

## AIS Emerging Risks

### Information security and threats from cyber-attacks

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Advancement in digital technologies has enabled service provider to launch new products and services with new business models to create or capture the business opportunities.

Through the coming of 5G technology cycle which currently is at the infant stage, the Company over the next 10-5 years will be facing new challenges in developing and sometime co-developing with partners the emerging digital products and services that is vastly different from today as well as managing the new and complex network environment. Advanced technologies come with risks of information technology, considered as emerging risks from 1) Risks result from the evolving complexity of technologies and 2) Gap between the complexity of technology development and employees' competency. New technologies such as IoT or 5G will require new or a revisit in approaches to cybersecurity to ensure the cyber security and resilient. Although, there are potential for security enhancement on 5G but the implementation has not yet to be realized due to early stages of the technologies. Meanwhile, advanced technologies, particularly cognitive technologies e.g. Artificial Intelligence, Machine Learning have been leveraged by cybercriminals. For example, AI-backed Deepfakes technology is used to create fake contents by impersonating individuals. It is not yet to realize the full scope of the threat posed by such cognitive technologies, resulting in ever more sophisticated threats. A rapidly evolving landscape of cyber threats has introduced new skills requirement in cyber security and could lead to the deficit of cyber security skills. Another factor is the enforcement of new laws and regulations by the government or regulators on cyber security and personal data protection which may impact company's business both financially and operationally.

In early 2020, the COVID-19 pandemic has not only created challenges to the company but also brings the business opportunities i. e. shooting demand in digital consumption, expedite the digital disruption and urge customers to use digital products and services such as banking application, work from home digital solution, online shopping. Such events have created the risks related to information security and cyber-attacks.

**Impacts:** As the company is directly dealing with customer data (e.g. personal information, id number, address, etc.), insufficient of information security system may cause of data breach and unauthorized access. Resulting from such cyber-attack can cause directly impact on business as non-compliance case under the Cyber Security. The financial impact is also expected as revenue loss from business disruption and penalties under the Act. This also impact to company's reputation.

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

- Apply suitable international standards and align with the Cybersecurity Act and Personal Data Protection Act.
- Extend and expand security appliance tools to cover significant systems.
- Enhance information security measures, e.g., by reviewing the access control procedure; maintaining a closed working environment; and building IT awareness across the entire Company.
- Enhance staff competencies related to Cybersecurity.

## Changes in customer behavior and technology developments

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Technology developments have accelerated industrial changes by bringing about new ways of providing products and services. These development also change customer behavior because of more choices in the digital world. This, force the company to adapt and develop its plan to accommodate the changing technologies and new innovations in order to ensure long-term sustainability. Within a couple years, telecommunication sector will start to see commercial use of new technologies such as 3D media, virtual reality, hologram and many more that enriches customers' experience. 5G technology is the most recent development that offer such capabilities. Technology advancement also poses risk to business disruption due to emerging new business models and how to service customers.

In early 2020, the COVID-19 pandemic has put pressure to business sector globally both financial and operation as well as AIS. Meanwhile, it also creates new business opportunities to the company i.e. shooting demand in digital consumption, expedite the digital disruption and urge the change in customers' behavior in using digital products and services i.e. banking application, work from home digital solution, online shopping. Opportunities are coming sooner and resulting in bigger market size in both enterprise and residential markets.

**Impacts:** The potential impact to company is on the financial revenue, which may get the impact from the changing behavior in using products and services. Financial revenue and market share also may impact from customers have more choices of products and services in digital world from both mobile operator and OTT providers. Another impact to the company is high capital expenditure required in network improvement and/or expansion i.e. 5G technology, to let company have the most recent technology advancement to provide products and services to our customers.

**Mitigations:** AIS is incorporating the following steps into its risk management plan:

- Define the key strategies, both short-term and long-term, to respond to the changing customer behavior and technologies.
- Enhance the digital customer service system, e.g., increase engagement with customers via a fully online system, build AI/Chatbot capabilities, and implement Robotic Process Automation for customer services.
- Bundle product and service offerings of mobile, fixed broadband and digital content in a new model which provides added value to reduce complexity and create cost savings for customers, while also attracting new customers.
- Build the capability of gaining customer insights with Data Analytics to provide customers with product and service offerings according to their needs and at the right price.
- Develop the network infrastructure, customer service systems, and support systems by incorporating new technology such as cloud technology.
- Grow the corporate business and content business, e.g., by expanding the IoT business and creating and driving a complete Cloud Business Ecosystem.
- Transform the organizational structure and develop the competency of employees to support the key strategies of the Company.