Business Sustainability Development

Sustainability management policy and targets

Amidst rapid changes in technology and the consumer market, we have had to face many challenges as well as opportunities, such as competition from new businesses that threaten revenue from traditional telecommunications services, increased concern over cybersecurity and data privacy, digital literacy and even accelerating climate change, which has made us more acutely aware of our energy usage and waste disposal. These matters have only grown in importance due to concerns and mandates of government, business partners, consumers and our investors. Today, sustainable business is no longer a choice, but a necessary action for a major organization such as ourselves, that impacts the economy, society and environment.

AIS has outlined a clear path towards sustainable business to ensure effective action. Considering both risks and opportunities, we synthesized the “7 Strategies for Sustainable Development”, accounting for the economy, society and environment. Our 7 strategies to business sustainability includes Digital Innovation, Data Privacy and Cyber Security, Human Resources Development, Social Inclusion, Cyber Wellness and Online Safety, Emissions and Waste.

AIS is devoted and determined to conducting its business with sustainability in all dimensions, which has led to it being chosen for listing on both domestic and international sustainability indexes such as in both the Dow Jones’ World Index and Emerging Market Index for 2019 in the telecommunications industry category, the FTSE 4 Good Emerging Index, the SET Thailand Investment Index and on ESG100 as a registered company showing excellence in environmental, social and governance work for a fifth year as decided by Thaipat Institute.

The Sustainable Development Committee is responsible for defining policy, strategy, operating targets related to Sustainable business development, as well as ensuring that the implementation of sustainability development policy and strategy meets the target. The committee reports to the Board of Directors quarterly. (More details on One report page 163 The Scope of Authority and Duties of the Board of Directors and Board-committees)

AIS promises to continue to work toward business, social and environmental value in equal measure and in accordance with Good Governance and to support the United Nations Sustainable Development Goals to provide a foundation from which the nation can grow and all of Thai society can benefit, towards shared sustainable growth. For more details of AIS’s sustainable business please visit the full version of sustainability report 2020 at the company website : https://sustainability.ais.co.th/storage/sustainability-report/2020/20210225-advanc-srd-2020-en.pdf

Management of impact to stakeholders in the business value chain

Business Value Chain

Sourcing	Operations	Products and service development and distribution channels	After sales service	Supporting activities
• Provision of network equipment, and frequency spectrum for mobile and fixed broadband internet services • Provision of standard quality and environmentally friendly network equipment by selecting vendors with advanced technology development, adherence to regulations, and consideration towards human rights, environmental and operational health & safety • Provision of safety tested communication equipment e.g. smart phones, tablets and routers of differing prices for wide customer accessibility • Acquiring of licenses from the National Broadcasting and Telecommunications Commission (NBTC)	• Telecommunication Network, IT and operations systems management • Locating base stations by evaluating community and environmental impacts, constructing base stations resilient to natural threats and climate change including flooding and storms for service continuity • Expansion of network for nationwide coverage, maintaining quality and safety standards while limiting environmental impacts by focusing on energy efficiency and increasing proportion of alternative energy through installation of solar cells • Focusing on cyber security and customer data protection under policies and frameworks that conforms to the ISO27001 standard for managing and safeguarding information security, 24x7 threat monitoring and response • Management of e-waste from business operations by selecting partners authorized to properly dispose of electronic waste	• R&D of a diverse range of digital products and services to support business growth, economic development and the enhancement of society and quality of life • Collaboration with partners in a variety of industries for the development of products and services responsive to life and business in the digital era • Maintenance of standards and safety for fixed broadband internet installation by contractors • Management of online and offline sales and distribution channels for customer accessibility extending to monitoring and quality control of distributors and maintaining a fair remuneration structure • Marketing and provision of transparent and complete information on products and services, fair pricing	• After sales service for customer satisfaction via varied channels, including AIS Shop, Call Center and social media • Customer personal data protection using policies and procedures that regulate access and use of customer data, provision of a channel for reports and complaints • Retaining of customer relations by customers segmentation according to usage and demands, providing privileges, to maintain loyalty • Responsibility for products and services, promoting cyber wellness and proper electronic waste disposal	• Fair and transparent human resource management with an emphasis on employee development in line with the company vision, appropriate remuneration and benefits, creation of a safe and hygienic work environment • Trustworthy accounting that is accurate and transparent and that is aimed at creating financial stability conducive to business growth • Good corporate governance and ethical business conduct

Analysis of stakeholders in the business value chain

Stakeholder group	Channel and frequency	Expectations	Our actions
Community and society	• Community relations agencies (Daily) • Complaint centers (Daily)	• Quality telecommunications services covering local communities, modern technology for the betterment of community life through E-Commerce, enhance agriculture, etc. • Health safety from magnetic fields generated by signal from network towers • General support and aid, natural disaster response, emergency aid etc.	• A mobile network covering 98 percent of the population, a broadband network covering over 7 million households in more than 50 provinces and an array of packages at different price points • Support for community quality of life, adding value to technological access via the Aor Sor Mor health volunteer program combating pandemics, support for digital intelligence and skills to enhance online marketing by community enterprises, promotion of online safety and appropriate usage • Provision of knowledge and understanding to communities and their leaders on safety from magnetic fields generated by signal towers, a system for fielding complaints and demands and addressing concerns • Support for communities during times of disaster i.e. floods, cold snaps and for occasions i.e. Children's Day, local holidays, etc.
Customers	• AIS Call Center is the core channel for evaluating customer satisfaction and utilizes the IVR automated chatbot to field feedback, suggestions and complaints (Daily) • Contact center at 08-0000-9263 (Daily)	• Maximum personal data security • Network and service quality, ease of contact and access to service via varied channels • Personnel and service system are capable, able to provide accurate information and guidance, act on claims and follow up until completion of service within set period, keep customers updated on progress	• Formation of a risk assessment and management committee that sets strategies a nd policies for cyber security and data privacy utilizing a cyber security committee and data protection division, training for personnel on data protection and regulation of access. Transparent safety protocols and punishments. • Procedure for regular monitoring and measuring of signal strength, use of IVR: Interactive Voice Response to reduce customer wait times and facilitate voice commands, automated responses and product promotion, service available via Email and social networks • Use of E-Learning for around the clock training of personnel • Enhancement to work processes reducing processing time, allowing customers to view status of processes via automated system

Analysis of stakeholders in the business value chain (Continued)

Stakeholder group	Channel and frequency	Expectations	Our actions
Corporate customers	• AIS Call Center is the core channel for evaluating customer satisfaction and utilizes the IVR automated chatbot to field feedback, suggestions and complaints (Daily) • Contact center at 08-0000-9263 (Daily)	• Quality of products and services i.e. network coverage, stability and speed of data connections, varied business solutions, after sales service, efficient resolution of problems • Varied services meeting different client demands, responsiveness to New Normal, ability to enhance business efficacy and facilitate adaptation to changing contexts • Strict and standards meeting data privacy protection	• Constant development of the 4G network, regular evaluation of signal integrity, introduction of 5G technology in 2020, development of fiber internet for high speed service • Establishment of the 24x7 Cyber Security Operation Center (CSOC). Approval under the ISO27001 Information Security Management System (ISMS), Payment Card Industry Data Security Standard (PCI DSS) and more. • Development of new cloud, ICT, cyber security and IoT services in response to demands for greater business flexibility and security • Worthwhile promotions and applications, solutions and equipment for New Normal business operation, privileges for corporate clients including product and service discounts, free trials and cost reductions under the Biz Up program • Development of digital channels supporting faster, more efficient sales and customer service including online product and service sales, billing, electronic receipts, payment and appointing AIS to carry out withholding tax deduction online

Analysis of stakeholders in the business value chain (Continued)

Stakeholder group	Channel and frequency	Expectations	Our actions
Partners	• Trade Partner satisfaction evaluation (1 time per year) • Representatives of personnel who contact customers (Daily) • Distribution channel applications and websites (Daily) • Annual meeting with trade partners (1-2 times per year) • Interviews (1 time per year)	• Expand alongside AIS to reach greater array of customers • Fair business dealings by AIS • Increased connection to society by AIS	• Support for partners to enhance their ability to distribute products using broadband internet as to increase their revenue • Creation of standards for effective cooperation, a fair and just remuneration structure • Development of a platform for more efficient connection between AIS and its partners
Shareholders and investors	• Shareholder meeting (1 time per year) • Operational returns announcements such as analyst conferences, domestic and international road shows, SET opportunity day (5-6 times per quarter) • Investor relations website, Email investor@ais.co.th, Line@ contact phone number (Daily) • Operation visits (1 time per year)	• Sustainable business growth • Consistent dividend payments • Good corporate governance, transparency and trustworthiness • Equal access to information	• Maintaining of competitiveness in the mobile phone business, expansion into new services to spur growth such as digital cloud services, insurance, etc. • Policy to payout 70 percent of dividends two times a year • Thai Institute of Directors Corporate Governance Report score in the “Excellent” range • Regular release of quarterly performance via all channels, timely and comprehensive disclosure of key data via appropriate channels to investors/shareholders

The 7 Strategies for Sustainable Development

1. Digital Innovation

Innovate digital products & services to improve the quality of lives and promote businesses in Thailand

3. Human Capital Development

Drive AIS' human capital to pursue new strategic growth area focusing on digital business

6. Emissions

Reducing GHG emissions and utilize renewable energy in most possible extent in our operation

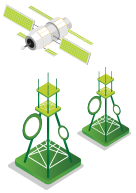
Economy

Society

Environment

2. Data Privacy & Cyber Security

Ensure effective data privacy and cyber security to enhance customer value while ensuring customer trust



4. Social Inclusion

Leverage our digital infrastructure & solutions to uplift community well-being & reduce the digital divide

5. Cyber Wellness

Establish trusted brand in cyber wellness & online safety to build healthy online space

7. Waste

Reduce & recycle waste from operation as well as encourage customers to dispose e-waste properly

Target 2023

Economy

1. Digital Innovation

- Generate 150 million baht in revenue from digital innovations

2. Data Privacy & Cyber Security

- Operate in adherence to applicable laws and regulations including the Cyber Security Act and Personal Data Protection Act.
- Continually enhance cyber security capabilities both in terms of technology and personnel readiness to protect basic infrastructure, systems and new services. Bolster protection and technological processes to improve safety.
- Enhance cyber security efficacy and capability and personal data protection using Machine Learning and Artificial Intelligence to augment monitoring, analysis and threat assessment, use Automation to speed up and streamline processes.
- Become a leading Cyber Security Operation Center for corporate clients. Bolster service in terms of personnel, procedures and technology. Develop capacity to provide advice to provide the Data Protection Office (DPO) as a service.
- Develop and improve technology, cyber security and personal data privacy policies and standards, including revamping CSL directions for synchronicity with AIS

Society

3. Human Capital Development

- Acquire enough staff with new abilities in digital technology to support business growth
- 85% of talent pool is retained
- 85% of Talent on Critical Role staff undergo new Ability training in digital technology
- Employee Engagement Survey participation rate above 85% and Employee Engagement Index above 4.10 (82%)

4. Social Inclusion

- Improve the wellbeing of 700,000 people through our digital platform and collaboration

5. Cyber wellness

- Become Thailand's number one telecommunications brand, trusted for cyber wellness and online safety.
- Promote cyber wellness and online safety at 1,500 schools and protect 290,000 Thai users from cyber threats.

Environment

6. Emissions

- 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 compared to 0.06% in 2018

7. Waste

- Collect 360,000 units of obsolete mobile and related electronic waste for proper recycling
- Reduce non-recyclable E-waste from AIS services and operations from 5% of total waste in 2018 to 3%
- To be Thailand's No.1 telecommunication service brand that is also trusted for its environmental responsibility in terms of electronic waste, promoting awareness among the Thai people about proper recycling of E-Waste.

Economics Aspect

Digital Innovation

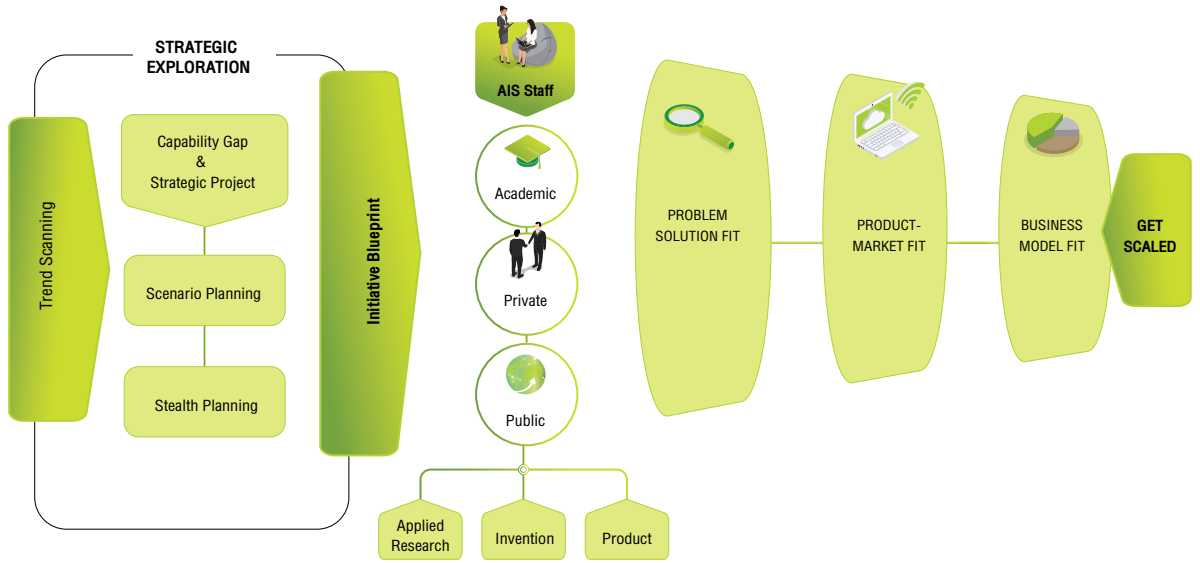
Innovate digital products & services to improve the quality of lives and promote businesses in Thailand

Digital technology has come to be a catalyst for the rapid change of the world. New businesses have sprung from using technology that better respond to the changes in demand of consumers in their daily lives and from other business. Challenges also result from global companies carrying out research and technological development these matters pose opportunities for AIS to develop digital technologies that can drive its growth and competitiveness while generating value for customers and society.This requires that AIS adapt its business approach to stay in step with digital age consumers, take part in developing the economy and society, reduce its impact on the environment to a minimum and offer products, services and solutions that extend to a variety of industries.

AIS is resolute in its mission to create innovations that deliver products and services that better the daily lives of the Thai people and enhance their businesses. AIS seeks to become a leader in innovations for sustainability by enhancing its adaptability and formed an Innovation Development Department tasked with supporting the company's innovation leadership both internally and through collaboration with partners. The department also supports doing business in the digital era and growing new sources of revenue that coincide with changing trends both current and to come in the future in all markets relevant to AIS and beyond. The department produces a report for the Chief Information Officer (CIO) at least once a month. The CIO set strategies and policies as well as manage information technology in the short and long term to better the organization's capabilities and competitiveness in a digital world.

AIS Open Innovation Framework Framework so that it may serve as a guideline for efficiently supporting the development of innovations based both in the company's own internal knowledge and knowledge from outside the organization towards its business goals. The framework consists of the following:

AIS Open Innovation Framework



AIS is determined to grow alongside its partners and thus engages in collaborations with academic and state agencies to exchange knowledge and technology as well as jointly development solutions that go from the prototyping phase to market. AIS allots funding for research and development in support of growing the ICT industry ecosystem both in the medium and long term. In 2020, AIS invested over 162 Baht for research and development of innovations with an emphasis on IoT, Smart Industries and Microservice systems.

2020 Progress

1. **Supporting Internal Innovation through AIS InnoJUMP** which promotes staff to adopt an innovative mindset and drives innovation by providing opportunities to experiment and create developments that may lead to new business ventures for the company. The objective of the program is to develop new products and services for market. AIS organized "INNOJUMP Competition 2020", receiving over 290 submissions from staff. The shortlisted teams are offered funding for testing and experimentation to develop projects until market viable.

2. **Collaboration with Partners to Drive Innovation**

- **5G Testing to Create Opportunities and Enhance the Thai Industrial Sector** AIS worked with partners to develop and trial 5G technology, testing use cases. For example, AIS took part in developing a forklift remotely controlled between Bangkok and Saraburi via a 5G network, working with SCG and Prince of Songkla University. Also, AIS tested the application of 5G technology to logistics, in particular to allowing remote container crane operation at Hutchison Port of Laem Chabang Port.

- **Projects from Joint Research and Development with Academic Offices and Educational Institutions e.g. 1) IoT satellite** AIS worked with University of Tokyo to enhance IoT technology, installing IoT equipment in remote forest areas to monitor against forest fires and notify relevant agencies. In 2020, AIS installed equipment in 3 locations and plans to add another 20 locations in 2021.

- **AIS IoT Alliance Program (AIAP)** Aimed at promoting knowledge and skills from a range of industries, public and private organizations, equipment manufacturers and software developers to bring about different IoT solutions able to address the needs of different industries and enhance the potential of the country. AIAP membership rose to 1,900 members. In 2020, AIS acquired partners including Koh Samui Municipal Office for the development of Smart Lighting for more efficient lighting management and resource conservation after being installed in 5,000 locations across Koh Samui.

- **AIS Playground** AIS established a space to serve as a central incubator of innovation, providing basic infrastructure and technology to university students, developers and startup entrepreneurs looking to test their prototypes and connect to AIS's Application Program Interfaces (API) to gain access to actual commercial services and experts who can provide them with guidance and technical know-how. In 2020, 638 groups joined in testing prototypes and sought expert guidance via AIS Playground with over 116 connecting their products and services with AIS for support toward going to market. In 2020, AIS also staged 5 workshops and courses at its AIS Playgrounds, attended by more than 400 people with the aim of enhancing creators and business operators.

Actions against Covid-19

AIS ROBOTIC LAB AIS created Thailand's first 5G lab robot for the assistance of physicians. Connected to an operating system on a 5G network, the robot was an achievement of the AIS NEXT team's Innovation unit, which designed the 5G Robot Platform by combining technologies, networks and medical care to create the 5G Robot for Care, a tool able to adapt to the unique requirements of different hospitals.

Cyber security and Customer Privacy

Ensure effective data privacy and cyber security to enhance customer value while ensuring customer trust

AIS, as a digital service provider, manages massive amounts of data, both from its operations and from its customers, and is compelled to work in adherence to laws to protect against the leakage of personal data as well as to reduce risks to its finances and reputation. Moreover, AIS sees an opportunity in creating and developing complete cyber security services, which would address its operational requirements and enhance its capability to service clients. Thus, beyond carrying out its own cyber security and personal data protection, AIS is seeking to build a body of knowledge on the two matters and relevant new technologies such as the National Blockchain Hybrid Cloud, IOT and financial and insurance mechanisms. AIS also place value on building staff capability and knowledge to be ready for technology advancement.

AIS manages and implements policies, procedures and administrative systems for all offices corporate-wide to secure trust from its customers that it operates with transparency in its information and personal data protection and includes that trust in its risk management handled by the Audit and Risk Management Committee. At the administrative level, policies and strategies for cyber security and personal data protection are decided by the Cyber Security Committee and Data Protection Office, which must report to the Board of Directors and Audit and Risk Committee on a quarterly basis. AIS also enforces cyber security policies and data privacy policies for all its offices, extending to related external organizations. The Company carries out regular systematic internal audits to ensure its management of data privacy and cyber security and related operations adhere to its policies, standards and frameworks.

Ensuring AIS can continue operating in crisis situations, the Company established a Crisis Management Committee comprised of C suite executives and Heads of Business Units, which reports directly to the President and CEO. The committee is responsible for and has decision-making authority during times of crisis from response to damage mitigation to following up to ensure continuity of operations as to reduce impact on customers and the company's reputation. The committee also decides on remedial measures for customers and manages the Crisis Communication Team to communicate and publicize necessary information inside and outside the Company as well as for communication with government agencies and related organizations in an accurate and timely manner.

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 a commitment to legal compliance, AIS undertakes the following actions and processes to enhance its data privacy:

- **Indicate Customer Data Privacy Protection Guideline** for users to inform them of its regulations and practices concerning personal data protection
- **Data Life Cycle Management** in the interest of protecting personal data
- **Limiting access to sensitive information** and applying a range of data protection techniques covering storage, utilization and transmission to safeguard against personal data leaks or breaches.
- **Incorporating the Privacy by Design and Privacy by Default** principles into its services and products as necessary.
- **Utilizing the Data Protection Impact Assessment: DPIA** to identify and mitigate data privacy risks in new services.
  - Evaluate risks in daily operations to protect against leaks and implement measures to mitigate such risks.
  - Started implementing a Standard Contractual Clause: SCC both internally and with partners in need of access to customer data protecting against the forwarding or transmission of private customer data.
  - Started keeping a Record of Processing for private data both internally and with partners to confidently utilize, process and disclose private data and to allow for the tracking and risk assessment of private data processing.
- **Setting specifications for the data flow process and communicates** with relevant agencies to ensure compliance with said specifications.

- **Establishing a system and enhancement of processes to customer requests** as to comply with the Personal Data Protection Act within the legal timeframe

- **Data Request Management**
  The Company provides customer usage data to government agencies in accordance with legal requirements and upon request by legal authorities.

  In 2020, AIS reviewed and improved its data privacy protection policy to display its personal data storage, which is done purposefully, within limitations and in compliance with the law and fairness with consideration towards the human rights of data subjects within legal parameters.

  Operationally, AIS designed a Data Protection Impact Assessment (DPIA) to decipher risks to the Company's personal data protection measures. The assessment was designed to result in a document explaining processing of personal data, calculate probabilities and aid in the management of risks to personal rights and freedoms resulting from the processing of personal data, leading to measures protecting against such risks.

- **Promoting awareness, knowledge and understanding on customer data protection to all personnel and partners** in the interest of operations that adhere to policies, laws and relevant new regulations

- **Setting a framework for systematic reviewing of personal data protection** in the interest of customer confidence in Company operations, the Internal Audit Team plans comprehensive and systematic reviews throughout the year with frameworks based on principles and requirements from the Personal Data Protection Act, approaches for personal data protection provided by government agencies, universities and expert organizations and business operations, with the focus on activities with risks and that involve personal data.

- **AIS maintains an Incident Center that serves as a central office for responding to cyberthreats arising from leakages or breaches related to personal data.**

Cyber Security

AIS has the infrastructure, systems and protocols to manage, test, and monitor cyber security carried out by its Cyber security and Information Resilience team, a dedicated team responsible for cyber security and building awareness of cyber security within the organization. AIS is committed to protecting its systems from cyber threats and regularly enhances its systems and infrastructure to meet data protection standards, performs security evaluations and tests ahead of launching systems and applications and has software developers perform self-evaluations during their processes. The Company uses automation to enhance the efficacy of its processes so that they are more capable and quick to respond to cyber threats and monitors against threats 24x7 using a central notification system that allows for timely response and the ability to lockdown equipment. The Security Information and Event Management (SIEM) system empowers these capabilities in real-time and works in conjunction with User Entity Behavior Analysis (UEBA), which enhances detection of irregular incidences and the evaluation of cyber threats. Cyber security policies and practices are regularly prescribed and improved to maintain alignment with international practices and relevant regulations.

- **Cyber security guidelines and frameworks**
  - **o AIS utilizes the Cyber Security Framework by the US National Institute of Standards and Technology (NIST) as a guideline for designing its cyber security strategies and process,** which includes the following steps, Identify, Protect, Detect, Respond, and Recover. AIS also plans to develop further systems and processes based on other relevant standards and protocols to enhance the efficacy of its cyber security and privacy protection.

  - **o For responding to cyberthreats and its escalation process, AIS applies the Cyber Incident Response Framework by the National Institute of Standards and Technology (NIST) to its daily operations.**

- **Work-from-Home** In situations where operation from AIS offices is not possible, the Company has provided access channels through which personnel may perform their duties effectively with the emphasis being on security through monitoring and control of information technology systems being utilized remotely and the implementation of policies and conditions

Further information on
1) AIS personal data protection policy
2) cyber security policy
Please see "Related policies" at http://sustainability.ais.co.th/th/sustainability-priorities/data-privacy-cyber-security

2020 Progress

AIS achieved its targets of elevating cyber security personal data protection, with result in 2020 as follows:

1.Compliance with laws and regulations

- **Reviewed frameworks and policies for alignment with laws and regulations to ensure company operations and policies comply with the law**

- **Appointed a Critical Information Infrastructure Officer (CIIO)** The Critical Information Infrastructure (CII) office was established in accordance with the Cyber Security Act with approval from the Company's Information Security Committee.

- **Supported cooperation between the state and private sector on cyber security and data privacy in the following ways:**
  - o Cooperated with administrative agencies, state offices and internet and telecommunications services providers to establish the Thai Telecommunication Computer Emergency Response Team (TTC-CERT) to respond to cyberthreats against the telecommunications industry.
  - o AIS worked alongside state agencies in support of drafting the Cyber Security Act while internally promoting an understanding of the role of a Critical Information Infrastructure (CII) organization according to the Cyber Security Act to its executives and managerial level staff involved in operational planning. All attended talks by domestic and international experts in the cyber security technology and legal fields.
  - o **Improved procedures and systems for electronic meetings to meet international standards and adhere to the emergency decree on meetings held via electronic media of 2020** for shareholder meetings, Board of Director meetings and other important company meetings.

2.Personnel knowledge, skill and conscience development

- For the enhancement of AIS cyber security and data privacy capabilities, relevant staff underwent over 23 different training courses and certificate programs encompassing Ethical Hacking and Penetration Testing, to allow them to test the security of systems by seeking out loopholes and weaknesses, Incident Management and Forensics, to allow them to handle and manage cyberthreats appropriately and promptly as well as to inspect for digital forensic evidence and Cyber security and Data Privacy.

- Continual cyber security in mind promotion for all AIS personnel nationwide on a monthly basis to ensure proper and correct practices online and offline.

- Cyber drills A total two drills were undertaken in 2020, 1) Application of the Business Continuity Plan (BCP) in response to a cyber threat crisis to prepare personnel to handle cyber threats effectively with the 2020 drill scenario being a Ransomware Tabletop Exercise 2) A Phishing Simulation testing the cyber threat knowledge of all Company and outsourced personnel.

3.Technology and operational procedure development

- **Procedure improvement**
  - o Expanded usage of the Data Classification and Handling Framework, which determines data sensitivity, to all core offices handling the personal data of customers and operations systems in 2020.
  - o Reviewed and improved cyber threat response in line with the NIST Cybersecurity Framework and integrated the process into the Company Crisis Response Plan. Executives and related persons were provided training and responded to demonstration cyber security scenarios. For 2020, AIS compiled the AIS Security Playbook for application in crisis communication and response training.
  - o Employed the MITRE Attack Framework, a base of knowledge accessible globally with information on strategies, formats and techniques used by system and database attackers, using its ATT & CK knowledge to form a basis for collaboration between cyber security operatives when reporting incidents and to compile a manual on cyber threat preparedness and response directing cyber security, response to undesired incidents, classification of protected items and identification of loopholes in the Company's cyber security.
  - o Reviewed and improved cyber security to encompass Work-from-Home and so that company operations are secured and aligned with requirements of the current situation such as use of Centralized Remote System (CRS) Mobile Devices, the Teleworking and Bring Your Own Device Standard (BYOD Standard) and the Access Control and Identity Management standard.

- Set regulations for entry and exit to the cyber security division in accordance with the ISO27001 standard.
- Improved and enhanced cyber security procedures by applying automation to threat detection and response, a core function of Security Orchestration, Automation and Response (SOAR) equipment.
- Improved cyber threat reporting using the TIMS-trouble ticket system, a complete management solution.
- Developed the Cloud Security Standard to encompass Private Cloud and Public Cloud usage and for alignment with company cyber security policies and international standards.

- **Improvement of the cyber security policy** for greater clarity, comprehensiveness and to encompass partners and external personnel in response to developments in the digital age and the New Normal such as mobile offices.

- **Continual data protection enhancement** In 2020, AIS improved its network security system in terms of protection and monitoring, adopting new technologies and upgrading and developing operating procedures, data collection and monitoring, notification and analysis of data to identify events with the potential for irregularity, developing Advanced Persistent Threat detection using Threat Intelligence drawing on threat data from various sources to fortify AIS. Automation was also applied to operations.

- **The 24 x 7 cyber security operation center (CSOC** After establishing the CSOC with modern detection tools and training personnel to be able to respond to threats effectively 24-hours a day in the previous year, AIS in 2020 expanded the center's services to monitoring against threats to the systems and information technology of its corporate clients. Towards elevating its information protection management systems to meet international standards, the company expanded the boundaries of its ISO 27001 certification to encompass services by the CSOC.

- **Technology, knowledge and experience exchanges with world leading telecommunications service providers** Exchanges with companies such as Singtel OPTUS and Globe allowed for model guidelines and practices for the management of data in an efficient and low-risk manner to be set, allowing for data protection and timely response to cyber threats.

- **Auditing** - In 2020, internal and independent auditors reviewed the Company's information system and customer data protections, evaluating its general information system controls, data security awareness programs, cyber threat response and cloud system operations and security. Overall, AIS did not discover any cyber threats or violations of personal data or loss of data resulting in civil suits or legal fines in 2020.

Social Aspect

Human Capital Development

Drive AIS' human capital to pursue new strategic growth area focusing on digital business

Challenges & Opportunities

Amidst changes in digital technology, AIS has had to transition into being a fully functioning digital technology service provider to keep up with varying customer demands and to maintain its leadership in the telecommunications industry. The challenge for AIS has been enhancing its capabilities and preparing itself to progress in-step with a rapidly changing business frontier.

AIS devotes great importance to human capital management. Its Chief Executive Officer (CEO) oversees operational policies enacted under the supervision of the Chief Human Resource Officer (CHRO), who interprets such policies into strategies and work plans, making sure to comply with relevant laws and with consideration to human rights. Focus is placed on providing opportunities for employees to fully showcase their abilities and potential for driving the organization forward towards sustainability while fostering an organizational culture aligned 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 objectives are clearly communicated. Details of the approach are as follow:

AIS applies sustainable development goals to its human capital management in the following ways:

1. Talent Attraction, Retention and Succession Plan

1.1 Fair Employment

AIS adheres to fair employment principles and complying with all applicable laws as well as sees 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 and providing funds to the Disabled Persons Support and Quality of Life Development Fund, seeking to have disabled employees work in the communities most convenient to them and for them to acquire new abilities in the digital technology industry.

1.2 New Ability

AIS maintains an approach for managing distinctly talented employees within the organization. Such individuals are sought out, provided with appropriate positions and duties and developed and fostered so that they may be retained in the company.

1.3 Digital Skills Hiring

AIS works with leading universities both domestic and abroad to organize activities that introduce itself and open the opportunity for students with functional skills for the digital age such as block chain, AI and data analytics to join the company and enhance its digital growth capability sustainably.

1.4 Career Development

AIS supports its employees in contributing to its growth plan and developing their career capabilities. Employees are provided with data and advice from their superiors so that they may plan their careers and support their own sustainable development.

1.5 Employee Retention

AIS maintains practices to retain and encourage skilled employees to remain and grow alongside the organization, including providing incentives both monetary and non-monetary and strong benefits to employees at levels such as health insurance and a standard meeting healthcare center.

1.6 Succession Plan

Ensuring continual operation, 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 an emphasis on leadership capability and readiness to assume the role.

2. Lifelong Learning

AIS 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 via both online and offline courses, AIS seeks to unlock the creativity of its employees and open them to constant learning and betterment towards greater efficiency.

2.1 Employee Development and Training

AIS supplies necessary courses to employees via the Learn-Di and Read-Di applications, allowing them to engage in learning from anywhere and at anytime. The applications provide courses that cover digital technology relevant to operations, news and updates and serve as an online library for research and study.

2.2 Individual Development Plans

Individual Development Plans were drafted in collaboration with the superiors of each employee. A Competency Model was also created based on collaborative analysis between the employee, their superior and the human resources team in order to lay a foundation towards career development.

2.3 Evaluating the effectiveness of training

AIS employed the Kirkpatrick Model, which measures results in 5 levels where level 1 measures satisfaction, level 2 measures behavioral changes post training until level 5 measures return on investment.

3. Employee Well-Being

The AIS human capital management policy encompasses the physical and mental health of employees both for the sake of employees themselves and their efficient work. The policy also promotes a positive environment within the organization. The Occupational Safety and Health Committee was formed to promote and support safety and health measures, enforce relevant legal regulations and policies and act as an administrative body for safety and

health with an emphasis on promoting awareness and supervising related operations within the company. The committee's principle responsibilities are as follows:

- Enacting a strategy promoting good health among employees
- Reducing stress among employees
- Maintaining employee medical information privacy
- Promoting safe work environments
- Maintaining safety for contractors and sub-contractors
- Organizing occupational safety and health training courses
- Assessing occupational safety and health risks

4. Performance Appraisal

AIS devotes importance to performance evaluation and fair remuneration, undertaking performance appraisals 2 times a year, divided between:

- Appraisal of achievement of objectives and targets jointly set by superiors and subordinates.
- Appraisal of work behavior based on corporate culture.

Appraisal results are used in considering remuneration and are communicated to employees for the planning of mutual sustainable development.

5. Remuneration and Benefits

5.1 Remuneration

Remuneration for employees is compared to in and out of industry rates with an emphasis on equality, relation to company returns and relevance to duties. AIS employs an external consultancy firm to design its crucial human resource systems, which includes improving remuneration calculation for great clarity, accuracy and fairness to keep up with changing contexts in the digital era. The firm also carries out surveys of pay and benefits in the labor market for comparison to AIS and monitors changes to criteria, benefits management and remuneration formats used by other industry leading companies for analysis and development of AIS remuneration in the interest appropriacy, enhancement of talent retention and attraction of future employees.

5.2 Employee Benefits

AIS provides a range of benefits to its employees such as marriage support funding, educational funding for employee children that meet performance criteria, assistance funds for accident victims, patient visitation funding, funeral services assistance funding, natural disaster assistance funding, loyalty rewards, health checkups, medical care, life insurance, etc.

6. Diversity and Inclusion

AIS devotes importance to diversity and equality and provides employment opportunities to people of all ethnicities, beliefs, genders and ages while maintaining Zero Tolerance for prejudice and a Non-Discrimination Practice for all employees. In its business operations, AIS sees diversity as beneficial, as staff with differing experiences and skills are able to complement one another, and makes sure to create opportunities for exchanges of ideas to enhance its innovations, operations and service capability, using Design Thinking to highlight the strengths of its employees.

7. Application of Technology to Human Capital Development

AIS uses digital technology to enhance the efficacy of its human capital development. The company developed an application tailored to the various uses of its employees and that is accessible at all times from any location. Through the application, AIS staff can view their personal information and privileges, manage scheduling, seek various authorizations and follow up on company news and announcements in a convenient and flexible manner.

2020 Progress

The past year came with the challenge of operating amidst the COVID-19 crisis. The human resources department found it necessary to apply technological solutions to finding potential employees, publicizing positions and receiving applications via QR Code and holding employment interviews via video conference to avoid contact. At the same time, AIS supported all of its personnel to undergo training to enhance their ability to respond to challenges and competition, emphasizing new skills needed for modern tasks such as Design Thinking and Data Analytics while also encouraging employees to update their existing skills for the modern context such as by utilizing digital systems to automatically carry out tasks such as filing travel reports. Knowledge of the digital realm was emphasized in light of the company's evolution.

Talent Attraction, Retention and Succession Plan

In 2020, AIS made preparations to transition itself and its employees into the 5G era. While looking to retain quality personnel into the long term, the company made plans to find new staff, using technology for searching as well as interviewing potential recruits. Activities were organized in cooperation with 18 universities to introduce AIS and its opportunities. Attracting 2,583 applicants, AIS offered post-graduation positions to the most ideal candidates and plotted their career growth. The "AIS Career Framework" was also created to serve as a tool for guiding recruits and their superiors along a clear growth plan and helping to identify those with a potential for future growth in the company.

Lifelong Learning

In 2020, AIS Academy launched an online learning platform for the Thai people dubbed "LearnDi for Thais" aimed at allowing all people in the country to access knowledge at any time from anywhere, elevating and modernizing learning in Thailand. LearnDi for Thais encompasses business, technological and financial knowledge among other topics and is intended by AIS to extend the capabilities of its employees to wider society and to become a sustainable digital learning platform.

AIS supports its employees in enhancing their abilities for greater work efficacy and provides courses based on its human capital development plan and operations year-round

AIS Academy for Thais

AIS is intent on playing a part in bettering the Thai people and devoted its resources to AIS Academy for Thais: Jump Thailand, a special activity that took place on 1 October, 2020 as part of the "Thinking for Others Mission". The aim of the event was to provide knowledge and support sustainable innovation through enhancement of education and the creation of career opportunities for Thais in need. The event was divided into the following three activities:

1. **Jump to Innovation** Selection of an individual or group with an innovation for better life in Thailand to take part in JUMP Thailand, so that the innovation can be developed for practical application in 2021.
2. **Jump over the Challenge** Seeing the need for career opportunities amidst the COVID-19 crisis, AIS created the "Aun Jai Career Development" project in 2020, allowing interested people to undertake work training and providing them a chance to earn income in spite of economic contraction.
3. **Jump with EdTech** AIS developed the "LearnDi for Thais" platform to facilitate lifelong learning, working with public and private educational agencies both domestic and foreign to enhance the capacities of the Thai people.

Employee Well-Being

Throughout 2020, the human resources department at AIS worked to prevent the spread of COVID-19 by escalating occupational safety and health measures across the company and altering strategies and operations based on safety concerns. Human resources in the company were accordingly developed in other aspects as follows:

COVID-19 Prevention Measures

- **COVID-19 Alerts and Reporting:** AIS created a procedure for issuing alerts and reports on the COVID-19 situation encompassing infections among its own employees. Staff who are diagnosed with COVID-19 are obligated to report the situation to their direct superior and the company's Emergency Report Center as to notify executives and relevant units and trigger set measures, which include investigation of close contacts, closure to risk areas for disinfection, notification of the Department of Disease Control and patient monitoring.

- **Implementation of Urgent COVID-19 Prevention Measures**

- Employees were asked to avoid international travel. Those with a necessity for travel abroad were required to submit a request to a high level executive and have their plan considered on a case-by-case basis.
- Employees returning from countries deemed at-risk were required to enter into a 14-day quarantine during which any necessary work would be done from home.
- Personnel from foreign business partners arriving from countries with COVID-19 outbreaks were not allowed onto company premises unless a formal notification including travel history and the results of a medical screening were submitted and the visit was approved by an executive.

- **Office Congestion Reduction Measures**

AIS implemented a Business Continuity Plan (BCP) in response to COVID-19, dividing employees into a Team A and Team B and rotating the teams into offices to reduce congestion from May of 2020. Staff not present in offices were allowed to work from home while those on-site had to adhere to social distancing measures in areas such as conference rooms, libraries, canteens and elevators.

- **Technological Support**

AIS applied technological support to its operations in response to COVID-19. An online meeting system was launched to facilitate conferencing, notifications to staff were made via online channels and all personnel were allowed to submit work and ideas electronically.

- Screening and Hygiene

Highest level health screening and control was implemented across the company. Thermo-scan machines were installed at all company entrances to check body temperatures and any individual found with a temperature 37.5 degrees Celsius or higher was denied entry. Disinfectant hand gels were placed in key locations alongside signage recommending usage, air filters were placed in different locations and strict cleaning measures were undertaken with greater frequency such as every 30 minutes for elevators. Important equipment was disinfected every hour using industry standard disinfectants and Air Handling Units (AHU) were regularly disinfected to maintain the sanitation of circulated air.

Employee Welfare

Details as follows:

- Scholarships for Employee Children :

AIS has continued to provide scholarships to the children of its employees.

- Support for the Family Unit :

AIS acknowledges and supports the family unit as a foundational institution for personal growth and social sustainability. The company provides 4,000 Baht in assistive funding to employees who enter into marriage.

- Employee Engagement

AIS conducts an Employee Engagement Survey every two years to collect the opinions of its personnel for analysis and synthesis into administrative improvements and better human resource management. Due to the COVID-19 pandemic in 2020 however, the survey was delayed to 2021.

Diversity and Inclusion

AIS supports staff engaging in activities with which they are interested or proficient, providing funding and opportunities for all of its employees to join in such activities. The company promotes respect for personal rights and an acceptance of diversity with the goal of creating a work and collaboration environment of solidarity.

Application of Technology to Human Capital Development

AIS sees the importance of developing its systems and applying technology to its human capital management, so that it can serve its employees quickly, precisely and with flexibility, as well as so that it can enhance human resource data analysis for the improvement of operations.

WorkDi

In 2020, the WorkDi system was developed to allow AIS employees to carry out various actions from any location at any time. Through the system, employees can declare leave, request overtime compensation, view total training time, receive information and notifications from the company, etc.

AIS DIGI

For 2020, AIS developed the AIS DIGI application to facilitate employee participation in company activities such as the LiFE system. Allowing employees to take part in an online society, activities were divided by the company's FIT FUN FAIR concept with participation awarding token points redeemable as discounts on products and services. AIS DIGI also provides news, notifications and promotions for employees, the ability to book conference rooms, access to the AIS Idea Portal and connection to the E-Memo system, where authorization for various tasks can be requested.

AIS KinDi (Canteen)

A canteen provided for AIS employees, diners are able to pay for meals using the wallet app to receive KinDi coupons providing discounts on future purchases.

Social Inclusion

Leverage our digital infrastructure & solutions to uplift community well-being & reduce the digital divide

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. Leveraging its business and human resources for social and community development through a range of policies and projects, AIS maintains a Business Sustainable Development Team to recommend policies and strategies and coordinate with relevant agencies to realize results. The team reports progress to the Sustainable Development Committee. 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.

2. **Supporting appropriate public access to digital communication devices**

AIS maintains a policy to support digital technology access and digital technology knowledge for all Thais. Under this policy, AIS acquires and presents appropriate choices for accessing digital technological equipment including smart phones that accommodate 3G and 4G priced between 1,000 and 3,000 Baht, phone and internet packages for students and migrant laborers and sales channels targeted at specific groups, all in the promotion of 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, to promote digital literacy and in support of the environment.

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.

Reducing Inequalities : Creating equal opportunities for access to education targeting underprivileged households and youths, supporting career opportunities for underprivileged groups as to sustainably close gaps in equality.

Digital Literacy Promotion : Support access to digital technology knowledge and practice through the provision of necessary resources to develop the capabilities of the Thai people and in support of results conducive to national development.

Environmentalism : Display responsibility towards environmental issues that could adversely impact communities and the nation, support and promote the management of waste and electronic waste generated by business operations and foster awareness among the Thai people of the dangers of electronic waste as to encourage them to take part in national environmental conservation.

2020 Progress

- **Development and Expansion of 5G Technology to Nationwide Coverage** At present, AIS operates a network that supports high-speed data transfers using 3G and 4G technology with coverage across 98% of the population, broadband home internet using fiber-optic technology across all 77 provinces of the country and WiFi networks in support of educational institutions and businesses.

Public Health

- **Aor Sor Mor Online application** The Aor Sor Mor Online application was launched to communities in 2015 with the objective of serving as a communication tool between sub-district health promotion hospitals and village health volunteers, facilitating the proactive work of local level health service units.

The year 2020 brought a major challenge to operations in the form of the COVID-19 pandemic. AIS turned its focus to safety and supported use of the Aor Sor Mor Online application to augment public health work during the crisis through these ways:

1. Digital platforms were used to demonstrate use of Aor Sor Mor Online application with conferences organized in cooperation with provincial public health offices to show how the application reports data relevant to monitoring COVID-19. The effort was expanded through the Aor Sor Mor network to over 10,000 people and was also applied to the Aor Sor Mor Online application Facebook Fan Page with live streams averaging over 5,000 views.

2. Contact channels were added to enhance work against the pandemic. Hotline 06-2520-1999 was made available between 09.00 and 17.00 hrs daily (excluding government holidays) to provide guidance and answers to Aor Sor Mor and public health officials on use of the application. Line official @aorsormor was another channel and garnered 11,731 members while the Aor Sor Mor Online application Facebook Fan Page fielded issues and queries 24-hours a day.

3. Development of the Aor Sor Mor Online application in response to the COVID-19 crisis
   - Screening and tracking of COVID-19 was added to the application. Surveys were added to aid Aor Sor Mor decipher contact and infection risks
   - Mental health screening was added in collaboration with the Department of Mental Health and Department of Health Service Promotion, allowing Aor Sor Mor to screen community members for stress, depression and suicidal tendencies.

AIS joined hands with the Ministry of Public Health to enhance the work of Aor Sor Mor during the COVID-19 crisis, adding COVID-19 screening and monitoring functionality to the Aor Sor Mor Online application and providing life insurance to support proactive efforts by Aor Sor Mor.

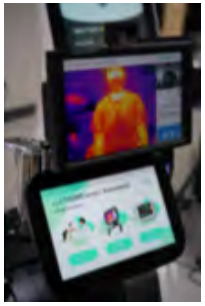
AIS joined hands with the Department of Mental Health and Department of Health Service Promotion in signing a memorandum of agreement to develop “Mental Health Screening” functionality for the Aor Sor Mor Online application , empowering Aor Sor Mor to screen their community members for mental health issues brought on by the COVID-19 crisis.

- **AIS 5G Battling COVID-19** Used PTC 65HD Sheet Piling Rigs for sale

1) Installation of 5G Networks in Hospitals to Support Medical Work AIS installed 5G networks at 158 hospitals nationwide, 150 in Bangkok and 8 in the provinces. The networks support medical work by allowing for innovations and solutions that reduce risks to medical workers while facilitating their care of COVID-19 patients. Additional AIS Fibre, 4G, AIS Super WiFi and Smart devices were also provided to enhance management in various areas at the hospitals.

2) AIS Robotic Lab Digital technology experts from within and beyond AIS were brought together to develop a 5G telemedicine robot and medical solutions through collaboration with hospitals to ensure responsive to their specific needs.

3) Development of 5G Telemedicine Robots AIS produced 23 new Robots for Care and delivered them to 22 hospitals. All of the facilities were testing and caring for COVID-19 patients and utilized the robots as assistants to doctors and nurses, performing thermos-scans and facilitating video calls between doctors and patients. Controlled via 5G, the robots eased the work of physicians while reducing crowding and risk of infection for both patients and medical workers.



Reduced Inequalities

1. The AIS Good Kids Brave Hearts project supported exemplary students hindered by their finances with the aim of reducing social inequality and providing opportunities for education to Thai youths so that they may find employment and support themselves and their families. Students chosen showcased exemplary behavior from Primary School Year 1 through to their bachelor's degree and worked to provide supplemental income to their family. Across the 20 years of the project, AIS provided scholarships to a total 910 students.

2. Reducing Inequality and Careers for the Less Fortunate AIS Call Center for the Disabled AIS recognizes the need to support human rights efforts and provide equal access to employment, launching a project to create career opportunities for the disabled in 2007 focused on using digital technology to augment the capabilities of disabled individuals and employing such individuals in its Call Center. Work environments and equipment were adapted to facilitate safety and convenience for disabled employees and they were provided with equal remuneration and benefits to their able-bodied counterparts.

Digital Literacy

1. SDG Lab by Thammasat University & AIS SDG Lab Project AIS joined hands with Thammasat University to establish "SDG Lab by Thammasat & AIS" to serve as a space for learning and actualization that creates opportunities and connections between innovators,

developers and inventors from across the globe with the goal of addressing environmental issues or the goal of creating sustainability innovations that can serve as models for practical solutions.

2. Telecommunications Systems for Community Development AIS recognizes inequality in digital technology access, especially for education among students in remote areas. A key factor in this issue is insufficient infrastructure especially in terms of education, bringing news and perspectives from the wider world to students so that they could apply their knowledge in their hometowns.

Cyber Wellness and Online Safety

Established a brand that promotes safe and appropriate use of the internet and social media

"Cyber Wellness and Online Safety" is a significant factor toward the sustainability of AIS, as a telecoms operator perceived as a purveyor of digital technology and internet usage, has an undeniable role in promoting cyber wellness and online safety and has the ability to play a part in promoting digital technology usage that is beneficial to the economy and society. By shaping appropriate digital era behaviors in Thailand, AIS can curtail online dangers, in turn supporting the telecommunications business to grow, reduce threats to the company's own reputation and foster consumer loyalty to the AIS brand. Moreover, in tackling these challenges, the company has the opportunity to innovate new products and services for the enhancement of online safety in Thailand.

The company maintains a Cyber wellness and Online Safety committee that reports directly to the Chief Executive Officer. The body comprises knowledgeable and experienced individuals from the realms of corporate image and sustainable development, community relations, corporate brand management, product development, systems engineering, telecommunications security and user information protection, who meet monthly to develop and expand projects. AIS is determined to protect the Thai people from cyberthreats as well as to promote online safety and focuses on vulnerable groups of youths. Its three main strategies under the "Aunjai CYBER" program includes digital quotient promotion, digital tools for cyber protection and promotion of awareness against the potential dangers and impacts of the internet and technology.

2020 Progress

AIS expanded upon its cyber wellness support through "Aunjai CYBER" program in the following ways:

- **Digital Quotient Promotion (Digital Literacy)** AIS joined hands with DQ Institute to formulate a Thai language Digital Intelligence Quotient (DQ) course consisting of a test and online lessons measuring and building eight DQ skills among children aged 8-12years, providing them the necessary knowledge to productively traverse the online world and internet.

- **Digital Tools for Cyber Protection (Cyber Security)** AIS offers the network-based security solution AIS Secure Net to assist in effectively reaching customers at risk from cyberthreats by working instantly without the need for an application download. Moreover, the company partnered with Google to promote use of its Family Link application, aiding guardians in training their children on appropriate internet usage.

In 2020, AIS continued to support cyber wellness among Thai youths through DQ courses and providing cyber wellness tools such as AIS Secure Net and AIS Family Link. With the COVID-19 outbreak situation delaying school semesters and moving students to online classes, AIS decided to adapt its strategy to publicizing the Aunjai CYBER program through digital channels including the myAIS application, AIS PLAY and Facebook, as to reach targets on every network. Efforts focused on families alongside teachers to forge an immunity for Thai youths in the digital era spending more time in front of digital screens amid the pandemic instead of only teachers through training courses. Nonetheless, AIS organized online courses for teachers to bolster their understanding of DQ and dispatched community relations teams to work with the teachers to design activities and formats so that DQ could be included into normal lesson plans. AIS also built an online community comprising teachers from participating schools with the purpose of inspiring and exchanging experiences. We also joined hands with the Faculty

of Industrial Education and Technology of King Mongkut's University of Technology Thonburi to consult on Digital Quotient with the Office of the Basic Education Commission (OBEC) as to equip teachers for dispensing the knowledge in primary schools nationwide as to enhance the DQ and digital skills of Thai children.

By the end of 2020, over 35,000 students from 114 schools participated in AIS DQ courses, more than 124,600 individuals became users of AIS Secure Net. Moreover, AIS extended its cyber wellness effort from mobile internet to fixed broadband internet, testing AIS Secure Net via AIS Fibre to ensure consistent internet speed and quality while protecting users from cyberthreats. The company expects to officially rollout the service in 2021

AIS remains determined to set off wide social change in terms of awareness of constructive and sustainable ways to contend with cyberbullying. Online seminars open to the general public via Facebook and YouTube under the topic "Empathy is the Key: Understanding Others and Not Jumping to Judgement" allowed members of the younger generation to share their views and experiences on cyberbullying. The sessions sought to dispense ideas for long term ways to handle cyberbullying and garnered 85,000 live views.

Environmental Aspect

Emissions

Reducing GHG emissions and utilize renewable energy in most possible extent in our operation

The issue of climate change has only grown in importance and urgency at both the national and global levels in recent times. International, state, private and consumer organizations have all supported cooperation and pushed forward measures to reduce greenhouse gas emissions (GHG emissions). Climate change is the result of GHG emissions from both the private and public sectors with industries and logistics playing a major role due to their overall dependence on fossil fuels for production, transport and service. While AIS is not part of any GHG emitting industry, its service provision still utilizes electricity produced using fossil fuels including natural gas and coal.

As a digital life service provider, AIS is acutely aware of its responsibility to society to use its capabilities and innovations to aid in remedying the issue of climate change. AIS has committed itself to reducing greenhouse gases, continually improving its energy efficiency and supporting renewable energy both in its operations and products and encouraging its operators, trade partners and equipment manufacturers to play a part in its sustainable business goals. Towards these commitments, AIS has set short, medium and long term goals for reducing greenhouse gas emissions with the head of its technology executives 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 chief also monitors regulations, measures and relevant technological trends to constantly improve the environmental management plan. A report on environmental efforts is presented to Sustainability Development Committee and Board of Directors at least once a year. AIS maintains an environmental policy approved by its Board of Directors with the objective to support environmental sustainability. Read more on the Environmental Policy at http://sustainability.ais.co.th/storage/sustainability-priorities/emissions/ais-environmental-policy-th-2018.pdf

2020 Progress

AIS is committed to its mission to play a role in remedying climate change and maintains core projects on energy efficiency, GHG emission reduction, promoting renewable alternative energy and reducing paper usage. These projects include:

- **Energy Efficiency**
  - o Expanded use of multi-mode station equipment covering 2G, 3G and 4G for improved energy savings in comparison to separate equipment, installing 63,880 pieces of such equipment over the course of 2020 to cut GHG emissions by 99.7 tCO_2e per year.
  - o Improved rectifiers for higher efficiency and reduced power loss, enhancing overall energy efficiency at base stations to indirectly reduce GHG emissions from energy production. Over 1,299 new rectifiers were installed or replaced in 2020, reducing GHG emissions by 227 tCO_2e per year.
  - o Expanded use of a Virtual Machine Server, an operating system enabling use of cloud software via a simulated server, and gradually decommissioned unnecessary server equipment. On top of enhancing resource efficiency and reducing cost, the effort lowered power usage at data centers both for servers and their cooling systems, cutting GHG emissions by 12,421 tCO_2e per year.
- **Alternative Energy Usage** AIS commenced an alternative energy program installing polycrystalline solar panels at 2,815 of its stations and fitted 12 stations with special solar panels equipped with micro-converters to compensate for obstructions to sunlight. All together the panels produce 6,018 MWh of electricity, offsetting part of the company's energy demand and cutting 3,503 tCO_2e in GHG emissions.

- **Environmental Management System (EMS) Development** The AIS environmental management system received ISO14001:2015 approval. The system uses 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, water and waste management in compliance with relevant regulations and sustainable business practices

- **Paper Usage Reduction** 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) myAIS, 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 end-2020, myAIS usage reached 8.1 million users, or 20 percent of AIS customers, 6.7 million users switched from mailed bills to E-Bills and 84.6 million users adopted E-Receipts, all together cutting the need for sheets of paper, equivalent to 1,865 tCO_2e in GHG emissions a year.

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 2020 was able to reduce its ratio of GHG emissions intensity, a ratio of GHG emissions to data traffic. At the same time, AIS increased its proportion of renewable energy usage to 0.49 percent of total energy used, compared to 0.08 percent in 2019.

Waste Management

Reduce & recycle waste from operations as well as encourage customers to dispose E-waste properly

AIS, as Thailand's largest telecommunications service and mobile phone related device retailer, is dedicated to proper management of environmentally hazardous waste resulting from its operations. In particular, AIS is determined to develop processes that reduce waste and increase recycling and maintains an objective of promoting widespread understanding towards the danger of E-Waste and proper E-Waste disposal so that it may enter the recycling process.

The framework for waste management at AIS comprises four areas:

Green Procurement AIS combined its environmental awareness into its procurement policy to create an effective mechanism for resource and energy usage that also reduces waste, pollution and greenhouse gases. Internal departments are encouraged to understand the criteria and regulations of the Green Procurement policy.

Operations Waste Management Encompassing network equipment, office electronics and mobile phones, AIS maintains a committee for amortizing network equipment and resources, which decides when to amortize electronic equipment for the sake of change and that maintains a goal of minimizing the environmental impact of resource deployment in AIS operations. Obsolete equipment is separated for reuse or refurbishment and in the event the two options are no longer applicable, recycling, as to make use of the materials and elements of the equipment. AIS has chosen partners authorized and capable of receiving and managing used electronic equipment. It auctioned the partnership with criteria requiring an appropriate environmentally-friendly process for waste recycling, maximum recycling of used equipment and proper landfilling of non-recyclable residue, which it aims to reduce to only 3% of all its E-Waste by 2023.

Office Waste Management Supporting 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 separation, seeking environmentally-friendly changes in behavior.

Promoting Proper E-Waste Disposal to Customers and the Public
The "Thais Say No to 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 could be entered into the proper disposal process. The project also sought to promote awareness towards the dangers of electronic waste and an understanding as to the need for proper disposal and recycling.

2020 Progress

Green Procurement

AIS is dedicated to working with partners while considering factors significant to sustainability and long term relationship management. AIS policies and strategies for procurement aim to maintain the company's competitiveness and operational standards while also devoting importance to economic, environmental and social considerations and good governance throughout the administrative structure of new and existing partners, functioning as a moral clause that agencies that collaborate with AIS must follow.

In 2020, AIS re-evaluated its Green Procurement policy and made environmental qualities a mandatory requirement for bidding and a preferred requirement. Plans were made to set Green Procurement requirements and develop a value chain administration policy, such as in the form of a Sustainable Procurement Management Manual or Spend Analysis. Details on the plans can be viewed at https://sustainability.ais.co.th/th/supply-chain-management

Operations Waste Management AIS recognizes network equipment including batteries, generators, base station equipment, cables and others, as operations E-Waste. The company's Waste Stewardship Team oversees management of such equipment using a Life Cycle Perspective. This past year, AIS delivered E-Waste into the recycling process using Department of Industrial Works authorized operators with clear processes and disposal locations. The company's non-recyclable residue proportion this year was 0.01%.

Office Waste Management Over the past year, AIS enhanced its waste separation by clearly delineating different types of waste, improving the ease of delivering waste for recycling. Waste receptacles were also improved to better personnel waste disposal at the source. From operations in 2020, only 548 kilograms of waste was generated, down 32% from 2019. Non-hazardous Waste made up 45% of the total, mostly comprised of office and operations building refuse, and Hazardous Waste made up 55% of the total, comprised of E-Waste and other types of hazardous waste from offices.

Promoting Proper E-Waste Disposal through "Thais Say No to E-waste" AIS continued "Thais Say No to E-Waste" in 2020, 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 towards the physical danger 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 hopes of fostering understanding towards the critical environmental issue posed by E-Waste.

- **Expansion of "Thais Say No to E-waste" Cooperation Network**
  Building a network of participation across the public and private sectors, AIS promoted a sustainable solution to E-Waste's impact on the environment, expanding its E-Waste receptacles to over 2,400 locations nationwide to facilitate the proper disposal of E-Waste.
  - 28 May 2020 : AIS joined Central Group to install E-Waste receptacles at 37 Central department stores across the country and The Office @ Central World to invite Thais to separate their E-Waste and engage in proper disposal for the sake of environmental sustainability.
  - 1 June 2020 : AIS joined hands with Thailand Post to expand its E-Waste receptacles to 160 Thailand Post offices nationwide.
  - 1 June 2020 :AIS joined Thailand Responsible Business Network alongside nine fellow Stock Exchange of Thailand listed companies, Bangkok Airways, Thai Optical, East Water, Thai Airways, Unison, SC Asset, Bank of Ayudhya and Singha Estate to promote proper disposal of E-Waste and for the practice to be further spread through families and acquaintances, setting up E-Waste receptacles at each company's offices.
  - 14 July 2020: AIS joined the "Green Paholyothin" network to encourage 13 organizations along Paholyothin Road to join in the "E-Waste the Battle" electronic waste collection and disposal competition.
  - 25 August 2020: AIS joined hands with the Government Savings Bank to promote awareness and understanding in proper E-Waste disposal.

- 3 December 2020: AIS joined hands with MBK Plc. and Kid Kid Co. Ltd. to invite Thais to sustainably preserve the environment by separating E-Waste and disposing of it through Thais Say No to E-Waste receptacles at the four MBK department stores of MBK Center, Paradise Park, Paradise Place and The Nine Center Rama 9.
- 16 December 2020 : AIS and the Ministry of Natural Resources and Environment joined hands in the Thais Say No to E-Waste network to promote awareness and participation in sustainable environmental care. The two main collaborations between AIS and the ministry were 1. Expanding E-Waste receptacles to Ministry of Natural Resource and Environment provincial offices nationwide to facilitate E-Waste disposal and 2. Cooperation with Village Natural Resource and Environment Protection Volunteers to further promote proper E-Waste collection and disposal.

- **Continued Support for Activities Promoting "Thais Say No to E-waste"** The Green Paholyothin and condominium challenge, AIS E-Waste Drop for Points campaign and AIS E-Waste Bin and Win spread awareness among the Thai people and enticed them to take part in properly disposing of E-Waste, paving the way for environmentally-friendly behavioral changes among the Thai public.
  - 2 September 2020: AIS worked to promote awareness while collecting E-Waste across the country through the "Thais Say No to E-Waste" project, launching the "AIS E-Waste Drop for Points" campaign to thank customers for joining in its environmental mission. E-Waste separated into the five categories of Mobile Phones and Tablets, Charging Cables, Earphones, Mobile phone batteries and Power Banks disposed of at an AIS Shop brought customers 5 AIS Points per piece.
  - 11 December 2020: "AIS E-Waste Bin and Win" invited AIS and AIS Fibre customers to properly dispose of E-Waste at AIS Shop branches nationwide, offering opportunities at prizes by counting 1 piece of E-Waste as 1 Privilege (1 number/10 privileges/activity)

Results of "Thais Say No to E-waste" (1 January – 31 December 2020)

Electronic Waste Type	Pieces
Used Mobile Phones and Tablets	8,950
Accessories	20,204
Batteries	18,073
Others	67,573
Total	114,801

Human Rights

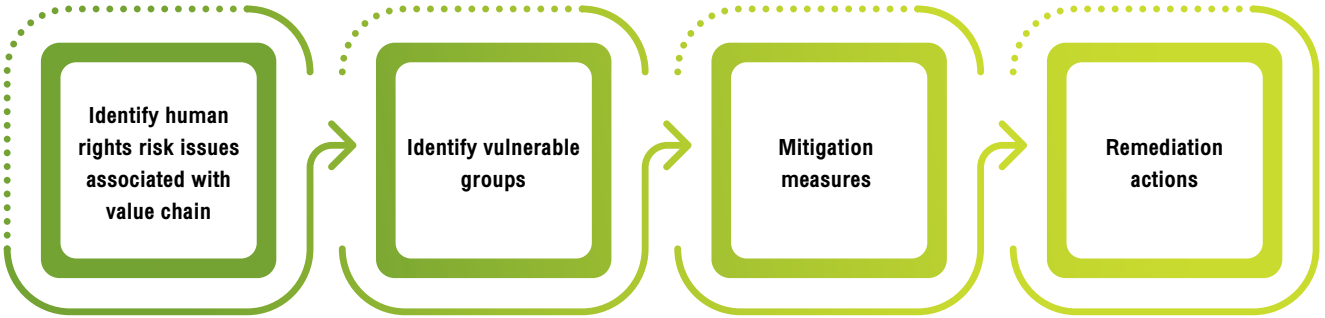
AIS realize the importance of and respect the human rights which is the fundamental for business operation and cohesiveness of the society. In this regard, the Company has approved this human rights policy in the part of the code of business ethics and shall set the practical guideline for conducting the business by respecting the human and employment rights under the international standard in accordance with the United Nations Universal Declaration of Human Rights – UNDHR and The International Labor Organization – ILO. The Board of Directors has delegated The Sustainable Development Committee to oversee this policy through the Business Ethics Committee which has the primary responsibility for implementing this policy by, together with the risk management committee on assessing the risk of human rights abuse, identifying the potential affected group, preparing the mitigation plan with respect thereto and initiating protective measures to the Company's business throughout the entire business value chain. The Business Ethics Committees will communicate the Human Rights policy to the employees, Agents, Intermediaries, Suppliers, Contractors, Business Partners to acknowledge, understand and taking part of business by respecting the human rights. Furthermore, the company is committed as stipulated in the Whistle Blower Policy to ensure that no Employee will suffer demotion or other adverse consequence, or incurs any kind of penalty, for reporting any abuse, unfair treatment and misconduct. For more details, please visit the full version of Human Rights policy by scanning below QR Code

To ensure that the business operations of the company will not violate the human rights entire business value chain, AIS has indicated the Human Rights risk assessment and monitoring process including with the human rights risk assessment in business activities of AIS and business partners that covering the mitigation plan and remediation actions.

1) Identify human rights risk issues associated with value chain
2) Identify vulnerable groups
3) Mitigation measures
4) Remediation actions

In 2020, the Company has assessed human rights risk to entire primary activities was found that 47.8% of activities in company value chain were found with human rights issues and 100% of activities in direct operation with human rights issues had mitigation measures and remediation implemented.

The Company required critical tier 1 suppliers participate in the self-assessment by fill in the questionnaire form which comprising of questions related to ESG issues and return it to the Company for reviewing by procurement team. The critical tier 1 suppliers identified as high-risk, the company will send letter informing and also scheduled visits them to implement a mitigation plan to remedy all risks.



As the result of Human Rights Risk assessment, the company has selected five potential human rights issues as following;

Human Rights Issues	Vulnerable groups	Nature of Risk	Mitigation plan/Remediation
1) Working Conditions	Employees: - Field salesperson - Field engineer	Field personnel who travel regularly to sites and different locations are exposed to long-working hours and may not have appropriately safe vehicles	- Emphasize safety standards through cooperation with leading educational organizations to introduce safety training courses and allow only qualified personnel to operate. - For travel safety: Periodic vehicle inspections and monitoring of appropriate vehicle life cycle. - Reduce travel distance by setting smaller operating areas, operating areas favoring employee abodes as to address health and safety concerns.
2) Privacy Protection and Data Security	General Customers	Despite existing data security and privacy measures, breaches could potentially be high severity, impacting customers and risking human rights violations.	- Established the Data Protection Office (DPO), responsible for data privacy protection and serving as a focal point for protecting and monitoring data. - Build awareness and understanding among all personnel. - Utilize the Data Protection impact Assessment to identify and mitigate data privacy risks in new services. - Limit access to sensitive information and apply a range of data protection techniques covering storage, utilization and transmission to safeguard against private data leaks. - Set specifications for the data flow process and communicate with relevant agencies to ensure compliance therewith

Human Rights Issues	Vulnerable groups	Nature of Risk	Mitigation plan/Remediation
3) Product and service safety	General Customers	Devices such as FBB's CPE (customer premises equipment) and mobile phones sold and distributed by AIS to customers can face quality issues, including threats to physical safety. Even with a low rate of occurrence, severity remains high.	- Strictly maintain and control standards for all products by carefully selecting materials to be installed at customer premises is made from UL94-V0 standard plastic and required surge protection testing by the government sector. - House brand mobile phones and accessories are inspected carefully by Acceptable Quality Limit (AQL).
4) Supply Chain working conditions	Contractors of fixed broadband business	Some FBB contractors may not have appropriate safety working standards to ensure worker health and safety. As the main contract partner, AIS shall have certain measures help ensure that these contractors meet certain standards.	- Set standard safety measures requirements for contractors including s ub-contractors starting at the procurement process including with necessary training and certificates issued to trained staff.
5) Freedom of Expression	General Customers	AIS occasionally faces government requests to block certain websites. This may incur risks of violating the human right to freedom of expression	- Balance freedom of expression and public and state policies which are, from time to time, issued so as to address social concerns, among others, the infringement of intellectual property. - Limit negative impacts by establishing efficient internal processes to control access to certain restricted information unless there is obvious supporting rationalization and officially requested by legitimate and competent authorities.

For more details about human rights aspect please visit the company website https://sustainability.ais.co.th/th/respect-to-human-rights