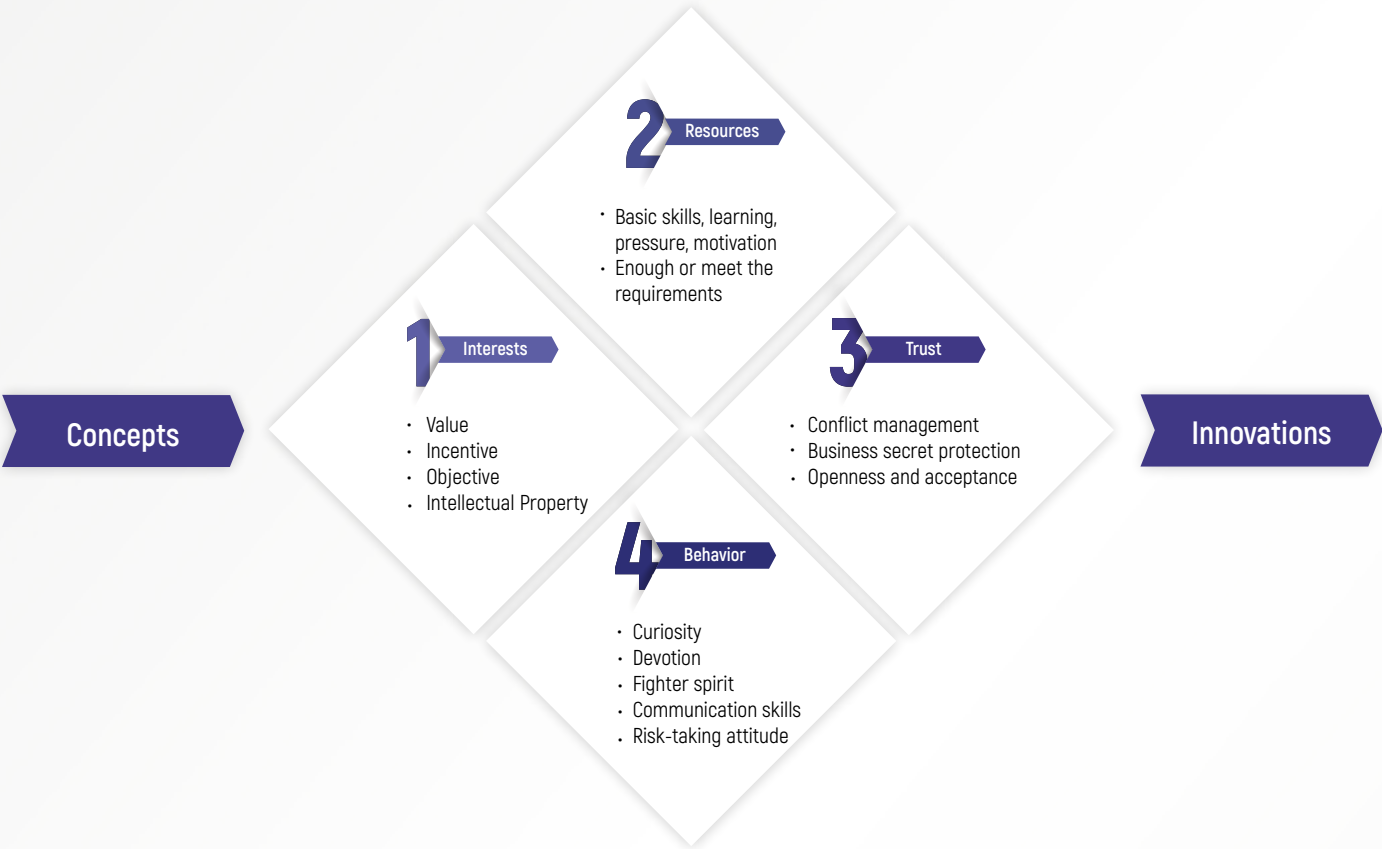
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Relationship Management Criteria



2022 Progress

Our business in new digital products and services

Our business vision is to grow revenue from new sources besides being a mobile network and home high speed internet provider. The two services which help drive AIS to be Cognitive Tech-Co are:

1. **Services to enterprise customers** including Cloud, Data Center, Cyber Security, Internet of Things (IoT), IT Solution, and CCIID. These services support the digital transformation of the organizations. AIS leverages our advantages of being the leader of network providers and 5G technology, which offers high speed and low latency internet, and can be connected to many devices at a time to effectively deliver smart solutions to industrial sectors and enterprise customers.
2. **Digital services.** AIS improves our services using digital technology, for example, network services and digital solutions. AIS focuses on 3 digital services including VDO platform, Mobile Money, and other digital platforms such as digital marketing, insurance, and lifestyle businesses. These services facilitate our customers and provide them with various digital experiences.

AIS and our business partners developed technology and digital services for enterprise and retail customers. Our significant developments and partnerships in 2022 include:



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→ 5G Smart Autonomous Vehicles Solutions



AIS partnered with SCG and Huawei; Yutong and Waytous also offered expertise in developing the driving system to improve the logistics in the SCG's industrial areas to be more efficient and safer. The smart solutions use the 5G technology, which offers low latency and can be connected to many sensors. The smart platform also helps manage route planning to transport equipments in the industrial areas. The automated vehicles seamlessly connect with one another, increasing the efficiency in industrial sectors and reducing the risk of drivers in dangerous areas. The vehicles driven by electricity and technology offer accurate route planning, so SCG is able to reduce CO₂ emissions by 35% compared to the traditional system.

→ Partnering with start-up businesses to increase added value and diversity in digital services



AIS aims to unlock our potential in providing digital services and strengthens the existing main business by buying shares in 3 start-up businesses, which specialize in customer relations, IT safety, and holistic IT solution development. This investment allows AIS to have access to specialized human resources and to enhance our business potential in increasing the added value in new digital services to our customers. Moreover, we put much effort in adding a variety to our digital lifestyle services such as the partnership with Agnos, a Thai health-related start-up business. Agnos provides its customers 24/7 access to healthcare via the AI platform on myAIS. Customers can initiate self health check-ups to evaluate the risks of diseases before seeing a doctor. Connecting with our digital partners to deliver new, useful experiences to our customers and enable myAIS to become a Personalized Super App. It also provides our partners and relevant industrial sectors with the business opportunities to grow.

People and Culture Transformation



AIS announced our vision to become a Cognitive Tech-Co. We focus on improving our staff to be knowledgeable and skillful in technology. An innovative mindset is another important factor in pushing forward our staff to attain a positive attitude and develop the working processes and corporate culture to allow more creativity and innovation.

Technology Incubation and Research Team was established under our human resource management team to reform corporate culture and support innovative ideas for the whole organization. We continuously encourage our staffs to create innovations through activities and training courses which equip them with the knowledge and skills relevant to creating innovations such as entrepreneurial skills. Moreover, we train our staff to understand our customers and develop a customer-oriented mindset. AIS adopts a design thinking process and encourages agile working process to enable our staff to work flexibly in the fast-changing world.



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In 2022, AIS, together with the Stanford Thailand Research Consortium, created a curriculum to encourage entrepreneurs to acquire the skills to develop innovations. We organized Jump Bootcamp 2022, which allowed participants from outside organizations to share ideas and experiences with AIS staff. The goal was to collaborate within the organization and outside organization to create innovations. There were 252 participants from 64 teams, which were parts of the AIS Academy for Thais. The project aimed to transfer opportunities and knowledge from AIS to the society to equip the Thai people with skills and digital technology innovations so that the Thai people gain further sustainable competitive advantages in the digital era.

Adopting Technology for Process Improvement

AIS employed the Robotic Automation Process (RPA) to improve the working process. We trained and coached our staff members with different background knowledge and who worked in different fields besides IT or technology. We managed to create 1,482 RPA-knowledgeable Citizen Developers who conducted over 1,000 projects to improve the working process. The working process is more efficient, accurate, and increases customer satisfaction. It reduces staff workload, especially repetitive work, and so our staff members have more time to develop themselves in many aspects.

Concerning the AIS Contact Center, Citizen Developers saw an opportunity in combining manual labor with technology. They developed 14 basic transactions so our customers can make transactions via our automated system. It reduces working process such as changing payment dates, changing payment methods, and canceling additional services, which were run by contact center staff. The working process adjustment greatly benefits our customers since it enables us to respond quickly and accurately to our customers. The response time has decreased by 60% and the steps and workload of our call center staff has also been reduced by 60%.

Our Data Center needs to be highly secured, so the Citizen Developers improved the system to allow staff to enter the Data Center by employing facial recognition technology and OCR-Optical character Recognition to scan faces and vehicle registration plates, and record sign-in and sign-out times. The technologies help eliminate human error in recording staff access to the Data Center. It is also more secure and verifiable.

In 2023, AIS plans to adopt more knowledge on intelligent automation technology to improve our working processes to ready our staff for our transformation into a Cognitive Tech-Co.

Innovation Ecosystem Development

Creating innovation cannot be succeeded by a single entity, so AIS improves our capabilities by leveraging our partners' strengths for co-creating innovative products and services. We created an ecosystem suitable for the creation of innovations by inviting partners from the academic, public, private sectors, and NGOs. These organizations encourage innovations and we have carried out the following projects that achieved tangible success in 2022:

The 5G A-Z Center to Develop the Smart 5G network



AIS and ZTE Corporation signed an MOU for strategic collaborations to encourage the development and creation of innovations. We aimed to establish strong digital infrastructure and we promote collaboration in three aspects: 1. developing the 5G innovation's infrastructure and solutions, 2. upgrading the 5G network to be a smart digital network via Big Data and AI, and 3. increase 5G competence to improve industrial sectors. This collaboration is centered at the first 5G A-Z Center in Thailand. This is our milestone in unlocking the potential of Thailand to move forward digitally. Business and industrial sectors started to undergo digital transformation to increase their effectiveness and improve management systems. The collaborations of the business and industrial sectors directly drive the digital economy of Thailand.



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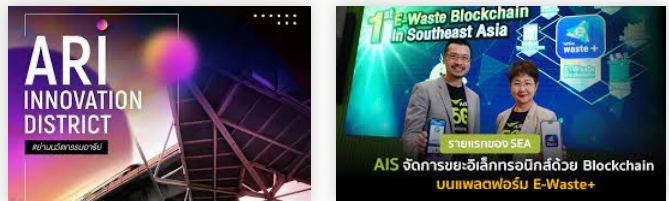
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Joint Innovation Center (JIC)

AIS and Huawei developed new technology in IT, networks, additional services, broadband internet, and the Internet of Things. We established the Joint Innovation Center (JIC), which has run successful projects in 2022. For example, we developed a network using specialized technology so that coverage and network performance improved while consume less electricity. Our technology allows 4G and 5G technologies to work in the same bandwidth, so users fully benefit from the effective network. The collaboration with Huawei allows AIS to work with experts in innovative technologies besides IT technology. This enables AIS to deliver new products and digital services to meet the needs of our customers in the digital era.

ARI Innovation District



AIS, National Innovation Agency (NIA), and 17 founding members established the ARI Innovation District in 2021. The objectives are to collaborate, carry out projects, organize activities, and share resources about innovations. It also functions as the 2022 sandbox where partnered organizations implement tangible plans to develop Ari to be an innovation district. The vision is to make Ari a pleasant working space and residential area which attracts innovators and investors. The partnered organizations and AIS have regular meetings to brainstorm ideas to develop innovations before launching them for commercial use.

The tangible success in the last year resulted from the collaborations of our partners in the Ari Innovation District Project. This led to the e-waste management project and AIS created an application called e-waste+, which encourages users to properly dispose of e-waste. They could track the status of the waste on a blockchain. The application calculated the waste and the amount of greenhouse gases the users managed to reduce. Then the users received the carbon scores, which could be shared on social media. AIS received support from partnered organizations in the private sectors and universities to carry out the test-runs. As a result, AIS is ready to widely launch the application to corporate and personal customers.

Collaborations to Develop Deep Tech

AIS collaborates with partners with expertise in 5G, AI, ML, Edge Computing, Blockchain, Immersive, and IoT. Together we invent advanced technology to be ready for new digital services. AIS showcased the development of Deep Tech in the HackaThailand exhibition organized by the Digital Economy Promotion Agency to promote the innovations to the public.

5G Garage + AIS Playground



AIS expanded the opportunities to people to co-create innovation through the AIS Innovation Framework. We built and increased the areas of the AIS Playground co-creation space at universities. In 2022, we opened 5 new AIS playgrounds in the Kasetsart University Sriracha Campus, Suranaree University of Technology, Mahasarakham University, Mahidol University Salaya Campus in Nakhon Pathom, and Chulalongkorn University Faculty of Engineering. In total there are 8 AIS playgrounds at present. Importantly, at Chulalongkorn University, the AIS playground and the 5G garage are in the same area. The objective of the 5G garage is to foster collaboration in research, innovation, and advanced technology concerning the 5G technology as well as new case studies.

Interoperability on Metaverse

AIS and our partners who are interested in Metaverse tried using our digital infrastructure including 5G-based Blockchain combining 5G Multi-access Edge Computing (MEC) and the Internet of Things (IoT). We aim to foster various collaboration across the Metaverse. For example, we collaborated with Chulalongkorn University Faculty of Engineering to bring Intania Verse, which was a pilot study of Chulaverse, to work with Ari verse, using our basic digital infrastructure. We also cooperated with CMKL University to create Metaverse using AI for small entrepreneurs.



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Extending AIS ROBOTICS Lab to ROBOT Assistant for Retail Business and ROBOT Assistant for Library



→ ROBOT Assistant for Library

Universities in the northern region of Thailand including the Phayao University, the Mae Fah Luang University, and Chiang Mai University trust AIS and are ready to try and give constructive feedback to develop the quality of this new product. The ROBOT Assistant for Library gives information on library services makes announcements, navigates library users to service areas, and searches for books on a mobile application. Moreover, the robot stands by in corners to welcome university students and staff members who visit the library. It greets, makes friends with, and entertains the students and staff members.

AIS built a lab to develop 5G robots and design the 5G Robot Platform. We collaborated with our business partners specializing in robotic technology and related software. In 2022, AIS leveraged the innovation for a ROBOT Assistant for Retail Business and ROBOT Assistant for Library. We launched them in the market, increasing business value as aligned with AIS' business expansion into new digital life services.

ROBOT Assistant for Retail Business and ROBOT Assistant for Library make use of the AIS Robot Platform via low-code technology, which enables our staff to customize the User Journey and characteristics of the robots to match the customers' needs more easily and quickly. In the past, each robot's qualifications had to be customized, which was complicated and time-consuming.

→ ROBOT Assistant for Retail Business

Our customers trust us and are ready to try new products to improve their quality. ROBOT Assistant for Retail Business was established at the Central Department Store in Chiang Mai. The robot gives information on shops, promotion & campaigns, and functions as a personal navigator to each shop. Moreover, when the store is packed, the robot can welcome shoppers, greet, and entertain them.

In 2023, AIS is moving forward to delivering smart digital technology. We are determined to develop innovations, which require research and development in technology and new knowledge. We are ready for changes in the future, as we allocate funds for research to encourage the growth of the ICT industry ecology in the medium and long term. We collaborate with our business partners to maximize our potential to develop technology, which benefits the whole industry ecology.

Performance Table

Topic	Unit	2019	2020	2021	2022
Business partners ¹⁾	Number of partners	89	80	77	74
New products and services ²⁾	Number of launches	37	39	108	104
R&D investment	Million THB	159	110	253	248

Remark: ¹⁾ Partners on the AIS Partner Platform delivering products or services to the market
²⁾ Products or services that were launched or whose functionality was developed in the past one year



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Economic Performance Table

Topic	Unit	2019	2020 ¹⁾	2021	2022
Economic value generated					
Total assets	Million Baht	289,669	350,171	356,222	337,044
Total revenue	Million Baht	180,894	172,890	181,333	185,485
Economic value distributed					
Operating cost	Million Baht	111,899	110,848	121,453	126,172
Employee wage and benefits	Million Baht	10,760	9,800	9,807	9,543
Payment to government	Million Baht	16,696	37,595	31,016	23,286
Community investments	Million Baht	144	25	27	15
Payment to providers of capital					
Dividend payments	Million Baht	21,050	20,219	21,203	22,871
Finance cost	Million Baht	4,777	5,917	5,626	5,231
Economic value of AIS Group					
Net profit	Million Baht	31,190	27,434	26,922	26,011
EBITDA	Million Baht	78,710	89,398	91,408	89,731

Note: ¹⁾ The numbers from 2020 onwards are based on TFRS16



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Cybersecurity and Customer Privacy Protection

Develop a reliable system for cybersecurity and customer privacy protection



Target

- Reach the highest cybersecurity and personal data protection standards on par with or surpassing those of other business organizations in the industry and the region as well as approved by third-party agencies by the year 2027.
- Enhance the efficiency of cybersecurity and data privacy measures to defend AIS's significant business value chain by the year 2025.

Key Highlight in 2022

➔ Goals achieved

- AIS earned a higher average score than did all other registered companies across Thailand in the 2022 Cyber Resilience Survey, administered by the Stock Exchange of Thailand (SET) in collaboration with Acinfotech Company Limited.
- AIS conducted risk assessment on third-party service providers having access to its important data and computer systems to ensure their compliance with its cybersecurity standards and ultimately the protection of its business transactions, data privacy, and important data in accordance with internationally recognized standards.

➔ Compliance with applicable laws, rules, and regulations

AIS continually reviewed newly passed acts and/or notifications to ensure that its business operations and policy implementation complied with applicable laws, rules, and regulations, such as the Supreme Court President's Directive on Electronic Procedure Code 2563 B.E., the Electronic Transactions Commission's Notification on Cloud Computing Service Use Guidelines 2562 B.E., the Ministry of Digital Economy and Society's Notification on the Criteria for Service Providers' Electronic Traffic Data Storage 2564 B.E., and the Personal Data Protection Committee's Notification on the Standards for Personal Data Security 2565 B.E.

➔ Technology and process improvement

- **Cybersecurity.** AIS elevated the safety standards for the control, monitoring, and authorization of internal and external system access, especially superuser access, reviewed its password policy, and integrated such protocols as multi-factor authentication. The company implemented all these cybersecurity measures in all its operations, drawing on its on-premises or on-cloud infrastructure, obsolescence management, and zero trust security framework.
- **Personal data protection.** AIS constantly reviewed and improved its personal data protection measures to secure access to important data, such as confidentiality classification, shared storage inspection, and data encryption, utilizing several information protection and governance tools, including hardware security modules (HSMs) and key management systems (KMSs).

For more information on AIS's cybersecurity policy [Read more](#)

For more information on AIS's personal data protection policy [Read more](#)

Opportunities, Challenges, and Impacts

Information technology is advancing at an unprecedented rate, revolutionizing both personal and corporate communication. This is not only accelerating online information exchanges and transactions across the globe but also exposing service users to the higher risk of cybercrime. According to a study conducted in 2022 by the Global System for Mobile Communications Association (GSM Association), Thailand witnessed a 56% rise in cybercrime – primarily attributable to the use of vulnerable mobile devices, cybercriminals' ingenuity, and fraud perpetrated in more varied and subtle forms.

As AIS transitions toward becoming a 'Cognitive Tech-Co' that renders a wider array of digital services, the company and its customers alike are increasingly susceptible to personal data theft and complex cyberattacks committed using novel technology, especially cognitive technology, such as artificial intelligence (AI) and machine learning (ML). As a result, concerns over system and data security are heightening with further investment being directed toward the purpose of cybersecurity technology development, capacity building, and process improvement. As a leading telecommunications and digital service provider, AIS realizes the importance of efficient cybersecurity and personal data protection, there by aiming to elevate its IT system and strengthen the capacity of its human resources to be able to respond effectively to problematic cyber threats



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and to offer not only extensive but also secure mobile network and digital services that satisfy customer needs while defending their personal data protection rights.

Moreover, global and local regulatory agencies are placing particular emphasis on cybersecurity development and personal data protection. To meet with such a challenge, AIS needs to constantly analyze and improve its operational processes to avert the impacts of data leakage on service users, mitigate personal data dispute risk, and minimize financial and reputational damage from cybersecurity incidents.

Apart from its unequivocal commitment to the provision of safe digital services, AIS also aspires to devise comprehensive cybersecurity services to meet the needs and realize the potential of corporate clients. To this end, the company is continually building bodies of knowledge pertinent to cybersecurity and personal data protection through such groundbreaking technologies as national ID, blockchain, hybrid cloud, and IoT.

To seize the opportunities and weather the challenges mentioned above, AIS has amended its cybersecurity development and personal data protection goals, policies, and strategies to reach the highest standards on par with or surpassing those of other business organizations in the industry and the region, to be approved by related third-party agencies by the year 2027, and to apply the scope of its cybersecurity and personal data protection standards across the entire significant business value chain by the year 2025.

Management Approach

AIS oversees, determines, and implements policies, procedures, and administrative systems for all offices corporate-wide to secure trust from its customers in the transparency of its information and customer privacy protection operations. AIS also incorporates cybersecurity and customer privacy protection in its risk management under the direction and regulation of the Audit and Risk Committee. For the governance structure, AIS has established Cybersecurity Committee, co-chaired by the Chief Information Officer (CIO) and the Chief Technology Officer (CTO), to devise policies, strategies, and guidelines to ensure the efficiency of cybersecurity and personal data protection. Furthermore, there are units to support and drive policy implementation within the organization, such as the cybersecurity team and customer privacy protection team, who report to the Cybersecurity Committee on a monthly basis. The Cybersecurity Committee then reports to the Risk Management Committee quarterly. At the administrative level, policies and strategies for cybersecurity and personal data protection are decided by the Risk Management Committee, which must report to the Board of Directors and the Audit and Risk Committee every quarter.

AIS imposes the cybersecurity and customer privacy protection policy on all offices corporate-wide and external organizations affiliated to the company as well as constantly conducts internal audits to ensure that its cybersecurity and customer privacy protection operations comply with its policy, standards, and framework.

For further information, please visit:

- Cyber Security Policy [🔗 Read more](#)
- AIS personal data protection policy [🔗 Read more](#)



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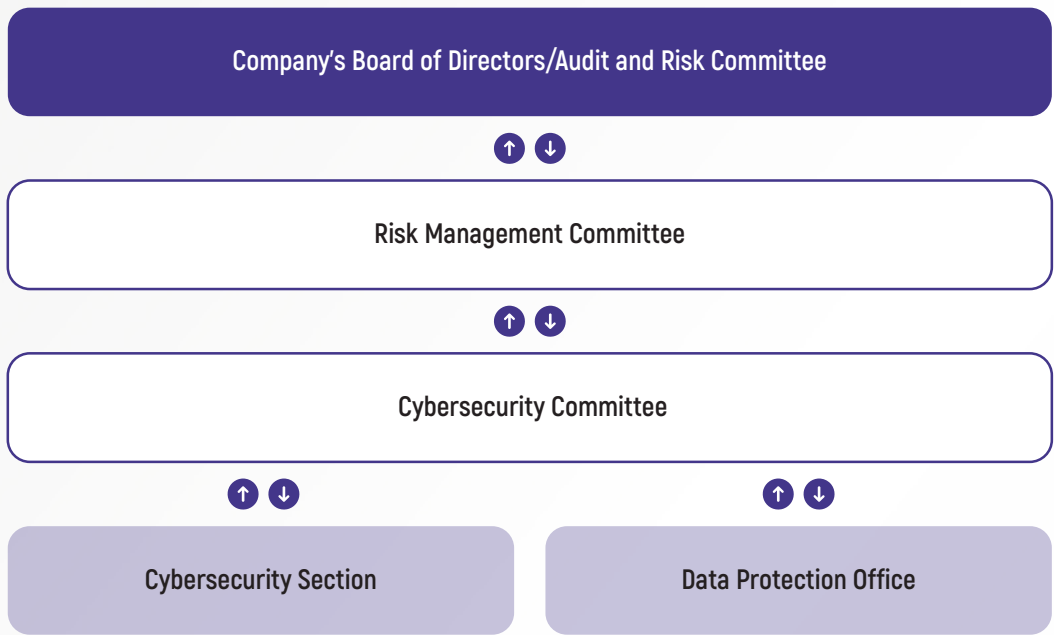
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Structure of the Committees Overseeing the company's Cybersecurity and Personal Data Protection



Privacy Protection

AIS maintains a Data Protection Office, which acts a central hub for the protection and monitoring of the personal data of customers. The office provides guidelines and policies to maintain compliance with relevant laws and regulations for both AIS and group companies as well as advice on data storage and usage to other offices within the company to enhance business operations, competitiveness and pave the way for new businesses. With commitment to legal compliance, AIS undertakes the following actions and processes to enhance its data privacy:

Personal data protection framework and process

- ➔ **Data governance**
 - Devise a personal data protection policy for service users and update relevant announcements to ensure that service users understand the company's rules, regulations, and practices pertinent to personal data protection.
 - Determine confidentiality classification, including access to sensitive information, and apply various information protection tools to prevent personal data leakage from data storage to data use and transfer processes.
 - Formulate data flow specifications in a systematic manner and communicate the information to the relevant units to ensure adherence to the data flow specifications.
 - Establish personal data protection standards for employees and external parties through data life cycle management.



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Collection, Storage and Utilization



- Personal data is collected and stored purposefully and with restrictions in a lawful and fair manner and is done so only within the limitations of providing service
- Personal data is collected and stored in accordance with terms of service and/or customer consent and is done only for the purposes notified to customers with no utilization beyond purposes accepted/consented by the customer
- Appropriate data privacy protection measures are implemented in alignment with personal data confidentiality, to protect against loss and unauthorized or unlawful access, destruction, utilization, altering, amendment or disclosure as well as to protect against unauthorized application of personal data in accordance with the AIS Group Cyber Security Policy
- Personal data is collected within limited time frame according to the purposes notified to customers and contracts and legal proceedings.

Disclosure



- Personal data disclosure is done in accordance with terms of service and/or customer consent and is done only for the purposes notified to customers with personnel, company operatives and partners overseen to prevent utilization/disclosure beyond the purposes notified to customers and in accordance with legal compliance policies, the National Broadcast and Telecommunications Commission Notification on the Rights Protections of Telecommunication Service Users in Relation to Personal Data Privacy and Freedom to Communicate via Telecommunications and other laws relevant to personal data.
- Guidelines are provided to partners on the collecting, storage, utilization and disclosure of personal data requiring that they put in place measures to adequately protect personal data via a cyber security policy that at least must be equal to AIS Group standards.

Destruction



- A clear policy is provided on the time period for personal data collection and storage based on data collection and storage purposes or the contract or legal relation period alongside a policy for the deletion or destruction of personal data or rendering of data to remove personal identifiers.

➔ Awareness raising and training

- Press ahead with raising awareness of personal data protection among all employees, trade partners, and contractors to ensure that they are able to properly comply with newly introduced laws, rules, and regulations, such as those pertinent to confidentiality classification and data lifecycle management, and that the implementation of personal data protection measures is consistent throughout the organization.
- Promote the principles of privacy by design and privacy by default for responsible product and service design among employees to maximize personal data protection and cybersecurity.

➔ Risk follow-up and assessment

- Conduct a Data Protection Impact Assessment (DPIA) in accordance with internationally recognized standards, taking the following steps:
- Assess risk from daily data leakage operations and specify risk reduction measures.
 - Draft standard contractual clauses (SCCs) for data transfer that need to be followed by internal units and trade partners involved in personal data access to prevent the circulation and/or transfer of such data.
 - Prepare records of personal data processing undertaken internally within the company and by trade partners to ensure that personal data are legitimately and properly used, processed, and disclosed in accordance with applicable laws, rules and regulations, and frameworks, and that personal data processing risk can be monitored and assessed.



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- Establish an internal audit team to construct an annual audit plan and set out internal audit guidelines by taking into consideration relevant codes of practice, such as the Personal Data Protection Act 2562 B.E. as well as public agencies', universities', and organizations' guidelines pertinent to personal data protection.


➔ **Personal data breach prevention and response**

- Clearly detail in the Codes of Conduct for employees disciplinary action in the event of personal data leakage and disciplinary action guidelines for different magnitudes of damage. Such provisions are applicable to AIS and all its affiliates and subsidiaries.
- Establish the Incident Center to be responsible for responding to personal data breaches, cyberattacks, and personal data leakage.

For any customers who wish to voice concerns or make enquiries, please contact our Complaint Center



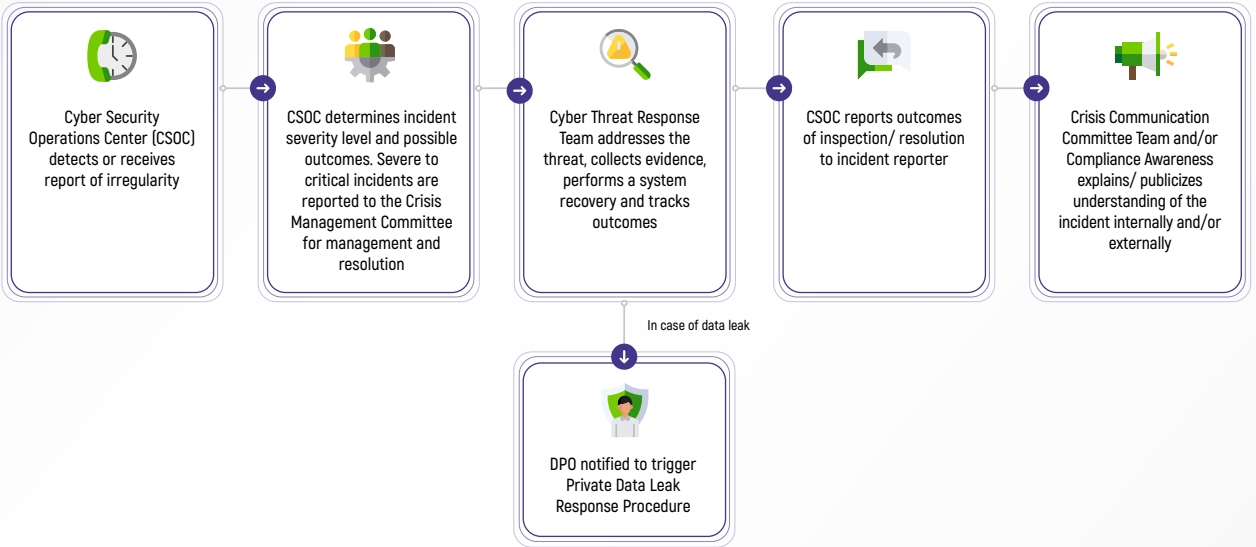
Telephone: 08-000-9263



Email: complaint_center@ais.co.th

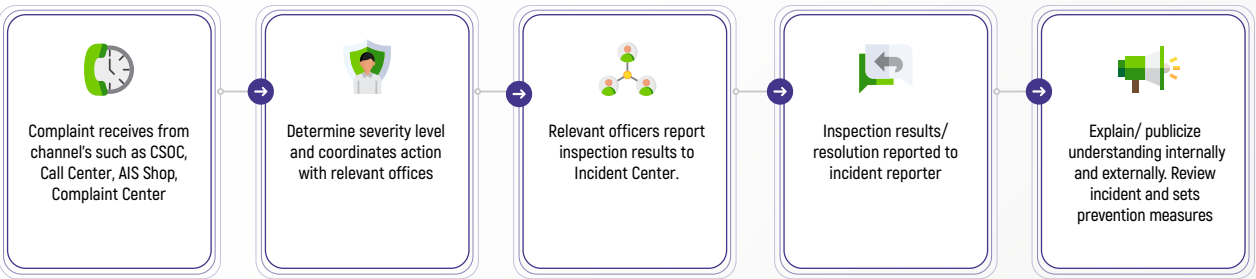
The threat response process is as follows:

Cyber Threat Response Procedure



Incident Center’s Cyber Threat Response Procedure under General Circumstances

Private Data Leak Response Procedure



Incident Center’s Cyber Threat Response Procedure in the Event of a Personal Data Breac



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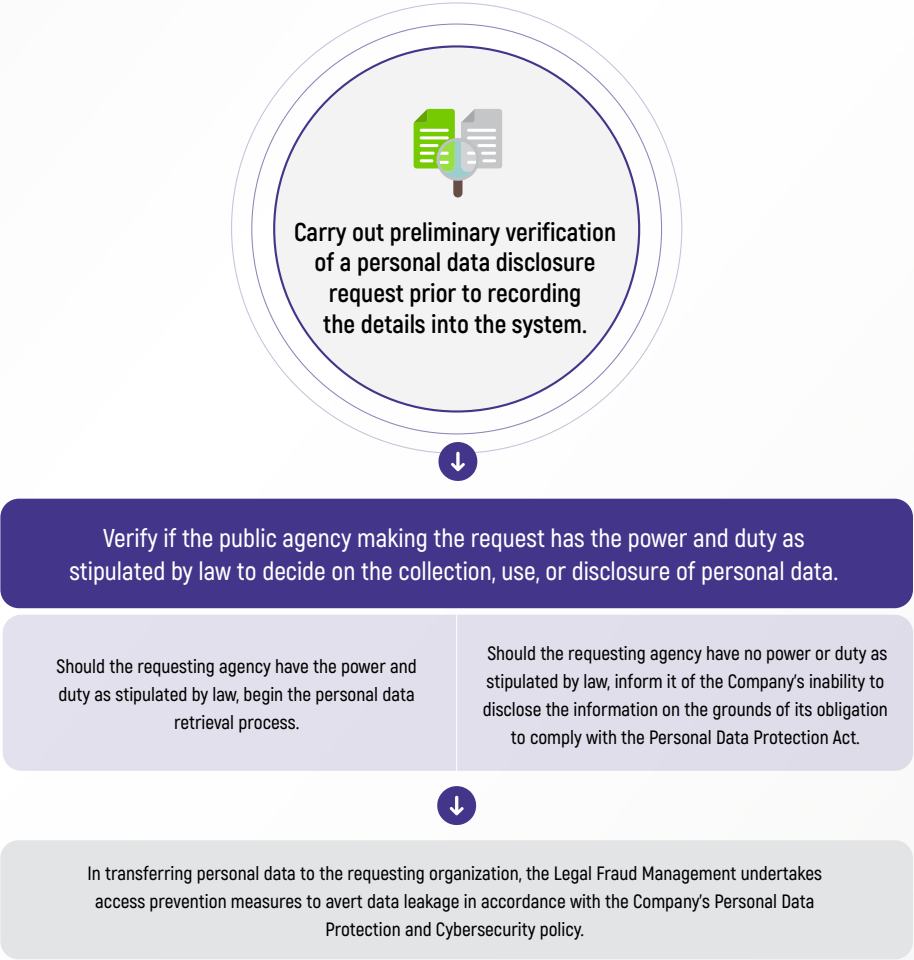
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Procedure for processing personal data disclosure requests

AIS considers personal data disclosure requests through the Personal Data and Cybersecurity Committee, led by the company's executive-level managers collectively referred to as the C-Suite. The Personal Data and Cybersecurity Committee is tasked with issuing policies for personal data protection, risk assessment, and cyber threat response, as well as determining personal data protection and cybersecurity strategies in accordance with applicable laws, rules, and regulations. Also, it is responsible for disclosing information in a legitimate manner by virtue of law or at the request of such public agencies as the Court of Justice, the Royal Thai Police Headquarters, and the Anti-Money Laundering Office. AIS has also established the Legal Fraud Management Committee to be in charge of considering and overseeing personal data disclosure to ensure that it complies with the criteria specified in Section 1 Clause 4(1) of the National Broadcasting and Telecommunication Commission's Announcement on Customer Data Privacy Protection Guidelines, Right to Privacy, and Freedom of Communication through Telecommunications Means, and in Section 24(6) of the Personal Data Protection Act. The processes and/or procedures undertaken by the Legal Fraud Management Committee need to be approved in principle by the Chief Corporate Officer.

In 2022, AIS received 19,454 personal data disclosure requests from authorized public agencies. It acceded to 17,791, or 91.45%, of such requests.



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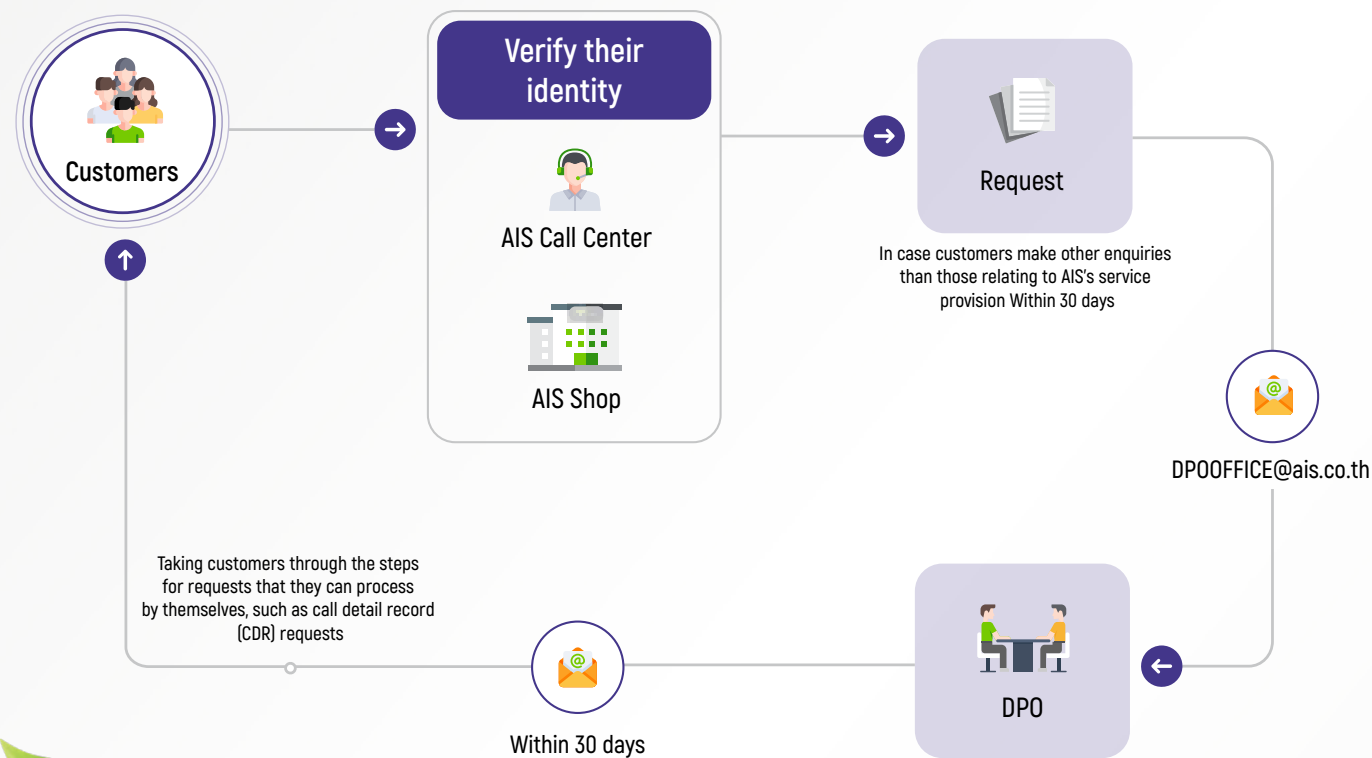
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In addition, customers, as data owners, are entitled to claim their rights within the duration specified in the Personal Data Protection Act by contacting AIS through one of its various communication channels, including the AIS Call Center and AIS Shops. For statutory rights, such as the rights to access, correct, delete, or transfer personal data, as well as to make CDR requests, certain criteria and guidelines have been put in place. For non-statutory rights, the DPO has been delegated to receive and process requests within 30 days. For additional information, please refer to [Click here](#)



Procedure for Processing Customer Requests

Human rights compliance and assessment of human rights risk pertinent to data privacy

Realizing that human rights are inherent to all human beings, AIS only discloses personal data with the consent of data owners and in accordance with the company's policy and the Thai legal framework. The information pertinent to human rights compliance and assessment of human rights risk pertinent to data privacy is accessible by [Click here](#). However, the company is unable to notify the data owner of personal data disclosure in the event that it constitutes an investigation process undertaken by an authorized public agency.

AIS has delineated and imposed its Human Rights Policy to guide its business operations in accordance with the United National Universal Declaration of Human Rights (UNHDR) and the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work. The company's Board of Directors delegates the policy oversight to the Sustainability Development Committee through the Human Rights Committee, which pursues the policy together with the Risk Management Committee by identifying the human rights risk in various aspects, such as personal data protection, affected parties, and the identification of solutions to and preventive measures for potential human rights violation incidents throughout AIS's business value chain. For further details [Read more](#)

During the previous year, AIS also reviewed and amended its Personal Data Protection Policy to ensure that personal data storage is carried out with a legitimate and ethical goal, framework, and procedure respecting data owners' human rights.



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In the event of violation of human rights pertinent to personal data disclosure, the injured person shall be paid damages in accordance with the law as follows.

- For a criminal case under the Damages for the Injured Persons and Compensation and Expenses for the Accused in Criminal Cases Act 2544 B.E., the injured person shall be entitled to receive money, property, or any other benefits for indemnification of damage caused by or resulting from a criminal offence committed by others, including personal data disclosure to an authorized public agency by virtue of law.
- For a civil case prosecuted on the grounds of personal data breaches, the injured person shall be entitled to damages as incurred.

Cybersecurity

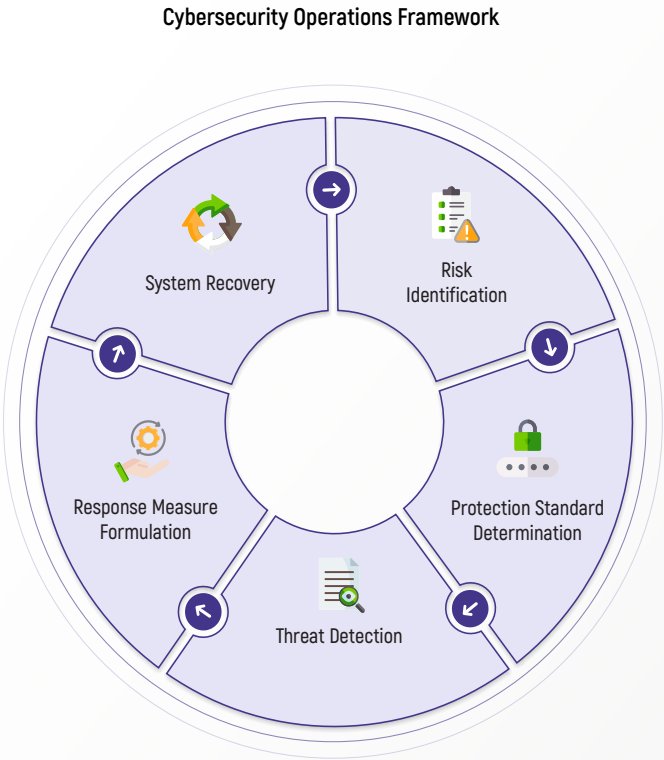
AIS has developed an infrastructure and formulated measures, procedures, and guidelines for cybersecurity management, testing, and monitoring, for instance establishing the Cybersecurity Department to defend its cybersecurity and raising cybersecurity awareness across the organization. Committing to sustaining cybersecurity, the company also constantly improves its infrastructure in accordance with internationally recognized standards, assesses the cybersecurity of systems and applications prior to their launch, arranges self-assessment by software

developers, as well as integrates automated technology into process improvement. Moreover, AIS monitors and responds to cyber threat on a 24x7 basis through a real-time warning system in conjunction with a user entity behavior analysis system to elevate its competitive advantage in incident detection and cyber threat assessment. Finally, the company regularly formulates and reviews cybersecurity policies and guidelines in accordance with applicable laws, rules, and regulations, as well as internationally recognized standards, including the ISO27001 ISMS Standard, applicable to the CSOC.

Operations framework and guideline

➔ Application of an established cybersecurity framework.

AIS has applied the Cybersecurity Framework of the National Institute for Standards and Technology (NIST) to the planning and design of its cybersecurity system to ensure that cyber threat prevention, detection, and response processes are not only timely but also systematic, as illustrated in the figure on the right. Additionally, AIS has set a goal to adopt other relevant guidelines and international standards in its system and process development to enhance the efficiency of IT defense and personal data protection.



Source: National Institute of Standards and Technology



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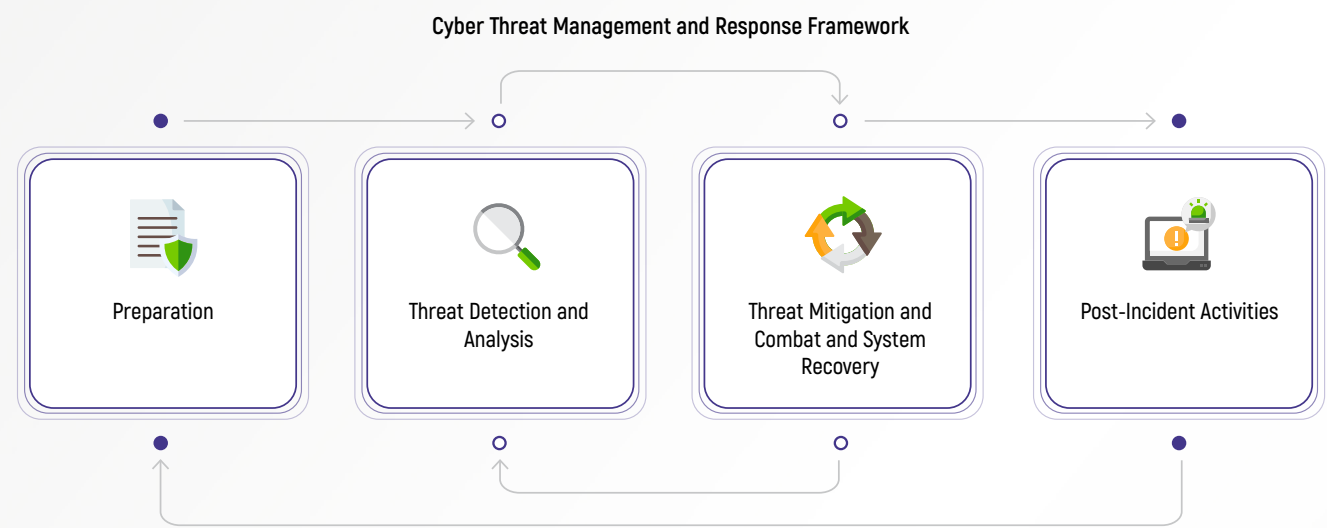
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➔ **Cyber threat response and escalation process.**

AIS has implemented the NIST's Cyber Incident Response Framework in its daily operations, as shown in Figure below under this framework, complaints are passed through specially designated channels and appropriately handled according to severity levels.



Source: Computer Security Incident Handling Guide by National Institute of Standards and Technology

➔ **Work from home scheme.**

The company has devised the work from home scheme to be effective in the event when operations on its premises is untenable and built a mechanism for efficient, unfettered, and secure and rigorously controlled access to its IT system. It has also formulated relevant policies, criteria, and measures to enhance the security of Microsoft Office 365 System, including access management, multi-factor authentication, confidentiality classification, data encryption, and data and mobile access rights and control.

➔ **Hybrid cloud system security protection.**

AIS has incorporated a hybrid cloud system – a computing environment that combines a private with a public cloud to allow data and application sharing between the two – for the achievement of operational flexibility responsive to changes in the workplace landscape. The company has also utilized various cybersecurity technologies to maximize cybersecurity in accordance with its policy and framework in this aspect.

➔ **Cybersecurity enhancement with the zero trust model.**

In managing system risk and vulnerabilities, AIS has adopted the zero trust model to elevate its cybersecurity standards, encompassing such frameworks as identity and access management, information protection, and network, endpoint, and application security management, including software updates and obsolescence management.

The zero trust model

is a security framework requiring all users in a computer system to be authenticated, authorized, and validated prior to being granted access to the system. It encompasses such cybersecurity frameworks as identity and access management, network and connection security management, endpoint, application, and software security verification, and data protection.



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➔ Coordination with regulatory agencies and major information infrastructure organizations.

AIS has allied with regulatory agencies, public agencies, other Internet and telecommunications service providers, and the Telecommunications Association of Thailand under the Royal Patronage to establish the Thailand Telecommunications Computer Emergency Response Team (TTC-CERT). The TTC-CERT aims to promote and enhance the coordination, information sharing, and management between its members in the event of a cyber threat to be in accordance with the Cybersecurity Act 2564 B.E., including issuing warnings of major vulnerabilities and attack incidents and sharing information pertinent to preventive measures.

AIS has won various certifications reflecting its determination to attain and uphold the highest personal data protection standards as follows:

- The ISO27001 Information Security Management System (ISMS) Certification since 2015, with the scope of the CSOC's security operations expanded to monitoring as a service in 2020 and to incident response (IR) as a service in 2022
- The Cloud Security Alliance's Security, Trust, and Assurance Registry Program (CSA-STAR) Certification since 2016
- The Payment Card Industry Data Security Standard (PCI-DSS) Certification since 2017, with the scope of security operations expanded to merchants and later to service providers in 2021.
- The ISO27017 Cloud Service Provider Security Standard Certification
- The ISO27018 Personally Identifiable Information (PII) Protection Standard Certification in 2022

Additional information on AIS's related policy, please visit

- AIS's Privacy Notice [➔ Read more](#)
- AIS's Cybersecurity Policy [➔ Read more](#)

2022 Progress

➔ Laws, rules, and regulations

Promotion of public-private partnerships in cybersecurity and personal data protection through the following.

- AIS participated in public hearings and legal and oversight procedure interpretation, promoted public sector activities involving cybersecurity skills development for public and private personnel, attended national cyber exercise programs in order to enhance cybersecurity and personal data protection for society, and assessed the implications of legal requirements on the company's business operations and the practicality of such requirements.
- AIS achieved preparedness within the organization by raising awareness of the scope, roles, and responsibilities of the Critical Information Infrastructure (CII) under the Cybersecurity Act among the company's Board of Directors and managerial level personnel in charge of system planning and development through training and lecture sessions delivered by internationally and locally renowned cybersecurity and legal experts.

➔ Capacity building and awareness raising for employees

Capacity building for cybersecurity and personal data protection personnel. Related personnel attended training programs and were awarded over 71 certifications ensuring that they will be able to meet standards relating to cybersecurity and personal

data protection, cloud security, system vulnerability monitoring, cyber threat detection and analysis, and incident response and forensic analysis. Other capacity building programs run over the year included log analysis, incident management, and digital evidence investigation

Awareness raising. AIS raised awareness of cybersecurity and personal data protection among its employees nationwide through both online and offline channels to ensure their compliance with its cybersecurity operations framework and guidelines. AIS achieved preparedness within the organization by raising awareness of the scope, roles, and responsibilities of the Critical Information Infrastructure (CII) under the Cybersecurity Act among the company's Board of Directors and managerial level personnel in charge of system planning and development through training and lecture sessions delivered by internationally and locally renowned cybersecurity and legal experts.

- **Courses, activities, and communication channels.** The company developed courses to enhance knowledge of cybersecurity and personal data protection covering a wide array of topics, especially confidentiality classification, data protection tools, cyber threat, digital strategies, the Personal Data Protection Act 2562 B.E., personal data and significant corporate information protection guidelines, and cyber threat management measures. The courses were delivered through various modes, such as on-demand streaming, e-mail communication, face-to-face information sharing activities led by internal and external experts, and most notably AIS's Inseedang Channel. Such extraordinary efforts earned the company the Cybersecurity Excellence Awards for Capacity Development.



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- **Assessment and evaluation of knowledge.** AIS requires all employees to take the cybersecurity and confidentiality classification test with over 99% of them achieving a passing score in 2022. The company also administered the test on its trade partners, such as Telewiz with more than 96% of them performing satisfactorily.
- **Prevention of IT system interruptions and cyberattacks.** AIS always conducts tests on IT systems and cyberattack drills at least semi-annually. In the previous year: one involving ransomware and distributed denial-of-service attack simulations and tabletop

exercises and the other incorporating corporate-wide phishing simulations. other incorporating corporate-wide phishing simulations.

➔ Technology development and process improvement

Process improvement

- AIS improved its superuser access system by tightening the control process through various measures, such as privileged password management (PAM), password policy review and amendments, and multi-factor authentication, implemented across the organization via both on-premise and on-cloud systems.
- The company enhanced its information access processes through such measures as confidential information protocols, confidentiality classification, shared data inspection, and data encryption, utilizing information protection and governance tools, HSMs, and KMSs.
- AIS made personal data access requests for analytical purposes more stringent by determining different levels of access pursuant to such requests.
- The company bettered its ransomware attack management by delineating the ransom incident response procedure to ensure systematic and timely operations in the event of a ransom attack.
- AIS reviewed and amended its Cybersecurity Policy, Personal Data Protection Policy, Personal Data Protection Announcements, and other related standards and practices in accordance with applicable laws, rules, and regulations as well as internationally recognized standards, in order to bring its operations in these aspects to another level of security and efficiency.

24X7 CSOC. The company assigned the CSOC to extend its service to corporate clients to enhance their system threat monitoring and elevate their IT security management to be line with internationally recognized standards. AIS also successfully extended the operations of the CSOC under the ISO27001 ISMS Certification from monitoring as a service to IR as a service.



Audits. AIS delegated internal and independent auditors to be involved in several initiatives connected to the company's cybersecurity and personal data protection systems, such as IT system control, data security awareness raising program implementation, cybersecurity incident prioritization, and cloud system security and operations protection, to ensure compliance with its policies and applicable laws, rules, and regulations. During the year 2022, all cyber threats inflicting damages on AIS customers' personal data were successfully countered with no material impacts on its cybersecurity system and business operations. For further information on remediation, please [visit here](#) page 81

For the year 2023, AIS has set objectives in line with its IT system defense and personal data protection missions as follows.



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➔ **Laws, Rules, and Regulations**

- Review and improve the cybersecurity and personal data protection policies and standards to keep abreast of the development of relevant legal provisions, most notably the Cybersecurity Act 2562 B.E. and the Computer-related Crime Act 2550 B.E., to be in line with its business operations involving CII, and to be prepared for the enforcement of the legislative instruments of such acts.

➔ **Capacity building and awareness raising**

- Constantly raise awareness of cybersecurity and personal data protection and ultimately integrate them into the organizational culture to ensure that the company's management and employees are able to efficiently detect and respond to cyber threats and defend personal data.

➔ **Technology development and process improvement**

- Enhance the security of and modernize the IT system by adopting the zero trust model in identity management, access control, and the security management of networks, computing devices,

applications, and personal data.

- Assess and improve the system and operational processes of the CSOC to support tasks relating to the prevention, monitoring, management, and reduction of cyber threats in line with internationally recognized standards as well as the provision of cybersecurity services to corporate clients.
- Enhance preparedness for cyber threat response, run a crisis management drill for the management and employees on an annual basis, and enforce the company's confidentiality classification framework corporate-wide.
- Draw up a checklist for the assessment of the business operations of trade partners, allies, and vendors to ensure the adequacy of their personal data protection, as well as provide updates on the company's Personal Data Protection Policy and Cybersecurity Policy to trade partners, allies, and vendors and enforce compliance with such policies.
- Improve cybersecurity enhancement tools, including confidential information protection, mobile access and control, identity and access management, and security testing and assessment, to be in line with internationally recognized standards.



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Performance Table

Topic	Units	2019	2020	2021	2022
Personal data protection					
Number of personal data breach and data loss complaints					
Complaints from general persons or agencies ¹	Number of cases	124	560	7	7
Complaints from regulatory agencies	Number of cases	47	23	20	11
Data leakage, theft, or loss	Number of cases	0	0	0	2
Requests for customers' personal data from public agencies with the power and duty ²	Number of cases	28,334	24,453	25,442	19,454
% of the total number of requests	%	-	92	70	91.45
Network					
Average frequency of network failure	Units	0.05	0.07	0.18	0.07
Average length of network failure	Minutes	12	39	54	38

Remark:

¹ As the number and types of complaints received surged over the year 2022, only those determined to be well-founded were reported.

² AIS provides customers' personal data to the public agencies granted the authority by law, namely the Court of Justice, the Royal Thai Police Headquarters, and the Anti-Money Laundering Office.



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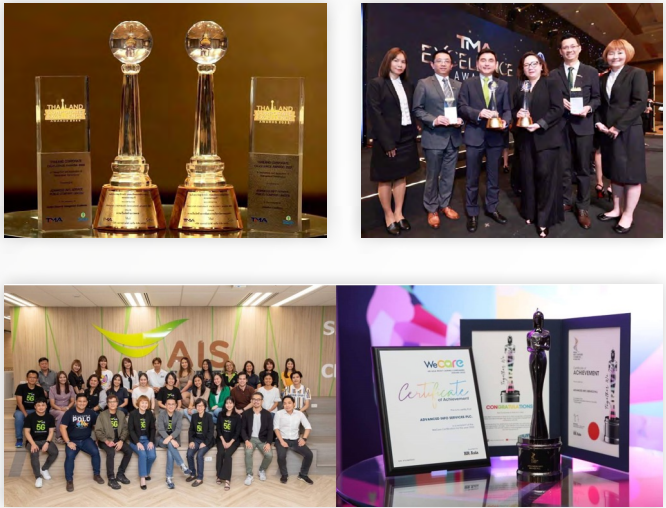
Nurture and develop AIS human capital to support business growth particularly digital business.



Target

More than 90% of AIS employee is equipped with new digital skills and literacy by 2025

Key Highlight in 2022



- In 2022, AIS started carrying out digital assessments among executive-level employees and found that their scores were higher than the global averages and those in the telecommunications companies. In the next phase, AIS plans to provide training and digital assessment to employees across the company to elevate employees' digital skills and capabilities to move toward the Cognitive Tech-Co goal.
- In 2022, AIS obtained multiple human resource management and outstanding innovation management awards, demonstrating AIS' commitment to human resource management and driving digital innovations to develop employees' skills, enabling them to keep pace with emerging changes. The four awards received are as follows:
 1. HR Best Company to Work for in Asia 2022
 2. Thailand Corporate Excellence Awards 2022
 3. Thailand Most Innovative Knowledge Enterprise (MIKE) Award 2022 for Innovation and Knowledge Management (Gold Class) and Innovation Excellence.
 4. AIS and Advanced Contact Center (ACC) were recognized by the Kincentric Best Employers Thailand Hall of Fame 2022.
 5. WeCare: HR Asia Most Caring Companies Award 2022, which recognized the companies concern for their employees' work and personal life balance through care and empathy.

Opportunities, Challenges, and Impacts

According to the Future of Jobs Report by the World Economic Forum, it is estimated that by 2025, 85 million jobs may be made redundant while 97 million new roles may emerge to accommodate the change in humans, machines, and algorithms of global workforce to develop digital skills to keep up with future jobs. The scenario reaffirms that the transformation into the digital age of organizations across the world has brought challenges for any workforce which fails to adjust itself and learn new skills, especially digital skills. They are faced with disparities in work skills and expertise whereas the business sector has encountered challenges from digital skill shortages.

The company's human resource management in alignment with the digital economy and AIS' new business direction has prompted employees to adjust to constantly changing skills. This provides opportunities for employees to adjust and learn new skills. On the other hand, it brings about challenges as a new work approach may put pressure on employees who need to integrate digital technologies into their work to enhance performance, affecting the work of some groups of employees. Anticipating such potential impacts, AIS has laid out a management approach that strikes a balance between effective human resource management and taking good care of employees' quality of life in promoting them to have fun at work, work happily, and to their fullest potential.



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The trend toward digital skill shortage coupled with the demand to reskill and upskill AIS' employees in line with the drive to realize the Cognitive Tech-Co goal are factors affecting AIS' competitiveness. These factors also pose challenges to AIS' human resource management in the realms of budgeting and planning for training new skills as well as strategies to recruit and retain highly competent employees. In addition, the ability to care for employees' health and mental well-beings can create positive employer image, attracting and retaining quality employees to work with the company with great pride.

With demonstrated commitment to its leadership status in the telecommunications industry and to enhancing capabilities to address customers' emerging needs, AIS has redefined its employee enrichment goals and strategies to align with this key transitional period. The objectives are to enable at least 90% of its employees to have the understanding and capability to utilize digital technologies effectively along with adjusting themselves and their mindsets to cope with the expanding new businesses. The efforts will make AIS employee's experts and trailblazers for the company's digital world direction for the future as well as quality citizens in the age of the digital economy.

Management Approach

AIS devotes enormous significance to human capital management. The Chief Human Resource Officer is responsible for setting up policies and implementing human resource management plans.

AIS strives to make the company the best workplace for all employees. Not only has the company established policies and operational guidelines

in compliance with labor laws, AIS has also stressed the importance of employees' occupational health and safety and respect for human rights according to Universal Declaration of Human Rights. The company provides opportunities for employees to fully showcase their abilities and potential for driving AIS toward business sustainability while fostering an organizational culture aligned to its business practices under the concept "FIT FUN FAIR". Employees are encouraged to develop their skills in response to the digital challenges of the business and the company's goals are clearly communicated. What's more, AIS has adapted its work arrangements to align with the change in the borderless digital world of work by creating a happy workplace environment in tune with the "Work Life Integration" concept, combining a work-life balance that offers flexibility in allocating time for work and life appropriate for each individual.



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The 6Ss Strategy

The Human Resources Department reviewed the strategy for human capital management to enhance organizational efficiency and drive employees to apply their full potential to increase the company's competitiveness through the 6Ss strategy comprising the following:



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Talent Attraction, Retention and Succession Plan

AIS made plans to recruit highly capable personnel to join and retain these employees to grow alongside AIS based on the following principles:

Fair Employment	AIS adheres to fair employment principles and complying with all applicable laws as well as seeing the importance in having a diverse workforce populated by personnel with different bases of knowledge and skills. The Company maintains a policy against employing child and all types of illegal laborers while supporting the employment of disabled persons to work in convenient environment and for them to acquire new abilities in the digital technology industry and providing funds to the Disabled Persons Support and Quality of Life Development Fund.	
Talent Management	Talented employees are sought out, provided with appropriate positions and duties, and developed and fostered so that they may be retained and grow alongside the Company.	
Digital Skills Hiring	AIS works with leading universities both domestic and abroad to organize activities that introduce itself and open up opportunities for students with functional skills for the digital age such as blockchain, AI and data analytics to join the Company and enhance its digital growth capability sustainably.	
Career Development	Employees are provided with data and advice from their superiors so that they may plan their careers and support their own potential development plan.	
Employee Retention	AIS provides incentives both monetary and non-monetary and other benefits to employees such as health insurance and a healthcare center at office.	
Succession Plan	AIS maintains succession plans for every position throughout its structure, using a criteria and process that transparently and fairly selects the most capable successor for any position with emphasis on leadership capability and readiness to assume the role.	

In the recruitment and interview processes, technological solutions were adopted to facilitate and increase efficiency in recruiting new hires. Examples included organizing Virtual Roadshow and Career Fair in conjunction with various universities and carrying out online job interviews to attract competent students to join AIS upon graduation.

➔ Performance Appraisal and Remuneration and Benefits

For the talent retention process, AIS attaches significance to fair performance evaluation by setting up the Assessment Center to develop approaches and tools for appraising employees' skills and competency to align with the company's business operations. In addition to providing tools to help analyze employees' skills appropriate for work in each function, the Assessment Center also provides suggestions to enable the executives to assess employees properly. The performance appraisal is undertaken twice a year, and the appraisal result will be jointly analyzed by the employee, supervisor, and HR officer to develop the employee's potential and capabilities to align with the company's business direction through the individual development plan. Each year, the Board of Directors and Senior Management establish the corporate key performance indicators as a basis of strong linkage of business direction. Employee remuneration is determined based on performance measurement, which is set by taking into consideration business objectives, leadership competencies, as well as behavioral evaluation in accordance with the corporate culture and in compliance with the Code of Conduct.

The results are also used in considering the employee's remuneration. AIS has put in place a clear remuneration policy defining appropriate remuneration as stipulated by law and comparable to companies in the same industry with emphasis on equality. The appraisal criteria are based on the following framework:



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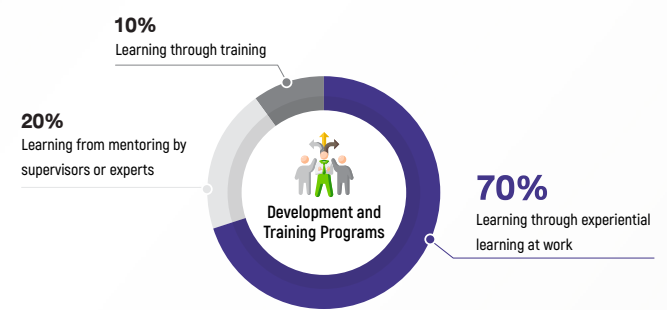
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1. **Performance appraisal based on corporate KPIs** which involves managers and employees jointly establishing goals as well as 360-degree feedback assessment including input from supervisors and coworkers. Employees also evaluate their supervisors or managers, contributing to skill and capability development from different perspectives. Furthermore, AIS employs a comparative ranking system to assess competency and performance in similar positions and job functions.
2. **Leadership competency** which is the assessment of leadership competencies, strategic thinking, vision to drive change, and the ability to foster relationship with all stakeholders among many other things. The appraisal results in the leadership front help create career development plans for employees.
3. **Compliance with culture and business ethics** which is based on the underlining concept Fit Fun Fair, assessing employees' behaviors in terms of physical fitness and mentality to support happy and efficient performance of work.

AIS realizes the importance of developing employees' skills, starting from the first day of their employment right through to retirement. As a result, the company supports its employees in enhancing their skills and knowledge for growth in their careers and diversification beyond their base skillset in line with the changes spurred by the digital disruption era through lifelong learning. The employee development strategy focuses on adopting Ed Tech (Education Technology) to allow employees to learn via online and offline, empowering them to work creatively. An evaluation system is put in place to assess their performance in training and learning. Furthermore, AIS provides an individual development plan to enhance both pro-active and technical skills best suited to each employee, and each is allowed to take part in devising a career development plan aligned with their skills and AIS' business direction.

To enrich employees' potential, AIS provides an array of development and training programs with a 70: 20: 10 development proportion as follows:



Additionally, AIS has incorporated the "cognitive life-long learning" plan that corresponds to the company's business operations and the employees' needs. To that effect, employees are provided with access to up-to-date courses through the LearnDi and ReadDi applications that allow them to learn

anywhere at any time. They feature training courses on digital technology useful for work as well as updates on news and information. The applications also serve as online libraries for convenient learning. The courses are categorized as follows:

- General operations courses
- Managerial courses
- Functional courses
- Compliance courses
- Talent, or high potential executive track employees courses
- Technological Skill Development courses
- Succession Plan course

As part of efforts to foster new digital skills to address the company's business operations, AIS Academy and Technical Knowledge Management (TKM) jointly set forth strategies that better address today's needs such as design thinking and strategic thinking. Aside from developing creative ideas into a digital business, AIS Academy and TKM are dedicated to adding more digital courses to develop employees' potential and skills and training them to have analytical skills in the form of data analytics. Added to this is the sharpening of their existing skills so they can be applied to today's world effectively such as by adopting digital systems in various functions. For instance, automation systems like RPA, UiPath, MS Power Automate, and MS Power App have been applied in preparing employees' business trip reports.

Occupational Health, Safety, and Workplace Environment Operations

In line with the commitment to conduct business with concern for the occupational health, safety, and workplace environment of its employees and contractors, AIS has defined an occupational health, safety, and workplace

Human Capital Development

Employee Potential Development through Work Culture and Lifelong Learning



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environment (OHS) policy and an action plan that meet international standards. A dedicated department was established to oversee, promote, monitor, and control the company's occupational health and safety operations as well as improve its overall OHS performance. Added to this was the setting up of an occupational health, safety, and workplace environment committee in each area responsible for supporting and enforcing the OHS policy, regulations, and requirements as prescribed by the OHS Department to control safety measures in every area. They are also tasked with reporting the performance results and suggesting room for improvement to the Department in terms of the company's safety requirements and standards.

For the OHS operations of employees working in offices or base stations, AIS has formulated an emergency plan and carries out a drill annually. Risk assessment of the office buildings and checking of work environment in the operating areas are performed by external agencies certified by law together with the company's professional safety staff to fix any arising problems in the area to ensure the work environment complies with proper standards and criteria.

AIS also recognizes the importance employees and contractors by building knowledge, understanding, and awareness about work safety. As such, AIS has organized multiple safety training programs for employees. Examples include the "Safety, Occupational Health, and Workplace Environment for General Employees and Newly Hired Employees" program designed for new hires to equip them with useful knowledge on safety and other safety requirements instigated by relevant laws. Other training programs are designed for high risk work such as safety for work associated with electricity, safety for working at a height requiring the use of fall arresting or restraining equipment, and safe driving, etc.

AIS has defined safety regulations for contractors to provide safety control criteria in their performance of work through the Safety Control of Contractors project, spanning the following efforts:

- Providing safety training both in theory and practice to contractors via the AIS Safety Passport Program
- Analyzing work-related dangers and preventive safety measures (job safety analysis)
- Ensuring the standards of personal protective equipment conforming with the relevant laws

In 2022, AIS introduced the Safety Onsite Inspection Program in which AIS safety professionals conducted an unscheduled inspection of a contractor at work to ascertain that the contractor is performing their work in compliance with safety regulations while providing them further advice to promote a safety culture in their workplace and procedures.

For further information:

- Commitment and Goals on Occupational Health, Safety, and Workplace environment. [🔗 Read more](#)
- Occupational Health, Safety and Workplace environment Policy [🔗 Read more](#)

Support for Employees' Human Rights

The Human Resources Department enforces the policy across the company to ensure fairness and transparency in the areas of recruitment, employment, orientation, and training among many other things. As well, AIS has performed due diligence to assess impacts, treated employees humanely with focus on educating and training line supervisors, and clearly communicated to make sure employees in each department understand and comply with the

company's zero-tolerance policy against discrimination and harassment. Employees are also required to take an ethical assessment survey every year. Based on AIS' monitoring of human rights 2021-2022, no human rights violations were found.

AIS has established guidelines to protect employees' human rights as follows:

➔ Support for Diversity and Inclusion

Support for diversity is key to empowering AIS to have a corporate culture that promotes innovation. Over the past several years, AIS has provided employment opportunities to people of different backgrounds in education, races, religions, beliefs, genders, ages, and physical abilities. Employees are given equal opportunities to develop their skills, take part in driving the company, and advance in their careers without prejudice against different backgrounds. Realizing the benefits of diversity in driving innovations and ideas, AIS encourages employees with differing experiences and skills to work together and exchange ideas to enhance innovations, operations, and service capabilities. The focus is on highlighting the strengths of employees through presenting creative ideas and developing design thinking.

Additionally, AIS supports employees to take part in activities that they are passionate about. For its part, the company provides budget and opportunities for employees from all functions to join the activities such as Pride Parade to promote equality of the sexes. Training on diversity and inclusion are held for human resources staff to promote respect for human rights and understanding about diversity of their fellow employees. AIS also resolves to create workplace environment and activities that promote solidarity among its staff.



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“ AIS has stressed the importance of employee diversity. Last year, the company accepted and included employees of different races, nationalities, and age groups by taking into consideration their knowledge and capabilities without discrimination. AIS believes a diverse workforce is key to driving the organization to achieve success and create positive impacts on society and employees’ families in a sustainable manner. Also, a diverse makeup in workforce and physical settings can bring about a learning culture that helps drive innovations for the organizations and Thai society. As such, driving organizations and businesses with diversity is one way to build people and society to grow together tangibly and sustainably. ”

Kantima Leleertyuttitham
Group Chief Human Resources Officer

➔ Non-discrimination Practice and Zero-tolerance against Harassment

AIS stresses the importance of respecting the human rights of every employee at all levels and of stakeholders regarding physical aspects and differences in views, perspectives, and ideas by adopting non-discrimination practice and zero-tolerance policies against harassment. In addition, AIS carries out business with concern for workforce diversity and the equal rights of employees.

AIS’ commitment to respect for human rights is reflected through its Human Rights Policy to treat employees respectfully without torture, violence, sexual harassment, physical or mental threats, or verbal abuse. In addition to maintaining good hygienic standards, safety in the workplace, and pleasant working environment, AIS has implemented a zero-tolerance policy to prevent the company and its employees from violating human rights or the rights of other employees in any form such as hiring illegal immigrants, child labor, forced labor, and the abusive, threatening, or coercive treatment of another employee.

Where employees find any violation of the policy, they can report the misconduct via the channels designated in the Whistleblower Policy. The reporting will be kept confidential, and the whistleblower will be protected from any act of retaliation. If the employee is found guilty of the misconduct, the company will follow a proper disciplinary procedure with fairness and non-prejudice. A disciplinary action can take many forms including a verbal or written warning, suspension, and termination of employment without pay. The company may also take legal actions against the wrongdoer where appropriate.

For further information:

- Respect to human rights ➔ [Read more](#)
- Whistleblower protection policy ➔ [Read more](#)

➔ Rights to Collective Bargaining

AIS has placed significance on employees’ satisfaction and respect of their human rights. To that effect, the company established a Welfare Committee at the place of business to provide suitable welfare to

employees, to give advice and recommendations, and to serve as an intermediary between employees and the management for communication on the welfare arrangements provided for the employees and their equitable freedom of association. To protect the rights of employees should there be a material change prompted by the company’s business operations which may affect their welfare arrangements, the company shall notify employees of the change 4 weeks in advance according to the company’s Policy.

Besides the Welfare Committee, other employee groups or committees have been formed, each entrusted with specific duties and scope of responsibility to protect the benefits of employees. The two groups dedicated to employees’ rights and benefits include the workplace environment and safety group and the financial security and support group.



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2022 Progress

Provision of Digital Learning Support for Employees

To elevate the learning level of employees, AIS put in place various advanced platforms and an information technology system to enable employees to learn anytime and anywhere as follows:

LearnDi by AIS Academy



AIS Academy is a hub for learning about technology and innovations through the LearnDi digital platform, a tool that compiles knowledge for easy access anywhere at any time. It is designed to promote a learning culture and prepare for technological changes in the digital disruption era. The platform enables AIS employees to upskill/reskill and are equipped with capabilities and readiness to perform duties amid the constantly changing circumstances. In 2021, time spent via the LearnDi platform was 29 hours per employee.

LearnDi is a new skill and knowledge hub that supports sustainable human capital development appropriate for employees at all levels. Easily accessible anytime and anywhere, the digital platform answers

the needs of every generation of people wishing to constantly develop themselves by charting their pathways to success through the Company's self-development initiative.

In addition, AIS Academy set online learning paths as a tool for designing and charting learning courses from the start to the completion to systematically help employees improve their skills such as Finance & Accounting, Visual Communication, Cloud for Non-technical, Leadership Capability, Big Data & Data Analytics for Non-technical, and more.

Technical Knowledge Management (TKM)

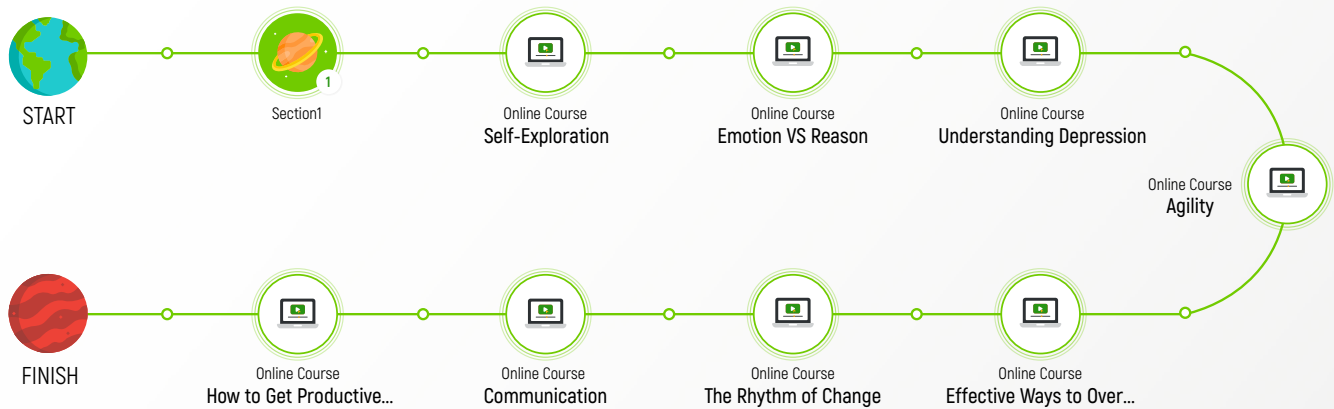
As a Digital Life Service Provider, AIS realizes the significance of equipping employees with advanced knowledge and skills related to providing new digital services and technologies. TKM was set up to develop technical courses and provide teaching for employees looking to enhance core competencies to cater to AIS' emerging digital businesses and the future trends. Examples include Cloud Competing, 5G Technologies, Artificial

Intelligence (AI), Data Analytics, Radio Network Optimization, etc. Every employee is provided with opportunities to learn new technical skills continuously to develop a career growth path designed by themselves. TKM is also tasked with reviewing the certificates necessary for performance of tasks.

An Assessment Test to Measure Training Effectiveness

In line with the new target, AIS has added an assessment test to measure employees' digital competence consisting of 5 standard and custom modules as the company considers them the skills vital to AIS' transformation into a Cognitive Tech-Co in the digital age. This has underlined AIS' relentless commitment to nourish its employees' technological knowledge and skills in response with the new target. As a result, the company has offered training on various digital-related topics and measured the training effectiveness, using an assessment test of 4th Talent, an internationally-recognized company with expertise in analyzing and predicting skills and future impacts on employees. The

An example of online Learning Path



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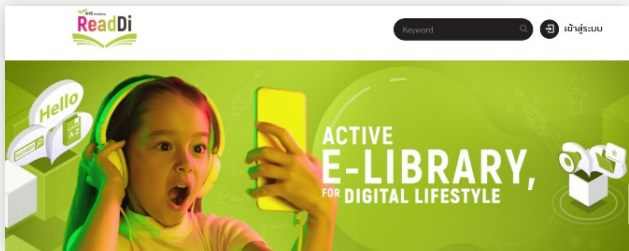
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test encompasses both standard and custom assessments in 7 topics: digital affinity, cybersecurity, remote work, digital transformation, technology know-how, 5G-cloud- data analytics, and business expansion.



On the other front, AIS Academy has adopted the Kirkpatrick Model to evaluate the results of learning and training programs to ascertain that employees can apply the knowledge learned to their work effectively. Learning can be evaluated through measuring employees' reaction and participation in class, knowledge and skills, behavioral changes after learning, and outcomes resulting from their learning.

➔ **Implementation of Information Technology System to Support Employees' Work**

To apply digital technology, AIS has developed a cutting-edge information technology system to accommodate the work of employees. The system helps increase accuracy and flexibility in work, enhance data security, reduce costs, and allow the data to be used for analysis to devise an appropriate management approach effectively.

In 2022, foreseeing the importance of big data & data-driven operations, AIS established the HR Analytic function to work with the AIS HR Ecosystem to analyze critical data in support of the analysis of the company's human resource management data. A team of experts in data science and data analysis was formed to perform their duties with the following

objectives:

- 1. To revolutionize human resource management work by utilizing relevant data to ensure the fullest benefits
- 2. To suggest guidelines to develop and/or solve human resource management pain points
- 3. To drive human resource management work to make it faster, more effective, and achieve goals
- 4. To propose human resources data analysis such as employee turnover rate analysis, employee welfare, benefits, and compensation analysis to middle-ranking and high-ranking executives for informed decision making

AIS has implemented the Workday HR system to systematically manage and keep track of employees' information based on PDPA with emphasis on protecting employees' personal data and the organization's trade secrets. Using integrated employee data from the company's human resources database, AIS performed workforce analytics to develop a new way of working, allowing the HRA team to analyze human capital data, anticipate, and solve human resource management problems in a timely manner.

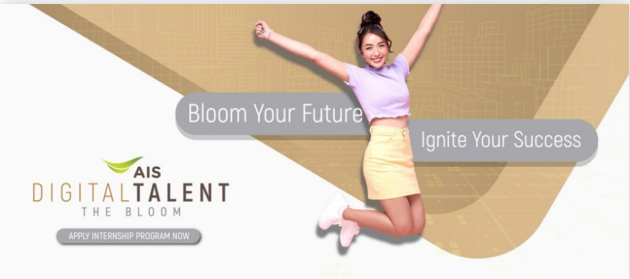
➔ **New Way of Working @ AIS**



In 2022, while still facing the management challenges arising from the COVID-19 pandemic, AIS streamlined its work policy to enable the working system to be more flexible and convenient. Realizing the importance of new work trends, the company has adopted the hybrid work model to allow employees to work from anywhere, either from home or onsite location via multiple online platforms. Also, the workplace was modified in which the office was transformed into a co-working space with no fixed desks to enable employees to experience different work environments. In addition, employees are also given opportunities to work with their supervisors to agree on the flexible working hours as a means to increase work flexibility and efficiency as well as allow employees to freely manage their time and responsibility appropriately.



➔ **AIS Digital Talent**



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AIS has created Digital Talent Hub, a hub for Thailand's digital ecosystem, to serve as a space to gather talent, and prepare and drive Thailand toward the world of digital under the "Digital Talent: Build Talents, Enhance Potential, and Elevate Thai Work Force to Enter the New Labor Market with Digital Technology Knowledge and Innovations to Increase Thailand's Competitiveness in the Digital Age" project. The project includes two major sub-projects. The Bloom is an internship program that provides opportunities for interns with outstanding performance to be hired after graduation. The Masters, on the other hand, offers opportunities for young people looking for a career growth in digital technology to undergo training on modern digital skills and knowledge along with showcasing their digital technology potential and creativity that can be further built upon in the future real work situation. They also have opportunities to work with AIS.



➔ **Promoting and Supporting Welfare to Take Care of Employees Holistically**

AIS provides a wide range of welfare and benefits for employees. Examples include assistive funding to employees entering into marriage, scholarships for employees' children who meet the criteria, financial assistance for employees injured because of an accident, gifts for a hospital patient, funeral benefits, financial assistance for employees

affected by a natural disaster, long service awards, annual health check-ups, and medical treatment coverage. Some of the employees' benefits are detailed as follows:

1. Supporting for the Family Unit

AIS acknowledges and supports the family unit as a foundational institution for personal growth and social sustainability.

- **Provision of assistive funding to employees entering into marriage.**
- **Maternity leave.** AIS realizes the importance of allowing female employees to take maternity leave and male employees paternity and family-care leave. Female employees are entitled to 98 days of paid maternity leave as prescribed by law. Moreover, employees are allowed to take another 10 day's personal business leave with pay.
- **Paternity and family-care leave.** Male employees can take 10 more days' business leave than entitled for taking care of a newborn and the family. They can also take annual leave with pay for a certain number of days, depending on their length of employment.

In case the male or female employees do not have enough days of leave left, they can further ask for permission to work from home.

2. Breastfeeding Room and Amenities



AIS advocates breastfeeding newborns to promote the good health of mothers' and newborns. To that effect, the company has set up an office pumping room for breastfeeding employees complete with all necessary amenities such as a refrigerator to store the breast milk. The room is private, clean, and hygienic.

3. Supporting for Scholarships

AIS has continually provided scholarships to the children of its employees. Likewise, contract employees who have worked continuously for one full year are entitled to apply for the scholarships. In 2022, the company provided 1,206 scholarships, amounting to 8,272,000 baht to employees' children who met its criteria and displayed academic excellence.

4. Providing Children Facilities

AIS provides spaces and facilities for children of the employees to learn new things while waiting for their parents to finish work including The Cultivation, Co-working space, and Chillout zone, allowing the children to learn, play, and do homework. They can also use their own computers or mobile phones to access AIS' LearnDi and ReadDi online platforms.

5. Supporting and Development Quality of Employees with Disabilities



Not only does AIS employ disabled persons as stipulated by law, the company also operates call centers for people with disabilities



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in Bangkok and provincial areas to create jobs, expand learning opportunities, reduce gaps in society, and raise the quality of life for persons with disabilities. This gave rise to "Work Wizard", a digital platform for persons with disabilities that integrates the company's technologies to facilitate the disabled employees in their performance of duties. For visually-challenged employees, the Thai text to speech application was installed to enable the employees to use the computer by themselves conveniently and efficiently. For employees with hearing impairment, AIS operates a sign language call center via a web cam, allowing the employees to work conveniently and communicate more effectively.

AIS creates opportunities for employees with disabilities to receive training both on-site and online via LearnDi application to increase knowledge that can be applied to their work. For physically-challenged employees, AIS has provided the appropriate environment and other facilities such as elevators, toilets, wheelchair ramps, etc.

6. Emergency Assistance

In the past year, Thailand faced severe flooding in several provinces, affecting vast areas in Bangkok, its outskirts and many other provinces. In response, AIS provided assistance to employees, coordinating for employees living within the affected areas to evacuate to safe places, and providing financial support to mitigate their hardship.

7. Activities to Promote Employees' Good Health, Income, and Well-being



In 2022, AIS organized activities to promote employees' good health, encouraging them to take part in exercise activities online as it could enable employees in every region to join. Participating employees were awarded token points redeemable for products and services. Mental health was also instrumental. As such, AIS provided knowledge on health care to employees and families through the Aunjai Station podcast. Doctors and experts from leading hospitals were invited to share their knowledge. On top of this, an annual health check-up for employees was provided at least once a year.

Besides good physical and mental health, a good living and sufficient income are the basic needs of employees. To help increase their supplementary income, AIS held activities in which employees with good skills in cooking and handicrafts could sell their products to other employees on the company's premises. This earned the employees extra income and helped strengthen ties among employees. Added to this was inviting financial experts to share knowledge on finance and savings with employees. In 2022, the topic was on investment in foreign equity instruments.



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Performance Table

Topic	Unit	2019	2020	2021	2022
Employees					
Total employees	Persons	12,701	13,975	12,909	13,141
Breakdown by gender					
Male	Persons	5,141	5,595	5,097	5,260
	%	40	40	39	40
Female	Persons	7,560	8,380	7,812	7,881
	%	60	60	61	60
Breakdown by age					
50 years old and above	Persons	524	671	965	1,084
30-50 years old	Persons	7,349	8,343	8,023	8,051
Below 30 years old	Persons	4,828	4,961	3,921	4,006
Breakdown by employee type					
Permanent					
Male	Persons	3,774	4,104	4,031	4,050
Female	Persons	5,004	5,258	5,043	4,898
Contract employee					
Male	Persons	1,367	1,491	1,066	1,210
Female	Persons	2,556	3,122	2,769	2,983

Topic	Unit	2019	2020	2021	2022
Other employee diversity					
Employees with Disabilities	Persons	112	202	142	149
	%	0.9	14	1.1	1.1
Training and Development					
Total Training Hours	Hours	613,557	517,165	422,422	374,737
Total Average Training	Hours/Person	49	37	32	29
Breakdown by Gender					
Male	Hours	45	32	35	32
Female	Hours	52	40	30	27
Breakdown by age					
50 years old and above	Hours	58	49	31	27
30-50 years old	Hours	42	31	35	29
Below 30 years old	Hours	44	24	24	27



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Topic	Unit	2019	2020	2021	2022
Breakdown by Employee level					
Top management	Hours	43	28	20	24
Male	Hours	37	27	21	21
Female	Hours	53	30	18	30
Middle management	Hours	39	40	47	39
Male	Hours	44	41	50	43
Female	Hours	35	40	44	36
Operation Staff	Hours	19	16	17	12
Male	Hours	25	17	20	16
Female	Hours	16	15	15	11
Total Costs of Training & Development	Mn. Baht	203.30	118.45	125.24	65.09
Total Costs of Training & Development/person	Baht	16,006	8,476	9,701	4,949
Human Capital Return on Investment (HCROI)	Times	4.8	4.8	4.9	4.9

Resignation (Permanent employee)					
Resignation	Persons	793	573	830	1,151
Total turnover rate	%	9.03	6.12	9.15	12.86
Total Voluntary turnover	Persons	758	475	755	1,043
Voluntary turnover rate	%	8.64	5.07	8.32	11.66

In this regard, the information concerning the "Other Performance Table" can be found [Here](#)



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Promote Digital Inclusion

→ Social Inclusion

→ Digital Wellness

Social Inclusion

Upgrade the quality of life for the community and reduce social inequality with digital infrastructure and solutions



Target

Improve the socio-economic condition of 5 million people by 2027

Key highlights in 2022

Topic	Unit	2022	Target 2027
Developing people's socio-economic condition and quality of life	persons	2,194,288	5,000,000
Health care	persons	1,740,910	
Education	persons	453,378	

- Expanded the survey on mosquito larvae in 2,414,700 households via the AorSorMor Online application. The results were analyzed to manage dengue fever outbreaks in various areas, resulting in the steadily declining number of dengue patients.
- Carried out mental health screenings and followed up on over 1,113,000 persons with mental health issues in the community. Persons who were checked for signs of a mental disorder such as anxiety, depression, suicidal thoughts, etc were given prompt advice to ameliorate their situations.
- Increased reporting of potential animal rabies cases to facilitate the work of AorSorMor volunteers (village health volunteers) in fields and to implement continuous vigilance and prevention of rabies outbreaks in at-risk areas in a timely manner under the management of a healthcare unit in that community.
- Launched the "Jump Boot Camp 2022" program, offering opportunities for those with ideas in the pre-seed stage and a prototype to learn and develop skills as well as enhance the capabilities of a digital entrepreneur free of charge. The participants who completed the program received a Stanford Online certificate and a badge from AIS Academy. This year's program was attended by 252 participants from 64 teams.



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Opportunities, Challenges, and Impacts

High-speed internet networks cover almost every area in Thailand. According to Thailand Digital Stats 2022, internet users in Thailand reached 54.5 million, or 77.8% of the country's total population. Nevertheless, some of the population remain without access to adequate internet due to poor signal reception in isolated areas or unreliable devices. Therefore, access to digital space, which is a significant channel for accessing multiple fundamental services in health care and education, remain a challenge. A digital divide also persists to some degree between cities and suburban areas.

Anticipating the challenges and opportunities, AIS is relentless in its commitment to expanding its internet network to remote areas to broaden the opportunities for adopting digital technology. This runs concurrent with upgrading telecommunications technology by expanding the 5G network to cover all 77 provinces. Given the limited use of 5G technology, however, investment in 5G network infrastructure has not realized full benefits, and the 5G technology itself has not been further developed to deliver other digital services as some users lack digital knowledge and skills, leading to a broader digital divide.

In response, AIS has supported more extensive use of digital technology and adjusted its sustainability strategies to better address the evolving opportunities and challenges to contribute to the nation's socio-economic development and well-being of Thai people. Added to this is the help in upgrading the quality of life for Thais and providing opportunities for the community and society to adjust their ways of life in alignment with today's global situations. The focus is on creating access to fundamental services in health care and education through multiple digital platforms.

Although the extensive internet network enormously benefits the surrounding communities, it may be a cause of concern for some communities adjacent to the base stations such as a low impact level of signal wave and aesthetic damage to the landscape. To ease concerns, the Community Relations team will meet with the community to provide information, establish preventive measures, and create understanding and acceptance of the community prior to base station construction. It is also an opportunity and means to foster good relationships with the community.

For business opportunities, an increase in the use of 5G technology in the community in terms of volume usage and a diverse range of services attests to the utilization of the internet network and 5G technology to its fuller capabilities. This, by all means, helps expand the customer base, generate more revenue, foster strong ties and gain acceptance from the community, while maintaining a good relationship between the community and AIS in the long term, thereby promoting AIS' corporate image as a company keen on driving the digital society.

Management Approach

AIS is committed to being a part of bettering life for the Thai people, using its communication technology resources to support developments that keep the Thai people in pace with the digital era, as well as leveraging its business and human resources for social and community development through a range of policies and projects. In recognition of inequalities in quality of life and opportunities for people in remote areas, in particular in terms of access to basic necessities and education, AIS set policies that mobilize its digital platforms and partnerships to achieve greater equality. Towards its intended achievement, AIS implemented the three following strategies:

1. Expansion of digital infrastructure for maximum coverage in support of efficient communication and alignment with national economic development

AIS is committed to developing a quality telecommunications network with nationwide coverage both in urban and remote areas and seeks to continually acquire new technologies to enhance its service capability, in particular to improve the capacity and coverage of 5G technology in satisfaction of demand and in support of the network being used to develop the nation's economy and households. Consideration is also given to the needs of the public telecommunications system.

Apart from signal quality, AIS attaches significance to creating customer satisfaction and maintaining good relationships with the community. To that end, Community Relations visits the community to conduct a survey, listen to their concerns, and constantly set out guidelines to prevent or mitigate possible impacts. The company also opens up opportunities for the community to negotiate or file complaints (if any) stemming from the company's operations. On top of this, the needs of the community are supported through healthcare and education projects to develop and elevate the quality of life for people in the community to grow alongside AIS.

2. Supporting public access to affordable digital communication devices

AIS is committed to providing Thai people access to digital technology through the acquisition and offering of affordable digital technological equipment, such as smart phones that accommodate 4G and 5G at affordable prices and phone and internet packages for students and



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migrant laborers. At the same time, it develops sales channels targeted at specific groups as to promote internet access and digital technological know-how in every region.

3. Developing digital platforms that enhance economic and social structures along with quality of life

AIS aims to use its communication technology and digital capabilities to play a part in building tools that better the lives of the Thai people, focusing on connecting communication technologies and digital systems to better public health and education, to reduce inequality, and to promote digital literacy.

→ Public Health

Support and promotion of public health operations through the creation of digital platforms that aid in the efficient work of public health personnel, facilitating proactive efforts to address community health issues in a timely manner and approaches that prevent and mitigate injury and loss across the nation.

→ Education

Creating opportunities for access to education by supporting exposure to knowledge and utilization of communication technology to enhance the capacities and quality of life of Thai people, as well as supporting career building through applying innovation and technology for sustainable development.

2022 Progress

In 2022, AIS continued its social and community development efforts through the rollout of various projects in line with the company's strategies to accomplish the new target. The development efforts spanned two aspects: developing potential and expanding 5G network to cover areas nationwide, and developing digital platforms to promote access to technology that has improved people's quality of life for Thai society.

Development and Expansion of 5G Technology to Nationwide Coverage

At present, AIS operates a network that supports highspeed connection using 3G and 4G technology with coverage over 98% of total population, broadband home internet using fiber-optic technology across all 77 provinces of the country and Wi-Fi networks in support of educational institutions and businesses. AIS is currently rapidly expanding its 5G network and has reached 85% of total population, simultaneously carrying out research and tests of 5G technology in cooperation with the industrial and public sectors to uncover the potential of the technology's practical application. Tests include using 5G to support public health efforts against COVID-19, utilizing 5G for logistics in collaboration with the construction industry, and applying 5G to innovations that mitigate environmental impacts and realizing sustainable development goals. These tests serve as a starting point to using digital technology for national development. Concurrently, AIS offers low-cost 5G smartphones between 990-1,990 Baht in support of public access to affordable communication devices and supported national development.

Established and Developed Digital Platforms in Support of Technological Access and Improve the well-being of Thai

Public Health Performance: AorSorMor Online Application

→ About AorSorMor Online Application

AorSorMor Online application has offered services to the community since 2015. It is designed to act as a social network tool to help connect sub-district health promoting hospitals and AorSorMor volunteers (village health volunteers) to facilitate and support the pro-active tasks of the primary healthcare units. For instance, the application is used to send relevant community information to AorSorMor volunteers. Likewise, volunteers can send pertinent information about healthcare activities to a sub-district health promoting hospital, a district public health office, and a provincial health office to keep them up to date with the local healthcare situation in their areas and incorporate such information into planning so as to cope with the situation more effectively and in a timely manner. The application also allows AorSorMor volunteers to develop their capabilities in effective use of digital technology. Further details about AorSorMor Online application are available at: [Click here](#) and on AorSorMor Online Facebook Fanpage.



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→ **Development of AorSorMor Online Application**

Launch Phase 2015 – 2016

200-1,500 Users

- Supported greater convenience, speed and efficiency in basic health care at the community level. The application was launched alongside the Aor Sor Mor website to serve as a tool for communication and the reporting of data between medical personnel, health promotion hospital staff, and VHVs.

Health Data Collection Development Phase 2017 – 2018

12,000-52,000 Users

- Increased support for the collection of health data for informing more efficient community outbreak and disease management. A map indicating the location of patients was added to the AorSorMor Online Application along with monthly overviews of disease situations. The application was applied to a wider group and extended to use at the district and provincial levels.

Functionality Expansion Phase 2019 – Present

110,000-500,000 Users

- Cooperation with the public sector was expanded and functionality of AorSorMor Online application grew beyond basic health to general betterment of quality of life with functions including mosquito larvae survey. The addition of these functions significantly increased positive social impacts and expanded the AorSorMor Online user base.
- Incorporated various healthcare information into planning to cope with the local and national healthcare situations pro-actively, to find the means to manage and control an endemic disease, and

to use as a case study for treatment and prevention of endemic diseases in other areas.

- Supported the dissemination of reliable health news and information and the sharing of experiences in public health service provision. A newsroom function was added for sub-district and village VHV heads to post updates and announcements on activities.

→ **Key Progress**

- Survey reports of mosquito larvae**



Over the past three years (2019-2022), the survey reports of mosquito larvae carried out by AIS in collaboration with the Department of Disease Control, Ministry of Public Health, contributed to effective vigilance, prevention, and control of dengue infection in Thailand. More than 5 million households were surveyed and had mosquito larvae in all water containers and ponds eradicated, amounting to over 100 million surveys being conducted on mosquito larvae. Thanks to the dedication of 280,000 AorSorMor volunteers regularly reporting on the survey results via AorSorMor Online application, the information was forwarded to the sub-district health

promoting hospitals for the summary and close tracking of dengue transmission in the area. In addition, the volunteers offered advice on improving the household environment for better hygiene, enabling people's improved well-being:

The collaboration also led to the transfer of knowledge in information management, particularly the use of information about survey reports of mosquito larvae on the AorSorMor Online application to jointly analyze and manage the spread of dengue in different areas, resulting in a steady decline in the number of dengue patients.

Dr. Chantana Padungtod,
M.D., director of the Division of Vector-Borne Diseases,
the Department of Disease Control

- Reports of mental health screenings and follow-ups**



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In the wake of several violent incidents in Thailand, the Department of Mental Health, the Ministry of Public Health became increasingly aware of the potential impacts of these incidents or other future crises on people's mental health. The Department, therefore, adopted the AorSorMor Online application as a tool to closely track persons with mental health risks in the community in addition to mental health screening to encompass every dimension. Such reports of mental health screening results and records of information could be used to design activities appropriate for each group of people. Also, they allowed the Department of Mental Health to prepare and distribute materials, information, and update AorSorMor volunteers to enhance their knowledge and understanding on mental health issues via the AorSorMor Online application for improved reach and coverage.

Reports of pets at risk of developing rabies



The AorSorMor Online application added reports of pets at risk of developing rabies in which AorSorMor volunteers could report information and coordinate on where the animal was found. They also provided free rabies vaccinations for pets (cats and dogs) in the community to reduce risks and proactively prevent the emergence of rabies.

Enhancing knowledge about health products for AorSorMor Volunteers



AIS signed an MOU with Food and Drug Administration (FDA) to enhance knowledge about health products to AorSorMor volunteers, taking a lead role in changing people's health behaviors and communicating knowledge about health and health products to the community via the news section on the AorSorMor Online application. The objectives were to equip the volunteers with accurate information to perform their duties in protecting consumers from harmful health products, enabling them to share the knowledge and understanding with the community to select and buy safe health products.

Awards for users of AorSorMor Online application



Chaturaphak Phiman Hospital in Roi Et received The Prime Minister's Digital Awards 2021's Digital Community of the Year for Well-Being category. The winning project titled "AIS AorSorMor Online, a health network tool in digital society toward Thailand 4.0" used digital technology via the AorSorMor Online application to take care of and promote people's overall well-being. The activities encompassed monitoring COVID-19 transmission, mental health screenings of people in the community, and surveys of mosquito larvae, a cause of dengue fever. The efforts allowed healthcare workers to access information and keep track of those at risk promptly, reduce inequality, and promote equal access to primary healthcare services.

The Prime Minister's Digital Awards 2021's Digital Community of the Year for Well-Being category was awarded by the Digital Economy Promotion Agency, the Ministry of Digital Economy and Society, to the community that adopted digital technology to facilitate work in the community. To win the award, the project must be recognized for being able to upgrade people's quality of life and contribute to driving Thailand's digital economy and society.

The study of social impacts from the adoption of AorSorMor Online application

Throughout the 7 years that the AorSorMor Online application has been developed and widely adopted among healthcare workers and AorSorMor volunteers, the application has supported the community healthcare activities of the primary healthcare units across the country. It is a tool enabling AorSorMor volunteers to work proactively, taking care of the health of people in the community both during normal periods and during endemic. More than 5 million households are regularly visited and taken care of by the volunteers. AorSorMor Online application has



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been used by the healthcare workers and volunteers in their field work on a continual basis.

In 2023, AIS plans an assessment of the use of AorSorMor Online application with the focus on the study of social impacts and quality of life of the involved stakeholders in the community including healthcare staff, AorSorMor volunteers, community leaders, and locals. The assessment is designed to cover three key components: knowledge, health, and economy. The project is now under way, and the data collection and analysis will be carried out in 2023.

Education Performance: AIS Academy for Thais



AIS and LearnDi Co.,Ltd have collaborated with partners in the EdTech industry continually through provision of the LearnDi application service. Providing opportunities for Thai people to better themselves through the learning of new skills and disciplines, LearnDi was also designed as a platform for complete online education management (details in the graphic on the right). AIS has initiated the “Mission to drive digital society” by leveraging its

in-house learning platform, LearnDi, and expanding its use as a digital learning platform for the public. In 2022, the AIS Academy for Thais had approximately 185,948 participants and approximately 267,430 program beneficiaries.

“LearnDi Digital Learning Platform”



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The AIS Academy

"Mission to Drive Digital Society"

The sharing of know-how and expertise from actual professionals improves the exchange of knowledge and is the new concept of learning

Kan Trakulhoon
Chairman of the Board of Directors

The growth of a sole organization is not sustainable. Strengthening Thai society leads to perpetual growth, this was the catalyst for AIS Academy, the spreading of knowledge to the public

Kantima Lerlertyuttitham
Group Chief Human Resources Officer



The aim of "Mission to drive digital society" is to encompass all groups within the education space, from educational personnel to students and the public. AIS Academy designed each of its programs to respond to the demands and necessities of each learning group:

→ The Educators Thailand



AIS joined hands with the Secretariat Office of the Teachers Council of Thailand, Ministry of Education, and leading members of the education sector to uplift Thai education with a focus on teaching competency and creating innovations to enhance educators in the digital age. The participants received guidance from leading speakers on designing modern courses that combine both academic knowledge and creativity to achieve lessons fitted to changing learning circumstances.

- The objectives of the project are as follows:
- To provide teachers professional experience training in creating innovative teaching-learning materials in the form of video clips applicable to all subjects
 - To serve as a stage for exchanging views and to showcase their innovative teaching materials that benefit the society as a whole

- To recognize and honor leadership in teaching-learning innovations
- To raise awareness and preparedness for changes by developing their own teaching-learning innovations to contribute to Thai education



In 2022, over 1,000 educational personnel joined the program with 10 teachers winning this year's awards. The project achieved success in upgrading teachers' knowledge to keep up to date with modern day education, enhance capabilities in innovating skills, and open opportunities for teachers in the Digital Age to use the knowledge learned from this program to transfer the body of knowledge to their students readily and effectively

→ The Tutors

AIS has partnered with the Ministry of Social Development and Human Security to roll out The Tutors Thailand project to develop the skills of a new generation of tutors, empowering them to use digital platforms to design teaching and learning as well as produce online materials that address learners' needs. AIS also offers opportunities for students throughout the country to access interesting learning materials of several tutors via a digital platform to bridge the gap in accessing a new format of education of students in remote areas. The project thus

opens up educational opportunities that help develop both teachers and learners at the same time.

→ Digital Library



AIS, in cooperation with the Ministry of Social Development and Human Security, introduced the Digital Library project to bridge gaps and provide more opportunities to access knowledge through multiple media digitally via the e-learning system and e-book platform. For its part, AIS provides additional support for internet connections to schools in distant areas. AIS hopes that this learning channel can help develop the potential of less fortunate youths, equipping them with the skills and knowledge needed for thriving in the digital society.



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→ The Jump Bootcamp 2022 Project



In 2022, the Jump Bootcamp 2022, a project dedicated to instilling knowledge and ideas in entrepreneurship, was organized for the fourth year and was attended by 252 start-up entrepreneurs from 64 teams. The objectives of the project were to develop the skills and capabilities in innovations by leaps and bounds and practice creating innovations to solve difficult social issues through an innovation skills development for entrepreneur’s course. Participants had opportunities to learn from leading experts from world-class universities such as Stanford University in the U.S. as well as experts from AIS and business partners both locally and internationally. The objectives also extended to enhancing the competitiveness of the country. On top of this, those completing the

program received a certificate from Stanford Online and a badge from AIS Academy. Above all, in addition to having the chance to establish a network with the country’s leading company and fellow entrepreneurs, the participants got to develop business ideas effectively in line with the procedures adopted by world-class start-ups.

→ The Good Kids, Brave Heart Project



Introduced in 2001, the project has since provided financial support for young people in need to reduce social inequality and offer educational opportunities for Thai youths, enabling them to have a career to take care of themselves and the family in the future. Building upon the concept “Giving opportunities is giving a future”, the project grants scholarships to students at different levels who demonstrate good conduct, perseverance, help with the family, and volunteerism to complete their studies up to bachelor’s degree level. AIS hopes that these efforts will empower these young people to have a good future and contribute to family, the community, and society. Moreover, AIS also

provides 5 scholarships to complete a bachelor’s degree for children of AorSorMor volunteers studying in the first year at the Faculty of Nursing, Praboromarajchanok Institute to support and boost morale for AorSorMor volunteers who have dedicated their time and efforts to taking care of people in the community. For further details, visit [Click here](#)

Careers Assumed by AIS Good Kids Brave Hearts Participants After Graduation

No.	Type of occupation	Number of people
1	Physicians and Nurses	15
2	Engineers and Architects	11
3	Educators	37
4	Police	10
5	Others	167
	Total	240



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At present, there are a total 378 students from primary to tertiary schooling involved in AIS Good Kids Brave Hearts

Levels of education	Numbers of students
Primary	32
Lower Secondary	70
Upper Secondary - Vocational Certificate	142
Tertiary	134
Total	378

➔ Aunjai Asa Career Development



Realizing that the way of life and family income may affect the education of youths in the project, AIS opens up opportunities for youths looking to earn supplementary income to join the Aunjai Asa Career Development project to attend vocational courses taught by experts in various fields, preparing them for skilled professions, developing value-added products, and learning how to sell products online.



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Striving to establish a brand that promotes safe and appropriate use of the internet and social media



Target

Empower digital citizenship by providing digital solutions and tools for 3 million people by 2027



Key highlights in 2022

Topic	Unit	2022	Target 2027
Participants of the AUNJAI CYBER Project	persons	205,860	3,000,000
Participants of the AUNJAI CYBER Curriculum	persons	169,930	
Users of the Cyberthreat Protective Tools by AIS and our Partners	persons	35,930	

Remark: The number of participants does not include the callers of the 1185 hotline, who called to report scammers' numbers and SMS.

- AIS signed MOUs with 4 organizations including the Ministry of Public Health, the Ministry of Education, the Ministry of Interior, and King Mongkut's University of Technology Thonburi (KMUTT). The public and private sectors collaborate to further learning in the digital era. We launched the AUNJAI CYBER curriculum on the LearnDi digital platform and the AUNJAI CYBER application. The curriculum was designed and adjusted by mental health experts for the Thai context. The aim is to equip the Thai people of all gender identities and ages with the attributes required for their safety as members of the online community, and to increase the awareness and the skills needed to be a digital citizen.
- AIS provided various cyber safety digital tools. Previously AIS delivered the AIS Secure Net service. We have collaborated with our partners to launch alternative applications which protect internet users from cybersecurity threats. We also encouraged users to go online safely and appropriately. At present, there are more than 35,930 users.
- AIS launched the 1185 hotline or AIS Spam Report Center, which offers free of charge services to our customers. They can call to report scammers' numbers and SMS. We collaborate with the Cyber Crime Investigation Bureau to investigate online crimes including scamming through phone calls and SMS, leading to arrest and penalty according to the law.
- AIS aims to increase awareness and promote digital technology skills and cyber safety. The objective is to enable the public to be aware of cybercrimes and properly use the internet. Our target includes people of all gender identities and ages in our networks. We promote cyber safety on social media. One of the outstanding campaigns is the "Knowledge Makes You Survive" commercial, 7 chat fictions published by AIS AUNJAI CYBER & Joylada, and video clips on how to handle cyber bullying, namely "Please Call Me by My Name".



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Opportunities, Challenges, and Impacts

Digital technology has played an increasingly important role in people's lives in many aspects. Digital technology is key in careers, education, public health, sports & entertainment, and most importantly, finance. Digital technology facilitates users, provides more equal opportunities, reduces inequality, helps reduce expenses, and saves time. However, the public should be aware of cybersecurity threats including identity theft, phishing, and cyberbullying. Cybersecurity for SMBs: Asia Pacific Businesses Prepare for Digital Defense [Cisco, 2021] reported that 56% of the at-risk groups of internet users including children, youths, and the elderly in Thailand experienced cybersecurity threats, which are likely to become increasingly complicated, serious, and frequent in the future.

AIS as a digital livestreaming provider, which brings digital technology and the internet to its users, is aware of cybersecurity threats and feels responsibility for the services it provides. AIS realizes that promoting proper use of the internet and cyber safety will equip the Thai people with digital skills and help protect them against cybercrimes, enabling them to be responsible digital citizens themselves. Digital awareness reduces cybersecurity threats from criminals and inappropriate use of the internet. Therefore, AIS adjusted its strategic plans to be aligned with challenges and business opportunities. We are determined to promote digital citizenship among the Thai people and strengthen their digital skills, which in turn enables the continuous growth of digital technology businesses. This helps decrease the risk to our reputation and encourages the AIS brand loyalty. Besides, promoting digital citizenship allows us to invent new products and services for our customers as well as build confidence in the safe and creative use of digital technology within society.

Management Approach

AIS is moving forward to promote the safe and proper use of the internet within the online community. We established the AUNJAI CYBER Project in 2019, focusing on partnering with the public and private sectors, which specialize in various fields including education and mental health. The goal is to expand the project to our target group (i.e. children, youth and the elderly) and enable them to adjust themselves to the digital lifestyle and become responsible digital citizens who safely make use of the internet through 3 main strategies:



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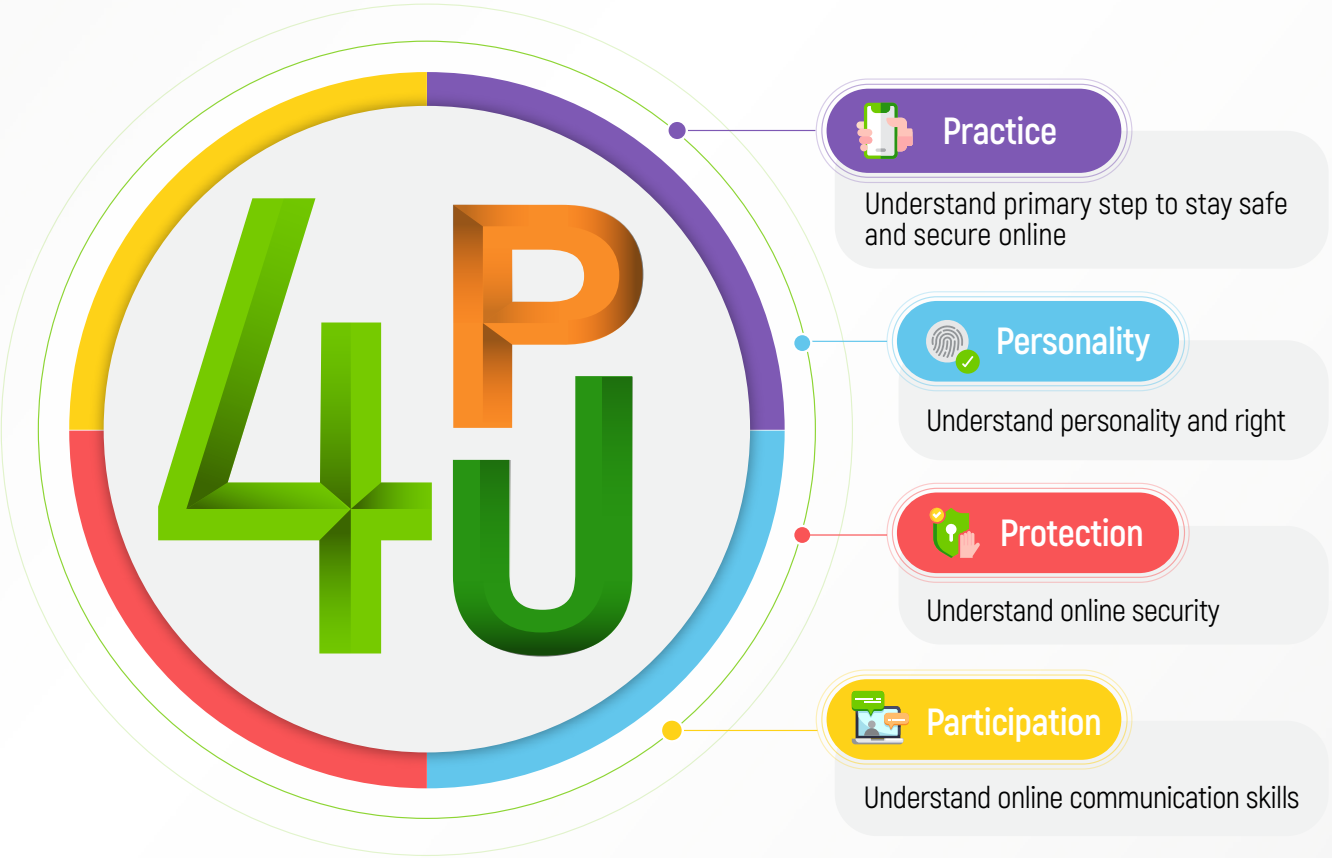
2022 Progress

AIS expanded upon its cyber wellness and online safety initiative under the AUNJAI CYBER program which has continued since 2019. Emphasis was placed on partnerships with the educational sector, relevant organizations, and experts in child and adolescent psychology with the intent to better reach its target audience so as to provide knowledge and build awareness on handling cyber threats effectively. The key 3 strategies of AUNJAI CYBER program are as follow.

Creating knowledge to encourage digital wisdom

AIS collaborated with the Ministry of Public Health's Department of Mental Health and King Mongkut's University of Technology Thonburi Faculty of Industrial Education and Technology to develop the AUNJAI CYBER curriculum, which was certified by the Ministry of Education's Office of the Basic Education Commission. Teachers who attend the online classes can claim the number of self-study hours to be accredited according to the criteria established by the Office of the Teacher Civil Service and Educational Personnel Commission (OTEP). AUNJAI CYBER provides online learning material which promotes online communication skills. It provides basic knowledge and encourages digital wisdom. The LearnDi for this platform is free and accessible to people of all gender identities and ages. It can be accessed via the following link: [Click here](#) and the AUNJAI CYBER application.

There are 4 main lessons in the AUNJAI CYBER curriculum



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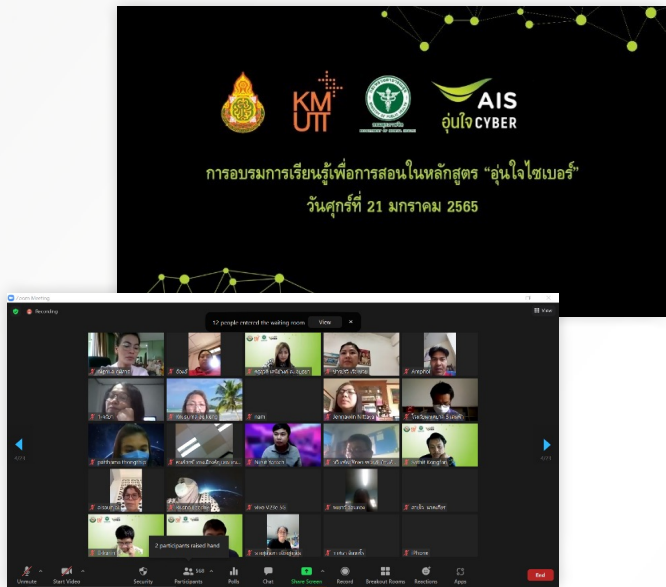
The AUNJAI CYBER curriculum is divided into 2 levels to suit the different ages of the users. The goal is for the users to be able to adopt the knowledge in their daily lives.

→ **Fundamental Level (for users aged 9-18)**

The curriculum provides basic knowledge about the internet for personal use. The objective is for the users to acquire the necessary knowledge and understand the technology and media in the digital era. They therefore become responsible digital citizens who can safely guide their way through the internet and benefit from it.

→ **Advanced Level (for users aged 18 and over)**

The curriculum presents knowledge about the internet for personal and organizational use. The objective is for the users to become skillful in using digital media and technology to solve new challenging problems. This level is suitable for university students, working people, and the elderly.



Moreover, our 4 partners including the Ministry of Public Health, the Ministry of Education, the Ministry of Interior, and King Mongkut's University of Technology Thonburi (KMUTT) signed an MOU and launched the AUNJAI CYBER curriculum, which is the first curriculum that aims to build adequate protection against cybercrimes in Thailand. The public and private sectors collaborate to further learning in the digital era and to protect users from becoming victims of cybercrimes. The aim is to build such protection in the digital community among the children, youth, and people of Thailand. Furthermore, teachers can study the curriculum by themselves and teach students on the LearnDi platform and the AUNJAI CYBER application. Teachers may design lessons according to the digital skill enhancing framework like DQ Framework (Digital Intelligence Quotient) and adjust the lessons based on the Thai context. Mental health experts also provide feedback to the lessons teachers create. The goal is to introduce the AUNJAI CYBER application to 30,000 schools supervised by the Ministry of Education and the Ministry of interior across Thailand. AIS encourages Thai people of all gender identities and ages to study and enhance their digital skills from the AUNJAI CYBER curriculum to instill within them the knowledge and skills to become responsible digital citizens.



Cyberthreat protection by protective tools

AIS has delivered the AIS Secure Net and AIS Fibre Secure Net, which protect our customers from cybercrimes via network-based security solutions. We also collaborate with our international partners to provide our customers with alternative applications, which strongly protect our customers and encourage the safe and proper use of the internet. Our customers can use the applications to verify information and report cybersecurity threats. Our goal is to protect our customers from online crime and encourage them to appropriately use the internet.



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AIS Cyberthreat Protective Tools

 **AIS Secure Net** is a protection and notification system against cyber threats such as virus-infected websites, malware, fake URLs as well as an online filter for children and adolescents to protect against pornography, narcotics, gambling, etc. built into the AIS 3G, 4G, and 5G internet networks to avoid the need to download an application. The service is divided into two types based on user requirements, namely, AIS Secure Net for general users and AIS Secure Net Kids for children 5-12 years in age.

 **Secure Net** a new service from AIS for high-speed home internet users, is a protection and notification system against cyber threats such as virus-infected websites, malware, fake URLs over AIS Fibre network without the need to install any application or program on the devices. It is ideal for smartphone, tablet, PC, laptop, smart TV, and Playbox.

Our Partners' Cyberthreat Protective Tools

 **Family Link** is an application that allows guardians to manage the safe usage of their children's smartphones with cooperation from Google. The application trains children in appropriate smartphone usage with functions such as phone call limitation and reports, new application installment management, website access and location monitoring, all together creating a constructive safety barrier around a child's digital life.

 **zIPS** Protection is an application delivered by our partner, Zimperium Mobile Threat Defence Suite. zIPS protects users from possible and unknown cybersecurity threats—using the advanced online crime detector, a solution for mobile phone users. It also notifies users of an unsecured network.

Bitdefender is a service provided by our international partner. It encourages proper use of the internet and protect users again cybercrimes. It notifies users of the possible risks and threats to internet users on mobile phones and portable IT devices including smart watches, smart glasses, and smart shoes.

activity is suspected and it is confirmed that the numbers or the SMS are scammers, AIS will block the numbers and the SMS immediately and report back to the caller. We also report to the National Broadcasting and Telecommunication Commission, which is the regulator of the sector. Additionally, we take a proactive approach by collaborating with Cyber Crime Investigation Bureau (the cyber police) to investigate online crimes and impose severe penalties. We send the numbers and the SMS to the cyber police, making the investigation process more efficient. The cyber police then arrest online criminals and the relevant penalties are imposed upon them according to the law.

During the past year, a lot of users have called to report scammers' numbers and SMS. AIS collaborated with the cyber police to investigate online crimes, leading to arrests and subsequent legal penalties.



In addition, AIS has launched the 1185 hotline or AIS Spam Report Center, which offers free of charge services to our customers. They can call to report scammers' numbers and SMS. Our staff investigating the issues can get back to the caller within 72 hours. Following the investigation, if an unusual



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Creating Awareness of the Danger and Effects of the Internet and Technology



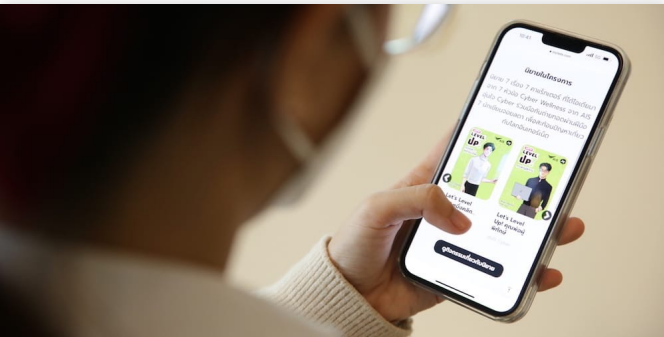
AIS creates awareness and equips the Thai people of all gender identities and ages with the digital skills and protection against cybercrimes. Our main theme is "Knowledge Makes You Survive" and we persuade the Thai people of the need to prevent any risks of cybercrime as well as learn the skills required to become digital citizens aware of cybersecurity threats. Cybercrime is a serious problem of our age, and we aim to promote the importance of awareness of cybercrime of all kinds. People of all gender identities and ages can fall victim to cybercrime. The only tool to protect us against online crime is "knowledge", and we can self-study the AUNJAI CYBER curriculum. AIS communicates with its customers via online channels, which have so far received 8.9 million views.



Moreover, we communicate with our target groups across Thailand via offline channels like TV and outdoor advertising.



In addition, AIS collaborated with Joylada, a chat fiction application which has had more than 10.3 million downloads. We launched a campaign called AUNJAI CYBER X Joylada: Let's Level Up to Conduct 7 Missions to Upskill for Digital Wellbeing. The 7 chat fictions of Joylada were adopted from the AUNJAI CYBER curriculum. The 7 chat fictions are uniquely written by 7 Joylada writers to reflect the problems arising from internet use. They are published on the Joylada application or [Click here](#) The objective is to give knowledge and train chat fiction readers aged 13-25 to have the skills to safely and properly use the internet. At present, the chat fictions have been downloaded 2,842,300 times.



AIS presents information to provide knowledge and build digital skills so that the Thai public are aware of cybercrimes and can protect themselves against them. We promote proper use of the internet on social media including Facebook, YouTube, and TikTok to include every target group of all gender identities and ages. We communicate how to safely use the internet and be safe from cyber criminals. On the Safer Internet Day, we collaborated with the Cyber Crime Investigation Bureau (the cyber police) to further the protection of the Thai people via a video clip. We directly communicated about cybersecurity threats. We emphasized public users to not easily believe anyone, to not hurry, and to not transfer money. The video clip, which has had 101,500 views, helps reduce cybercrimes.



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Moreover, AIS focuses on defeating cyberbullying on Stop Cyberbullying Day 2022. We continuously implement and introduce campaigns to raise awareness on cyberbullying. The aim is for the Thai people to become knowledgeable and actively take action to stop cyberbullying. We introduced a video clip on how to handle cyber bullying titled “Please Call Me by My Name”, which encouraged people to stop hurting one another by name calling. The video clip has been watched more than 167,100 times. It has also created a safe space for the online community to share their experiences and give advice on how to handle cyberbullying.



Development Approach 2023

AIS plans to move forward with the AUNJAI CYBER project. We introduced the AUNJAI CYBER curriculum to primary schools, high schools, universities, and the general public. The curriculum is a tool which helps build digital skills and increases awareness of cybercrime. We build skills and promote immunity against cybercrimes in the digital era so that the Thai people of all gender identities and ages can become responsible digital citizens. We have the following plans to further promote the AUNJAI CYBER project.

- AIS organizes training on the AUNJAI CYBER curriculum for teachers so that the teachers can transfer the knowledge and experience to students all over Thailand. Our goal is to give knowledge and enable Thai children and youth to protect themselves against cybercrime.
- AIS designed and developed the Cyber Wellness Index. We collect data from samples to analyze the cyber wellness of Thailand to design projects to promote, correct, and improve the digital skills of the Thai people.
- AIS develops and introduces new products and services by AIS and our partners to promote the proper use of the internet among our customers.
- AIS creates an understanding and awareness of cybersecurity threats. We also encourage Thai people of all gender identities and ages to be skillful in using the internet. They are also expected to be immune against cybercrime and be safe in the online community by protecting themselves against cybercrime and cyberbullying. In brief, they can properly use the internet and become responsible digital citizens.



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➔ Climate Actions

➔ Waste Management

Climate Actions

Minimizing environmental impacts with efficient management of business operation and supply chain



Targets

Short term target (2023)

- Reduce GHG emissions intensity as calculated from the ratio of direct and indirect emissions to data traffic by 90% compared to the baseline in 2015
- Increase renewable energy usage to 5% of total energy consumption

Long term target

- Net-zero emissions by 2050



13,414
(tCO₂e)
Energy Efficiency
Programs



12,094
(tCO₂e)
Renewable Energy
Projects



14,994
(tCO₂e)
Low-carbon
Products and Services



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Key highlights in 2022

Topic	Unit	2019	2020	2021	2022
Reduction of GHG emissions intensity	%	77	82	89	91
% Energy from renewable sources	%	0.08	0.49	1.23	1.73
Energy Efficiency Programs	tCO ₂ e	10,553	74,590	27,543	13,414
Renewable Energy Projects	tCO ₂ e	431	3,503	8,139	12,094

- ➔ **Increased Energy Efficiency** through the study and analysis of customers' behavior together with adopting power saving features in planning and appropriate use of network infrastructure, reducing energy consumption and GHG emissions by 13,414 tCO₂e.

➔ **Increase in the use of electricity from renewable sources** in 2022, AIS teamed up with business partners with expertise in renewable energy to drive the proportion of renewable energy use, enabling the company to install solar panels at 3,190 more locations. This resulted in a total of 8,751 base stations and switching centers using electricity from renewable sources, reducing greenhouse gas emissions by 12,094 tCO₂e.
- ➔ **Low-carbon products and services and customer engagement** that significantly helped enhance energy efficiency and reduce GHG emissions for corporate clients. Subscribers were encouraged to switch from mailed bills to e-bills and to adopt my AIS Application to reduce paper usage and fuel use in traveling to the service centers. The efforts reduced GHG emissions by 14,994 tCO₂e.

➔ **Revision of environmental policy.** The policy was revised to align with major developments both locally and internationally with added focus on biodiversity and forest protection.
- ➔ **Climate-related disclosures.** The company participated in the Carbon Disclosure Project (CDP) for the first year and developed the analysis of physical risks on AIS' business operations in conformance with the framework of Taskforce on Climate-related Financial Disclosures (TCFD).



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Opportunities, Challenges, and Impacts

Over the past few years, the world community encompassing international, state, private organizations as well as consumer groups has taken heightened interest in climate change issues and realized the urgent need to limit the increase of average global temperature to less than 1.5 degrees Celsius. For its part, the Thai government announced a plan to achieve the net-zero emission target by 2065 out of the concern that Thailand is among the 10 countries in the world most affected by climate change and to join the global community in its immediate efforts to tackle climate change. The declaration of such a challenging goal prompted the government to initiate the process of passing laws on climate change and adjust the national energy plan to prepare for operations in line with such goal.

AIS business operations are likely to be affected by climate change in 3 areas as follows:


- 1. **Physical risks** - natural disasters which may damage the network infrastructure and devices can increase operating costs from leveling up preventive measures against damage and maintenance. Also, transportation and production may be impacted by supply chain disruption.
- 2. **Transition risk** - the changing regulations and government policy that tend to control greenhouse gas emissions and can put upward pressure on the operating and management costs may prompt AIS to adjust its way of thinking and create innovations that enhance energy efficiency and reduce greenhouse gas emissions in compliance with future legislature.

- 3. **Transition risk** - the changing behaviors of consumers to become more eco-conscious bring both challenges and opportunities for AIS, demanding the company to adjust business strategies and corporate image to align with such development. This can generate new sources of revenue from low carbon products and services for enterprise clients looking for digital services that help reduce greenhouse gas emissions and for general customers opting for companies with concern for the environment.

As for the impacts from business operations on the environment, despite not being one of the industries that directly emit greenhouse gases from the production process, the company's provision of telecommunications network services utilizes electricity, which is chiefly produced from fossil fuels in Thailand, and its value chain indirectly generates greenhouse gases. AIS has thus adjusted the company's environmental targets to be more challenging by adopting the Science-based Target Initiative (SBTi) which stimulates the business value chain to streamline its operations to be more environmentally friendly. Another increasingly important issue is the impacts on the ecosystems where AIS' base stations are located, leading the company to add the targets of maintaining ecological balance and forest preservation. It is believed that not only do climate actions contribute to society and the environment as a whole, but they also benefit cost structure, reduce business operation risks, and increase opportunities for making profit in the long term. Above all, they help underscore the image of a Cognitive Tech-Co, which is as a leader in innovation and which captures the hearts of customers as a socially-responsible business.

Science-based Target Initiative (SBTi)

SBTi is setting a GHG emissions reduction target grounded in science in line with the main target of the Paris Agreement, which is to limit the increase of average global temperature to below 2, preferably to 1.5 degrees Celsius above pre-industrial levels.



Management Approach

In achieving these commitments, AIS has set short-, medium- and long-term goals for reducing greenhouse gas emissions with the Chief Technology Officer tasked with carrying out the effort and implementing environmental management across the organization, from its core business to its auxiliary endeavors. A team of environmental experts provides a quarterly report to the Chief Technology Officer (CTO) to inform actions such as setting indexes for performance. The CTO also monitors regulations and measures relevant technological trends to constantly improve the environmental management plan. A report on environmental efforts is presented to the Sustainability Development Committee and Board of Directors at least once a year.

In 2022, AIS revised the environmental policy approved by the Board of Directors to correspond to major developments, both domestically and internationally, and to cover AIS' business operations and support the environmental efforts of its business partners in the supply chain. The objectives of the policy were to promote environmental sustainability as follows:



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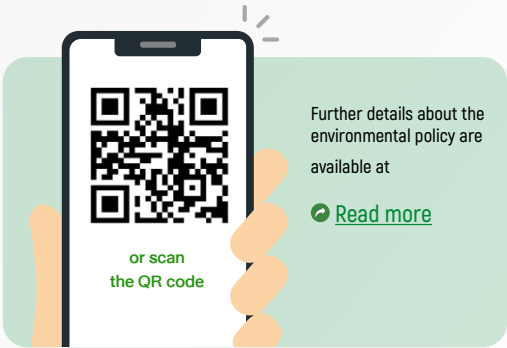
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- To reduce negative impacts from business operations on the environment and natural resources
- To improve resource efficiency in business operations when deemed appropriate
- To assess and manage risks associated with climate change and the environment and strictly comply with environmental standards and regulations
- To conserve the environment and protect our planet
- To promote digital solutions that help users and businesses cope with environmental challenges



2022 Progress

Despite its energy usage increasing due to network expansion and growing demand for data, AIS has still been able to limit its GHG emission intensity relative to the amount of data it supplies, underlining the efficiency of its network’s design and utilization. Promoting a higher proportion of renewable energy, AIS in 2022 was able to reduce GHG emissions intensity, a ratio of GHG emissions to data traffic, by 91 percent compared to the base year 2015. At the same time, AIS increased its proportion of renewable energy usage to 1.73 percent of total energy used, compared to 1.23 percent in 2021

Promoting Energy Efficiency

- AIS engineer team studied techniques and adopted multiple energy-efficient technologies in the management of base stations nationwide. Examples included installation of multi-mode station equipment covering 3G, 4G, and 5G, and improving efficiency of rectifiers that helped save energy and reduced indirect GHG emissions from electricity generation by 5,882 tCO₂e.
- Adopted AI in processing and analyzing network utilization to manage signal channels and manage energy use according to customers’ cell phone usage to deliver best services in terms of quality and power energy consumption. The efforts resulted in reducing 13,420 MWh/Year in electricity use and 6,707 tCO₂e in greenhouse gas emissions.
- For the steadily growing data centers, AIS put in place a resource allocation plan for the servers to align with clients’ usage and opted for high energy-efficient devices, enabling AIS to achieve a saving of 1,650 MWh/Year and a reduction of 825 tCO₂e.

Alternative Energy Use



In 2022, AIS continued to expand the installation of solar panels. 3,186 solar panels were installed at base stations and 4 at data centers and switching centers. Since the start of the project, AIS has installed and used alternative energy at 8,739 base stations and 12 data centers and switching centers, achieving 24,192.98 MWh/Year of electricity from

alternative energy and a reduction of 12,094.07 tCO₂e/Year in GHG emissions. Moreover, AIS has teamed with business partners with expertise in alternative energy to plan and accelerate the proportion of alternative energy use for lower operating and management costs.

Environmental Management System (EMS) Development

The AIS environmental management system received ISO14001:2015 approval. The system used independent evaluators at two AIS computer data centers and ISO14001 certified environmental experts at all others. The standard was adopted to enhance environmental management at AIS in areas including energy management, water management and waste management in compliance with the relevant regulations and requirements of a sustainable organization.

Customer Engagement

AIS integrated digital technology into its internal operations, processes involving partners and in service of customers under the Full-E concept, which encompasses the four services of: 1) my AIS, which allows customers to view fees, pay bills, register and monitor packages by themselves, 2) Electronic Bills (E-Bill), 3) Electronic Receipts (E-Receipt) and 4) Electronic Payment (E-Payment). On top of reducing paper usage and the need for travel, these services enhance operational efficiency and convenience for customers. By the end of 2022, my AIS usage reached 9.7 million users, increasing by 16%. Moreover, 111 million bills switched from mailed bills to E-Bills and 109 million E-Receipts all together cutting the need for sheets of paper, equivalent to 14,994 tCO₂e in GHG emissions a year



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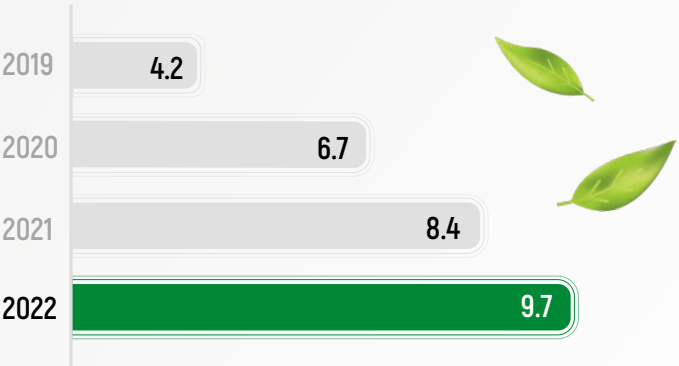
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Number of users of Electronic Bills (E-Bill) (Million Billing Accounts)



Low-Carbon Products and Services Development

Smart Solution Development – AIS strived to develop a smart solution service to enable corporate clients to meet needs in working in the new normal and to manage work processes to enhance energy efficiency to reduce GHG emissions. The digital solutions that support energy efficiency are categorized into two groups as follows

1. Cloud, Data Center & Mobility

- Cloud services that cater to the work systems of enterprise clients. AIS Cloud Data Center was designed to be highly energy efficient and feature the latest high energy-efficient devices, making the use of AIS service more environmentally friendly than investing in clients' own data centers.

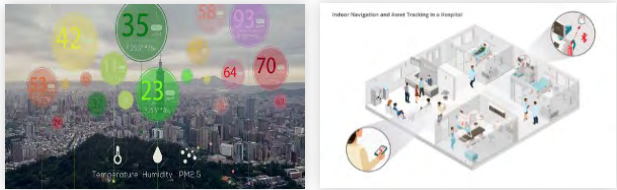
- Hybrid Workplace Solutions feature Smart Meeting, Cloud Contact Center, and the online work system management encompassing 4G, 5G, and fiber. The solutions help reduce travel time for work trips as well as energy consumption and GHG emissions from transportation.

2. 5G & IOT Solutions for improving and transforming business into a modern business model driven by data and information to enhance work efficiency. Examples include:

- Smart Factory that incorporates 5G, IoT, data analytics, and AI to monitor, track and analyze data to enhance efficiency in production, management energy and resource consumption in the factory, maintain machinery to keep it in good working condition, and minimize waste and pollution from the manufacturing



- Smart Property & Building Management Solution using IoT sensors to manage energy consumption in the building, parking, property, and security systems. The smart solution efficiently cuts unnecessary energy use in the building.



Air Quality Monitoring

Asset Management

- Smart Transportation & Logistics using a tracker to track a vehicle's location, and arrange and control routes which ensures improved vehicle and energy efficiency together with keeping vehicle maintenance scheduling to keep them up and running safely for a long time



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Climate-related Disclosures in Accordance with International Standards

Realizing the significance of the disclosure of information to stakeholders fully and systematically, AIS has adopted Taskforce on Climate-related Financial Disclosures (TCFD), enabling the company to assess the opportunities and risks arising from climate change comprehensively in the perspectives of physical risks associated with natural disasters and transition risks stemming from changes in policies, technologies, and consumer behaviors among others.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the company's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the company's businesses, strategy, and financial planning where such information is material.	Disclose how the company identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

In addition, the company has adopted a scenario analysis to assess the financial impacts under the following scenarios: 1) in the case of limiting global warming to below 2 degrees Celsius, 2) in the case of global warming reaching 2.5-3 degrees Celsius, and 3) in the extreme case of global warming exceeding 4 degrees Celsius. This scenario analysis allows the company to foresee financial damage that may arise under different scenarios and adjust its business strategies and risk management to be more flexible in response to the situation.

For further information about the TCFD report, visit [🔗 This link](#)

Biodiversity and Forest Protection

The biodiversity of the ecosystem is vital to the sustenance of life. Humanity must rely on the biodiversity from products and services in the ecosystem which benefit us both directly and indirectly. However, without proper management, human activities cause biodiversity loss and affect the balance in the ecosystem. Realizing their importance, AIS commits to conserving and protecting biodiversity and the ecosystem from its business operations. To that effect, the company has implemented integrated management and adopted internationally-accepted metrics to assess its operations. The goals are to achieve No Net Loss of Biodiversity and No Net Deforestation by 2027.

Further details about "Commitment to Biodiversity and Forest Protect" can be found [🔗 Here](#)

In 2023, AIS plans to pursue its Net Zero Emissions goal in alignment with the Science-based Target by additionally measuring its Scope 3 emissions and formulating a plan to reduce greenhouse gas emissions along with those in the supply chain systematically. On top of this, the company continues to give importance to the use of alternative energy in the aforementioned projects and seek partners with expertise in electricity generation from renewable energy apart from investing in building and installing solar panels to drive the proportion of alternative energy use for lower operating and management costs. At the other end, AIS sets its sights on implementing new technologies to help manage the base stations and procure high-efficiency 5G network equipment to enhance energy efficiency and meet the constantly growing demand of customers.



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At the same time, AIS is keen to provide innovative technological services that allow customers to track and analyze information for planning energy use and reduction in greenhouse gas emissions. The goal is to become a Cognitive Tech-Co that contributes to the economic development and address the needs of customers in the Digital Age with concern for the environment.

Performance Table

Topic	Unit	2019	2020	2021	2022
GHG Emission ¹					
Total GHG emissions (Scope 1 and 2)	tCO ₂ e	615,407	696,883	645,321	675,497
Direct GHG emissions (Scope 1) ²	tCO ₂ e	11,177	11,196	8,931	7,411
Indirect GHG emissions (Scope 2) ³	tCO ₂ e	604,230	685,687	636,390	668,086
GHG emissions intensity ⁴	tCO ₂ e per Terabit	0.02	0.015	0.01	0.008
Energy					
Total Energy Consumption	MWh	1,082,823	1,220,024	1,318,495	1,394,989
	Terajoule	3,898	4,392	4,747	5,022
Total non-renewable energy consumption	MWh	1,081,960	1,214,006	1,302,213	1,370,769
	Terajoule	3,895	4,371	4,688	4,935



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Topic	Unit	2019	2020	2021	2022
Direct energy consumption: Fuel and other ²	MWh	36,706	36,052	29,178	34,356
	Terajoule	132	130	105	124
Indirect energy consumption: Electricity ³	MWh	1,045,254	1,177,954	1,273,035	1,336,440
	Terajoule	3,763	4,241	4,583	4,811
Energy from renewable sources ⁵	MWh	862.91	6,017.86	16,282	24,193
	Terajoule	3.1068	21.6643	59	87
% Energy from renewable sources	% To total energy consumption	0.08	0.49	1.23	1.73
Power Usage Effectiveness (PUE) at Data Centers ⁶	Unit	1.61	1.56	1.51	1.505
Total energy consumption in data centers	MWh	59,015	70,182	77,261	83,851
% Energy from renewable sources in data centers	% To total energy consumption	0.94%	1.02%	1.57%	1.74
Energy cost	Million baht	4,443	4,853	5,138	5,798



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Topic	Unit	2019	2020	2021	2022
Total Water Use					
Water Withdrawal	Cubic Meters	191,332	226,528	179,306	198,751
Municipal Water ⁷	Cubic Meters	187,900	222,821	175,958	194,762
Water Stress Area	Cubic Meters	-	-	-	-
Ground Water ⁸	Cubic Meters	3,432	3,707	3,348	3,989
Water Stress Area	Cubic Meters	3,432	3,707	3,348	3,989
Water Discharge	Cubic Meters	-	-	-	101,322
Total Water Consumption	Cubic Meters	-	-	-	97,429

Remark: Details of note 1-8 are on [Page 94](#)



Reducing and recycling waste from operations and promoting proper e-waste disposal among Thai people



Targets

Short term target (2023)

- Zero e-waste to landfill

Long term target

- Maintain zero e-waste to landfill



Key Highlight in 2022

Topic	Unit	2022	2023 Target
Disposal of e-waste through landfilling	ton	0	0

- ➔ All e-waste from operations is properly disposed of, thereby achieving the zero landfill of e-waste target together with systematic monitoring of the process and prescribing the assessment of performance in the area. The improved process resulted in only 0.0003% of non-recyclable waste or residues.
- ➔ Joined the environmental network on waste separation organized by the Department of Environment and Bangkok Metropolitan Administration, leading to the clearer management of information to allow for the production of electricity and organic fertilizer.
- ➔ AIS Contact Center Development & Training Arena in Nakhon Ratchasima implemented a full-scale project dedicated to turning food waste into organic fertilizer, reducing approximately 9 tons of food waste per year.
- ➔ Carried out the "AIS HUB of e-waste" project, employing full-scale communication strategies with a focus on facilitating e-waste disposal. This was accomplished through a variety of campaigns and network collaborations, which increased to over 2,500 e-waste drop points nationwide. An example of e-waste+ application was also developed, using blockchain technology to manage information regarding e-waste from upstream to downstream. On top of this, knowledge and understanding were spread among Thai people about the adverse health

and environmental impacts brought about by improper e-waste disposal. The goal was to inspire a change in people's e-waste disposal behavior and promote effective e-waste disposal among the public.

Opportunities, Challenges, and Impacts

Today's constantly-developing digital technology has played a vital role in supporting and facilitating people's way of life as well as developing and driving digital economy in multiple industrial sectors. The fast-changing technology has resulted in the frequent replacement of equipment to keep up with the technology, inevitably adding to the amount of e-waste every year. According to The Global E-waste Monitor 2020 report of United Nations University, global e-waste continues to increase every year. It has been estimated that global e-waste will increase by 74 MT and 110 MT by 2030 and 2050, respectively (equivalent to an increase of 38.1% and 105.2%, respectively compared to 2019 which recorded 53.6 MT of e-waste).

As a Digital Life Service Provider, AIS is partly held responsible for generating e-waste from providing telecommunication network and digital services along with other related digital and electronic devices. Since e-waste is generally known to contain hazardous materials, predominantly heavy metals,



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improper or ineffective e-waste disposal could pose harm to human health and the community. Its negative effects also extend to polluting the environment and wasteful use of resources without effective management.

The ever-increasing amount of e-waste coupled with the problems stemming from improper e-waste disposal and consumers' growing concerns over the environment, society, and ESG (Environmental, Social, and Governance) have affected consumers' decision making regarding products and services as they look for companies committed to sustainable and environmentally-sound business operations. Changing consumer behavior has provided business opportunities for AIS to collaborate with partners to deliver eco-friendly products to consumers. However, such opportunities come with challenges brought about by management of e-waste generated throughout the AIS value chain. This has been prompted by the government authorities that plan to stipulate regulations to solve the e-waste problems such as the draft Act on the Management of Waste Electrical and Electronic Equipment. If AIS' e-waste management falls short of the regulations prescribed by the relevant laws, it is likely to negatively affect AIS' reputation and risk paying fines or compensations in case of damage made to the community and environment.

Realizing the importance of e-waste management from the company's operations, AIS has elevated its targets toward achieving zero e-waste to landfill by 2023 to keep up with the opportunities and challenges and the targets to create an environmentally-friendly future for consumers and society. Aside from promoting the image of a leader in sustainable business operations, the commitment helps boost confidence and trust among customers in AIS' products and services. It also encourages Thai people to take responsibility for society and the environment in accordance

with the circular economy concept to reduce resource consumption and increase the ability to recycle end-of-life products for reuse in a sustainable manner.

Management Approach

AIS resolves to manage waste from its business operations that may impact society and the environment. A focus is on developing processes to minimize waste and recycling waste materials. As such, the company has set forth environmental policies to provide a framework for business operations including waste management. Moreover, the concept of circular economy has been incorporated into proper disposal of e-waste without sending it to landfill to serve as a core operation. This runs concurrent with raising awareness among Thais about the danger of e-waste and promoting understanding about proper disposal of e-waste so it may enter the recycling process. The framework for waste management comprises four areas:

Green Procurement

AIS has established a procurement policy which concerns the environmental, social, and governance aspects (ESG), including green procurement. The company incorporates environmental requirements into its procurement policy to create an effective mechanism for resource and energy efficiency that also reduces waste, pollution, and greenhouse gas emissions. Internal departments are encouraged to understand the criteria and regulations related to green procurement and apply the policy to all suppliers equitably. The policy is part of the code of conduct to which all relevant AIS departments shall strictly adhere.

Operations Waste Management

A write-off committee tasked with amortizing network equipment and resources was set up to manage and decide when to amortize electronic equipment such as network equipment, office electronics, mobile phones, etc. for new replacement. The committee is also charged with setting target and waste management system to minimize the impact of resource use in AIS operations. Obsolete equipment will be disassembled for reuse or refurbishment. If not practical, they will be sent into the recycling process to recover some components for reuse, using authorized operators capable of properly managing electronic waste. In doing so, the used equipment will be auctioned off to operators with an efficient eco-friendly recycling process capable of recycling as much of the electronic waste as possible with the least non-recyclable residue directed to disposal. The goal is to ensure no landfill of e-waste.

Office Waste Management

AIS supports maximum waste separation in AIS offices ahead of waste delivery into the recycling process and promoting awareness among personnel on the importance of waste separation and proper waste disposal, seeking environmentally-friendly changes in behavior.

Promoting Proper e-waste Disposal to Customers and the Public

The "AIS HUB of e-waste" project provided receptacles for five types of electronic waste: 1. Mobile Phones and Tablets 2. Charging Cables 3. Earphones 4. Mobile Phone Batteries 5. Power Banks, so that the waste



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could be entered into the proper disposal process to achieve zero landfill of e-waste. The project also sought to promote awareness toward the danger of electronic waste and an understanding as to the need for proper disposal and recycling.

2022 Progress

Green Procurement

In 2022, AIS added environmental qualities to its mandatory requirements for bidding and as a preferred requirement in alignment with the Company's policies and targets on the environment and sustainable business operations under the revised targets of Act on Climate pillar in mid-2022. A plan was also devised to implement the green procurement guidelines and requirements, encompassing all groups of products and services. At the same time, the company strived to communicate AIS' policies on sustainable business operations importance of environmental, social, and corporate governance aspects to all suppliers. To that end, the company has employed green procurement guidelines and requirements in its procurement process, starting from a request for quotation to the delivery of goods and services from our suppliers.

Operations Waste Management

AIS defines e-waste operations as waste related to network equipment including batteries, generators, base station equipment, cables and others. The company's write-off committee oversees the management of such equipment using a Life Cycle Perspective. In 2022, AIS delivered e-waste into the recycling process, using the Department of Industrial Works' authorized operators with clear processes from waste transportation to final disposal. AIS also required that its e-waste recycling vendors compile operational reports every 30 days so that they can maintain start-to-end point

monitoring of e-waste management. A random onsite audit was also carried out to ensure proper and environmentally-friendly processing as specified in the procurement contract. For 2022, the company's non-recyclable residue proportion accounted for only 0.0003% of all its operations waste.

Office Waste Management



AIS has enhanced its waste separation by clearly delineating different waste containers for four types of waste: 1) general waste 2) recyclable waste 3) food waste, and 4) hazardous waste to facilitate proper waste segregation and disposal.



Food waste composter

In 2022, AIS joined the environmental campaign on waste separation organized by the Department of Environment at the Bangkok Metropolitan Administration. The campaign which was a joint initiative between the government and private sectors served as a good model in waste management. 5% of waste, amounting to 5,012 kilograms from offices in Bangkok went to the waste-to-energy plants, and another 15%, totaling 16,037 kilograms entered the process, turning it into fertilizer. This helped reduce the amount of waste going to landfills.



Organic fertilizer derived from the waste composter



Distributing organic fertilizer to employees



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Waste separation at the office building

AIS Contact Center Development & Training Arena in Nakhon Ratchasima has carried out a project to turn a food waste into fertilizer. The initiative can reduce up to 9 tons of food waste in 2022. In addition, the waste-derived organic fertilizer is used within the building’s green space and shared with employees and surrounding communities (temples, schools, and organic agriculture groups) as part of the efforts to campaign for utilizing food waste, proper waste management, and reducing greenhouse gas emissions. The project aligns with the concept of green building management and commitment to conducting business alongside society and the environment in a sustainable way.

From operations in 2022, 1,277 tons of waste were generated. Non-hazardous waste made up 17% of the total, mostly comprising office and operations building refuse, and hazardous waste made up 83% of the total, comprising e-waste from network operations and hazardous waste from offices.

Promoting Proper e-waste Disposal through “AIS HUB of e-waste”

AIS continued “AIS HUB of e-waste” in 2022, focusing on expanding its network throughout the public and private sectors to strengthen implementation and enhance convenience for e-waste disposal. The project also focused on promoting awareness toward health risks of retaining expired e-waste in the home or improper disposal, at the same time, dispensing knowledge on recycling and proper e-waste disposal in the hope of fostering understanding toward the critical environmental issue posed by e-waste. As well, it helps promote an image of a leader in sustainable business operations and boost customer confidence in the use of AIS products and services. The efforts are as follows:

➔ Expansion of “AIS HUB of e-waste” Cooperation Network

- Building a network of participation across the public and private sectors, AIS promoted a sustainable solution to the impact of e-waste on the environment, expanding its e-waste receptacles to over 2,500 drop points nationwide to facilitate the proper disposal of e-waste.
- AIS joined forces with Thailand Post to launch the “Drop off with the Postman” to facilitate e-waste drop-off free of charge.



- AIS collaborated with Thai League, the organizer of Thailand’s league-football competition, and Waste Management Siam Co.,Ltd (WMS), a waste management service provider, launched the “Thai Soccer Fans Say No to e-waste” campaign, encouraging fans of the 16 Thai league clubs to drop off their electronic waste for use in producing Thailand’s first medal derived from e-waste. It was a step toward a new standard of soccer competition while also showing due concern to the environment. The objective was to drive the concept of the Green Thai League by expanding the “AIS HUB of e-waste” campaign to promote the participatory involvement of Thai soccer fans in proper e-waste disposal. E-waste receptacles have been set at the stadiums of all clubs so the e-waste could enter into the proper recycling process to ensure

zero landfill. The derived components such as silver and gold will partly be used in an e-waste medal, the first such medal in Thailand, which was produced with environmental concern in every step of production. The medal is to be awarded to the soccer club which demonstrates outstanding sustainable environmental performance during the Hilux Revo Thai League 2021/2022 season.



- AIS introduced e-waste + application, an electronic waste management system on blockchain for the first time in Southeast Asia in cooperation with 6 Green Network organizations to solve the e-waste problems sustainably. To accomplish the goal, blockchain technology has been embraced to manage electronic waste from upstream to downstream. This allows for the monitoring of e-waste and display of the results in real time, ensuring that all e-waste will be sent to authorized disposal site with standard recycling processes to achieve zero landfill and reclaim valuable materials for the manufacture of new products in accordance with the circular economy concept. Moreover, the application can calculate the decrease in the amount of greenhouse gas emissions and display the carbon scores for the droppers of e-waste to keep track of their environmental contribution efforts. The following six allied organizations in both government and business sectors are collaborating to achieve this common goal to operate with social and environmental responsibility: Denso (Thailand) Co.,Ltd, Thammasat University, Chulalongkorn University, Ngern Tid Lor Public



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Company Limited, Government Savings Bank, and Kasikorn Bank. An application will be further developed for public use



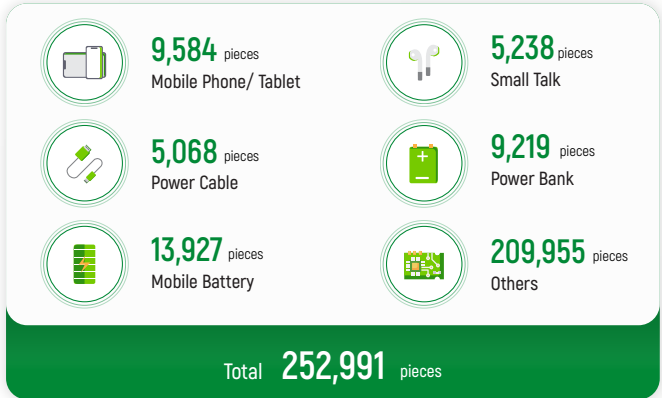
- AIS teamed with Lazada on Earth Day, inviting Thai people to drop off their electronic waste at AIS shops nationwide and receive a discount code from Lazada worth 40 baht for shopping on Lazada platform in the “AIS x Lazada Invite You to Drop off e-waste and Receive a Code” campaign.



- AIS created awareness on important environmental days, sharing knowledge about the danger of e-waste and the proper way to dispose of e-waste to achieve zero landfill through various campaigns with the goal of making the Thai public aware of the importance of the environmental problems caused by e-waste.



Operating Result from
AIS HUB of e-waste Project



Remark: 1 January – 31 December 2022



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➔ Continued Support for Special Activities Promoting “AIS HUB of e-waste” through multiple activities such as organizing a co-campaign with partners and activities on important environmental awareness days to spread awareness among the Thai people and encourage them to take part in the proper disposal of e-waste, paving the way for environmental-friendly behavioral changes among the Thai public to contribute to a better, more sustainable environment.

Performance Table

Topic	Unit	2019	2020	2021	2022
Total Waste generated	Tons	803	548	183	1,277
Total waste diverted from disposal	Tons	113	356	147	1,094
Total waste directed to disposal	Tons	690	192	36	183
Break down by waste type and disposal method (Totally offsite)					
1. Non-Hazardous Waste ⁹	Tons	778	246	66	217
1.1 Waste diverted from disposal					
Preparation for reuse	Tons	0	0	0	0
Recycling	Tons	89	54	28	13
Other recovery operations (organic fertilizer)	Tons	0	0	2	25
1.2 Waste directed to disposal					
Incineration (without energy recovery)	Tons	0	0	1	5
Landfilling	Tons	689	192	35	116
Other disposal operations	Tons	0	0	0	58



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Topic	Unit	2019	2020	2021	2022
2. Hazardous Waste ¹⁰	Tons	25	302	117	1,060
2.1 Waste diverted from disposal					68
Preparation for reuse	Tons	0	0	0	
Recycling	Tons	24	302	117	
Non-recyclable or Residue	% of Total Hazardous Waste	4.3	0.01	0.002	
2.2 Waste directed to disposal					4
Incineration (with energy recovery)	Tons	0	0	0	
Landfilling	Tons	1	0.04	0	
Other disposal operations	Tons	0	0	0.002	

Remark: Total waste from our operations increased from 2021 due to the following reasons:

- 1) Resuming operations at the workplace after the COVID-19.
- 2) Replacing a large number of expired batteries for the network equipment in 2022.

Note: Details of note 9-10 are on [Page 94](#)

Remarks

1.

GHG data collection and consolidation are prepared by the operational control approach. The GHG accounting is calculated by the reference method of the Thailand Greenhouse Gas Management Organization (TGO) version AR5, it is in accordance with the Fifth Assessment Report: AR5 of the International Panel on Climate Change (IPCC).
2.

The sources of direct GHG emissions (Scope 1) come from the burning of fuels, vehicles, power generators, coolant leakage, and carbon dioxide-type fire extinguishers. For the direct energy consumption from the burning of fuels, it is calculated by the reference method of the Department of Alternative Energy Development and Efficiency (DEDE).
3.

The source of Indirect GHG emissions (Scope 2) comes from electricity used in the business, of which a significant proportion is from the network operations. The data is calculated from electricity bills from the Metropolitan and Provincial Electricity Authorities, which report the data in Megawatt hours.
4.

GHG Intensity is the ratio of GHG emissions per data traffic generated during the reported year. The indicator is widely used in the telecommunication industry to gauge the efficiency of the emission by stating how much GHG is emitted for every terabit of data traffic.
5.

Renewable energy comes from solar panels installed at base stations nationwide, data centers, and call centers. Energy from solar rooftops is taken from electric meters while energy from base stations is calculated from the solar capacity of each site, which is derived from factors such as the average solar radiation energy (based on topography and regional weather condition), produced solar energy from the solar panel, the days of activated solar panels.
6.

Power Usage Effectiveness (PUE) is an indicator to measure the efficiency of energy consumption in data centers. PUE is defined as the total energy used in a data center divided by the usage of the IT equipment load in a particular data center.
7.

Third-party water refers to Municipal Water - tap water supplied by Water Authorities, both metropolitan and provincial. The total quantity of municipal water usage comes from the billings from both authorities. Our consumption is not from a scarce source and it is only freshwater.
8.

Groundwater is used at data centers in the upcountry. The volume of groundwater is measured and recorded in the system on a monthly basis. It is not from any scarce source as referenced from [Read more](#) and it is only freshwater.
9.

Non-hazardous waste is office waste or municipal waste which do not include those listed in the latest announcement of the Pollution Control Department (PCD) and Department of Industrial Works (DIW). Typically, they are general office waste, organic waste, and recyclable waste. The calculation methodology is to weigh the quantity of office waste from office buildings, which is collected by municipal government agency sent to landfill, making organic fertilizer, and incineration. The estimated average waste quantity per staff generated is multiplied by the total number of staff at the end of the year to obtain the total weight of non-hazardous waste. Another type of non-hazardous waste is 'recyclable' which is also undergone weight sampling to find the average waste per staff and then the total weight of the waste. This 'recyclable' waste will finally go to the recycling disposal process.
10.

The definition of hazardous waste is aligned with the international standards and the state's definition (Pollution Control Department, Department of Industrial Works, and other relevant regulations). Within the telecommunications industry, the majority of hazardous waste is E-waste, including network equipment, batteries, and cellular phones. The total amount of E-waste is collected from the company's resource management system, which records decommissioned equipment and carries out disposal. All hazardous waste is disposed of by authorized contractors.



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About This Report

Objectives

AIS compiled this report on sustainable business development to present information on its policies, strategies and operations in the three areas of Economy, Society and Environment with an emphasis on matters pertinent to the business and continued growth of AIS and 18 subsidiaries, which observe the strategic focuses for enhancing business sustainability.

Scope and Boundary

Information presented in this sustainable business development report encompasses operations between 1st January 2022 and 31st December 2022 using the Global Reporting Initiative (GRI) method of reporting for the 10th year. The company's sustainable business development report for 2022 has been reported in accordance with the GRI Standards 2021 and presented operations following the highest criteria of the UN Global Compact (UNGC) as well as report according to the Sustainability Accounting Standards Board (SASB) Telecommunication Services Standard. The boundary covered the operation of AIS and 18 subsidiaries in all dimensions; economy, society, and environment.

Information acquired from directly and indirectly inquiring stakeholders is also used. In-depth information on business practices, management structures, good governance, risk management, internal controls and auditing, rewards and important events in the past year, including operational returns are presented in the Annual Report 2022, which is available [Click here](#)

Validation

- Numerical data related to economic operations apply the same data as published in annual financial statements for 2022, which were audited by an independent external auditor.
- Data regarding environmental performance and employees training was audited and verified according to the GRI Standard 2021 by an independent assurer SGS (Thailand) Limited. (Further details are on pages [104-105](#))

Process for Defining Report Quality

- **Accuracy:** Information presented in this report is applied the accuracy principle such as the evidence, data measurement, calculations and assumptions, etc.
- **Balance:** AIS is committed to presenting balanced information so that readers may extrapolate an accurate assessment of the company's sustainability operations.
- **Clarity** Information is presented in a clear and accessible manner.
- **Comparability:** Information from prior operation is presented to display changes and development in the company. It allows assessment of progress on impacts over the time and against the targets.
- **Completeness:** Information presented in this report is provided sufficient information to assess the positive and negative impacts.
- **Sustainability context:** Information presented in this report has described the impact of the holistic context of sustainable development.
- **Timeliness:** This report is compiled annually so stakeholders may evaluate the sustainability of AIS operations in a predictable timeframe.
- **Verifiability:** Information presented in this report is verified and assured by internal auditors and third-party assurers, so that readers are confident that all information is accurate, transparent, and verifiable.

Inquiry Channel

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GRI Content Index

Advanced Info Service Public Company Limited has reported in accordance with the GRI Standards for the period from 1 January 2022 to 31 December 2022.

GRI Standard	Disclosure		Page number (s) and/or URL (s)	Omissions/ Remark
General Disclosures				
GRI 2: General Disclosures 2021	2-1	Organizational details	Cover page, 7-10, 95	
	2-2	Entities included in the organization's sustainability reporting	AIS Annual Report 2022, page 102-107	
	2-3	Reporting period, frequency and contact point	Page 95	
	2-4	Restatements of information	Page 95	The boundary covered the operation of AIS and 18 subsidiaries in all dimensions.
	2-5	External assurance	Page 101	
	2-6	Activities, value chain and other business relationships	<ul style="list-style-type: none">Page 7-10AIS Annual Report 2022, page 35 and 66	No significant changes (i.e. location, operation, share capital structure, supply chain, etc.) during the reporting year.
	2-7	Employees	Page 59	
	2-8	Workers who are not employees		Information is incomplete. We are in the process of collecting information from subcontracting companies.
	2-9	Governance structure and composition	<ul style="list-style-type: none">Page 11AIS Annual Report 2022, page 130-152	
	2-10	Nomination and selection of the highest governance body	AIS Annual Report 2022, page 153-154	
	2-11	Chair of the highest governance body	<ul style="list-style-type: none">AIS Annual Report 2022, page 119, 145More information refer to Board composition from this link, https://investor.ais.co.th/directors.html	
	2-12	Role of the highest governance body in overseeing the management of impacts	<ul style="list-style-type: none">Page 4-5, 11AIS Annual Report 2022, page 14, 152 More information refer to Human Rights policy https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-policy-en.pdf	
	2-13	Delegation of responsibility for managing impacts	<ul style="list-style-type: none">Page 11AIS Annual Report 2022, page 14	
	2-14	Role of the highest governance body in sustainability reporting	<ul style="list-style-type: none">Page 11AIS Annual Report 2022, page 14, 152	
	2-15	Conflicts of interes	AIS Annual Report 2022, page 65, 124-127, 149	
	2-16	Communication of critical concerns	AIS Annual Report 2022, page 125	
	2-17	Collective knowledge of the highest governance body	AIS Annual Report 2022, page 120	
	2-18	Evaluation of the performance of the highest governance body	AIS Annual Report 2022, page 12 and 159	
	2-19	Remuneration policies	AIS Annual Report 2022, page 155-159	
	2-20	Process to determine remuneration	AIS Annual Report 2022, page 155-159	
	2-21	Annual total compensation ratio	-	Confidentiality constraints
	2-22	Statement on sustainable development strategy	Page 4-5	
	2-23	Policy commitments	<ul style="list-style-type: none">Refer to related policies from this link, https://investor.ais.co.th/governance_policy.htmlRefer to Human Rights policy from this link, https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-policy-en.pdf	



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GRI Standard	Disclosure		Page number (s) and/or URL (s)	Omissions/ Remark
	2-24	Embedding policy commitments	Page 11	
	2-25	Processes to remediate negative impacts	AIS Annual Report 2022, page 78-81, 125-126	
	2-26	Mechanisms for seeking advice and raising concerns	AIS Annual Report 2022, page 125-126	
	2-27	Compliance with laws and regulations	AIS Annual Report 2022, page 116	
	2-28	Membership associations	<ul style="list-style-type: none"> Page 6 More information refer to Public policy participation from this link, https://investor.ais.co.th/public_policy_participation.html 	
	2-29	Approach to stakeholder engagement	Page 18-21	
	2-30	Collective bargaining agreements	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
Materials Topics				
GRI 3: Material Topics 2021	3-1	Process to determine material topics	Page 12-17	
	3-2	List of material topics	Page 13-17	

GRI Standard		Disclosure	Page number (s) and/or URL (s)	Omissions/ Remark
Digital Innovation				
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 25-28	
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	Page 34	
	201-2	Financial implications and other risks and opportunities due to climate change	Refer to AIS TCFD report from this link, https://sustainability.ais.co.th/en/sustainability-priorities/climate-actions	
Cybersecurity & Customer Privacy Protection				
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 35-44	
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Page 47	
Human resource management				
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 48-54	
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Page 57	
	401-3	Parental leave	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	



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GRI Standard		Disclosure	Page number (s) and/or URL (s)	Omissions/ Remark
GRI 402: Labor/Management Relations 2016	402-1	Minimum notice periods regarding operational changes	<ul style="list-style-type: none"> Page 54 More information refer to AIS Human Resource Management website report from this link, https://sustainability.ais.co.th/sustainability-priorities/human-capital-development 	
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-2	Hazard identification, risk assessment, and incident investigation	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-3	Occupational health services	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-4	Worker participation, consultation, and communication on occupational health and safety	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-5	Worker training on occupational health and safety	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-6	Promotion of worker health	Page 58	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Refer to AIS Occupational Health and Safety report from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/ohs-commitment-and-programs-en.pdf	
	403-8	Workers covered by an occupational health and safety management system	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
	403-9	Work-related injuries	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
	403-10	Work-related ill health	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
	404-2	Programs for upgrading employee skills and transition assistance programs	Page 52	
	404-3	Percentage of employees receiving regular performance and career development reviews	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	



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GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	Refer to HR Performance Table from this link, https://sustainability.ais.co.th/storage/sustainability-priorities/human-capital-development/20220617-hr-performance-table-2021-en.pdf	
	405-2	Ratio of basic salary and remuneration of women to men		Incomplete data on the breakdown of the gender pay gap by employee levels. The HR department will work on a more complete data next year.
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	Page 53	
GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	Refer to AIS Human Rights Risk Assessment report from this link, https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-risk-assessments-en.pdf	
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Refer to AIS Human Rights Risk Assessment report from this link, https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-risk-assessments-en.pdf	

GRI Standard		Disclosure		Page number (s) and/or URL (s)	Omissions/ Remark
Social Inclusion					
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 62-63		
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	<ul style="list-style-type: none">Page 62-70More information refer to AIS Stakeholder Engagement https://sustainability.ais.co.th/storage/sustainability-priorities/social-inclusion/ais-stakeholder-communication-engagement-01.pdf		
	413-2	Operations with significant actual and potential negative impacts on local communities	Page 62		
Digital wellness					
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 72		

GRI Standard			Disclosure	Page number (s) and/or URL (s)	Omissions/ Remark
Climate actions					
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 80-81		
GRI 302: Energy 2016	302-1	Energy consumption within the organization	Page 84-85		
	302-4	Reduction of energy consumption	Page 79		
	303-3	Water withdrawal	Page 86		
	303-4	Water discharge	Page 86		
	303-5	Water consumption	Page 86		



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GRI Standard	Disclosure		Page number (s) and/or URL (s)	Omissions/ Remark
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	Page 84	
	305-2	Energy indirect (Scope 2) GHG emissions	Page 84	
	305-3	Other indirect (Scope 3) GHG emissions	-	Information is unavailable. The Scope 3 assessment is a work in process and we expect to disclose the data next year
	305-4	GHG emissions intensity	Page 84	
	305-5	Reduction of GHG emissions	Page 79, 81	
	305-6	Emissions of ozone-depleting substances (ODS)	Information refer to Climate Actions https://sustainability.ais.co.th/en/sustainability-priorities/climate-actions	
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	-	Not applicable as our key GHG emissions come from Co2, which is an indirect emissions from electricity.
Waste management				
GRI 3: Material Topics 2021	3-3	Management of material topics	Page 88-89	
	306-1	Waste generation and significant waste-related impacts	Page 88	
	306-2	Management of significant waste-related impacts	Page 88-89	
GRI 306: Waste 2020	306-3	Waste generated	Page 92	
	306-4	Waste diverted from disposal	Page 92-93	
	306-5	Waste directed to disposal	Page 92-93	



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UNGC Requirement

Principle		Criteria of UNGC COP for the advance level		Page number (s) and/or URL (s)
STRATEGY, GOVERNANCE AND ENGAGEMENT				
Scope:	Implementing the Ten Principles into Strategies & Operations	1.	Mainstreaming into corporate functions and business units	AIS Annual Report 2022, page 14
		2.	Value chain implementation	AIS Annual Report 2022, page 66-70
HUMAN RIGHTS				
Principle 1:	Support and respect the protection of internationally proclaimed human rights	3.	Robust commitments, strategies or policies in the area of human rights	https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-policy-en.pdf
Principle 2:	Not complicit in human rights abuses	4.	Effective management systems to integrate the human rights principles	https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-policy-en.pdf
		5.	Effective monitoring and evaluation mechanisms of human rights integration	https://sustainability.ais.co.th/storage/respect-to-human-rights/human-rights-policy-en.pdf
LABOUR				
Principle 3:	Uphold the freedom of association and the effective recognition of the right to collective bargaining	6.	Robust commitments, strategies or policies in the area of labor	Page 53-54
Principle 4:	Uphold the elimination of all forms of forced and compulsory labour	7.	Effective management systems to integrate the labor principles	Page 49-50
Principle 5:	Uphold the effective abolition of child labour	8.	Effective monitoring and evaluation mechanisms of labor principles integration	Page 51-52, 59-60
Principle 6:	Uphold the elimination of discrimination in respect of employment and occupation			
ENVIRONMENT				
Principle 7:	Support a precautionary approach to environmental challenges	9.	Robust commitments, strategies or policies in the area of environmental stewardship	Page 80-84, 88-92
Principle 8:	Undertake initiatives to promote greater environmental responsibility	10.	Effective management systems to integrate the environmental principles	Page 80,88
Principle 9:	Encourage the development and diffusion of environmentally friendly technologies	11.	Effective monitoring and evaluation mechanisms for environmental stewardship	Page 84-86, 91-93
ANTI-CORRUPTION				
Principle 10:	Work against corruption in all its forms, including extortion and bribery	12.	Robust commitments, strategies or policies in the area of anti-corruption	AIS Annual Report 2022, page 117-119
		13.	Effective management systems to integrate the anti-corruption principle	AIS Annual Report 2022, page 117-119
		14.	Effective monitoring and evaluation mechanisms for the integration of anti-corruption	AIS Annual Report 2022, page 117-119
UN GOALS AND ISSUES				
Scope:	Taking Action in Support of Broader UN Goals and Issues	15.	Core business contributions to UN goals and issues	Page 14-17
		16.	Strategic social investments and philanthropy	Page 63-66, 68-70
		17.	Advocacy and public policy engagement	Page 4-5
		18.	Partnerships and collective action	Page 27-32, 63-66, 68-70, 89-91
GOVERNANCE				
Scope:	Corporate Sustainability Governance and Leadership	19.	CEO commitment and leadership	Page 4-5
		20.	Board adoption and oversight	AIS Annual Report 2022, page 14, 152
		21.	Stakeholder engagement	Page 18-22



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Sustainability Accounting Standard Board (SASB) Index

The tables below outline how our existing disclosures align with the recommended metrics under the SASB Telecommunications Services standard.

Activity metrics

Topic	SASB Code	Activity metric	Unit of measure	Reporting information	Disclosure reference
	TC-TL-000.A	Number of wireless subscribers	Number	46.0 million subscribers	page 9
	TC-TL-000.B	Number of wireline subscribers	Number	N/A	
	TC-TL-000.C	Number of broadband subscribers	Number	2.2 million subscribers	page 10
	TC-TL-000.D	Network traffic	Petabytes	10,550.52	

Sustainability Disclosure Topics & Accounting Metrics

Topic	Code	Accounting metric	Unit of measure	Reporting information	Disclosure reference
Environmental Footprint of Operations	TC-TL-130a.1	(1) Total energy consumed	Gigajoules (GJ)	5,021,960.40	page 84
		(2) Percentage grid Electricity	Percentage (%)	95.80%	page 85
		(3) Percentage renewable	Percentage (%)	1.73	page 86
Data Privacy	TC-TL-220a.1	Description of policies and practices relating to behavioral advertising and customer privacy	n/a	See more detail in Privacy Protection Section in Data Privacy & Cyber Security.	Page 37-42
	TC-TL-220a.2	Number of customers whose information is used for secondary purposes	Number	AIS complies with relevant law and regulation. Customer data is used in accordance with the terms of service and/or customer consent and is done only for the purposes notified to customers. Please see more detail in Data Life Cycle Management section in Data Privacy & Cyber Security.	Page 37-38
	TC-TL-220a.3	Total amount of monetary losses as a result of legal proceedings associated with customer privacy	Thai Baht	None	
	TC-TL-220a.4	(1) Number of law enforcement requests for customer information	Number	19,454	Page 47
		(2) Number of customers whose information was requested	Number	We only record number of cases	
		(3) Percentage resulting in disclosure	Percentage (%)	91.45%	Page 47
	TC-TL-230a.1	(1) Number of data breaches	Number	2 cases	Page 47
		(2) the percentage of data breaches in which personally identifiable information (PII) was subject to the data breach	Percentage (%)	100% (both cases are related to PII)	
		(3) number of customers affected	Person	We report the number of data records from the incidents: 48,647	
	TC-TL-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	n/a	See more detail in Cyber security Section in Data Privacy & Cyber Security.	Page 42-45



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Topic	Code	Accounting metric	Unit of measure	Reporting information	Disclosure reference
Product End-of life Management	TC-TL-440a.1	(1) Materials recovered through take back programs	Metric tons (t)	252,991 pieces of e-waste were collected, equivalent to approximately 12.37 tons. More detail in Promoting proper e-waste disposal section	Page 90-91
		(2) percentage of recovered materials that were reused	Percentage (%)	0	
		(3) percentage of recovered materials that were recycled	Percentage (%)	100%	
		(4) percentage of recovered materials that were landfilled	Percentage (%)	0	
Competitive Behavior & Open Internet	TC-TL-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Thai Baht	None	
	TC-TL-520a.2	Average actual sustained download speed of (1) owned and commercially-associated content (2) non-associated content"	"Megabits per second (Mbps)"	None AIS does not have these specified metrics. We comply with regulations from the National Broadcasting and Telecommunication Commission (NBTC) related to the quality of service. We also report download speed in accordance with the reporting standard specified by the NBTC.	
	TC-TL-520a.3	Description of risks and opportunities associated with net neutrality, paid peering, zero rating, and related practices	n/a	AIS provides internet access services based on equal and non-discriminatory treatment and comply with related regulations on customers' rights.	
Managing Systemic Risks from Technology Disruptions	TC-TL-550a.1	(1) system average interruption frequency as the average number of disruptions per customer	"Disruptions per customer"	0.07	Page 47
		(2) customer average interruption duration as the average number of hours per customer.	Hours per customer	38 minutes	Page 47
Technology Disruptions	TC-TL-550a.2	Discussion of systems to provide unimpeded service during service interruptions	n/a	Refer to the discussion on Risk from Major Network Failure or Interruption to Important Systems in Enterprise Risk Management section, Annual Report 2022	Annual Report 2022, page 58



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ASSURANCE STATEMENT

SGS (THAILAND) LIMITED'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE ADVANCED INFO SERVICE PUBLIC COMPANY LIMITED'S CORPORATE SUSTAINABILITY REPORT FOR 2022

NATURE OF THE ASSURANCE/VERIFICATION

SGS (Thailand) Limited (hereinafter referred to as SGS) was commissioned by Advance Info Service Public Company Limited (hereinafter referred to as AIS) to conduct an independent assurance of the Corporate Sustainability Report year 2022. The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in the report presented. SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements

INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all AIS's Stakeholders.

RESPONSIBILITIES

The information in the AIS's Sustainability Report of 2022 and its presentation are the responsibility of the directors or governing body (as applicable) and management of AIS. SGS has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all AIS's stakeholders.

ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The SGS ESG & Sustainability Report Assurance protocols used to conduct assurance are based upon internationally recognised assurance guidance and standards including the principles of reporting process contained within the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) GRI 1: Foundation 2021 for report quality, GRI 2 General Disclosure 2021 for organisation's reporting practices and other organizational detail, GRI 3 Material Topics 2021 for organisation's process of determining material topics, its list of material topics and how to manages each topic, its list of material topics and how to manages each topic, and Limited levels of assurance contained within the ISAE3000.

SCOPE OF ASSURANCE AND REPORTING CRITERIA

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

- GRI (In Accordance with)

SPECIFIED PERFORMANCE INFORMATION AND DISCLOSURES INCLUDED IN SCOPE

- evaluation of content veracity of scrutiny for AIS and scrutiny for subsidiaries, and applicable aspect boundaries outside of the organization covered by this report;
- evaluation of the report against the requirements of Global Reporting Initiative Sustainability Reporting Standards (200, 300 and 400 series) claimed in the GRI content index as material and in accordance with.
 - GRI 302 - Energy 2016 (302-1 Energy consumption within the organization)
 - GRI 303 - Water 2018 (303-3 Water withdrawal, 303-4 Water discharge and 303-5 Water consumption)

- GRI 305 - Emissions 2016 (305-1 Direct (Scope 1) GHG emissions and 305-2 Energy indirect (Scope 2) GHG emissions)
- GRI 306 - Waste 2020 (306-3 Waste generated, 306-4 Waste diverted from disposal and 306-5 Waste directed to disposal)
- GRI 404 – Training and Education 2016 (404-1 – Average hours of training per year per employee)

ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with relevant employees, superintendents, sustainability committee members and senior management; documentation and record review and validation with external bodies and/or stakeholders where relevant.

LIMITATIONS AND MITIGATION

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from AIS, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with QMS, EMS, OHSMS, ISO 26000, ISO 20121, ISO 50001, SA8000, CFP, WFP, GHG Verification and GHG Validation Lead Auditors and experience on the SRA Assurance service provisions.

FINDINGS AND CONCLUSIONS

ASSURANCE/VERIFICATION OPINION

On the basis of the methodology described and the verification work performed, nothing has come to our attention that causes us to believe that the specified performance information included in the scope of assurance is not fairly stated and has not been prepared, in all material respects, in accordance with the reporting criteria.

The assurance team is of the opinion that the Report can be used by the Reporting Organisation's Stakeholders. In our opinion, the contents of the report meet the requirements of GRI Standards in according with Reference Option.

GRI Standard

The report, AIS's Sustainability Report of 2022, is adequately in line with the GRI Standards in reference to GRI. The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics and boundaries, and stakeholder engagement, and manage the topic-related risks and opportunities, where relevant quantitative information was assessed for its accuracy and completeness to support the comparability of the data reported. The efficiency of communication and the identification of material issues are substantially increased during the whole reporting preparation process.

We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting.

QUALITY AND RELIABILITY OF SPECIFIED PERFORMANCE INFORMATION

The material topics and their boundaries are properly defined in reference with GRI's Reporting Principles for Defining Report Content. In year 2022. For future reporting, more descriptions of AIS Group and subsidiaries' involvement with impact for each material issue and mitigation efforts should be disclosed. The mechanism for internal audit on the data performance should be established to maintain the system in place

Signed:

For and on behalf of SGS (Thailand) Limited



Montree Tangtermsirikul

General Manager

100 Nanglinchee Road Chongnonsee Yannawa, Bangkok 10120 Thailand

17 February 2023

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