

Challenges and Opportunities: Cybersecurity in APAC and Taiwan

2022-03-03
Taiwan



Agenda

- **APAC cybersecurity overview and Taiwanese IoT market**
- Taiwan cybersecurity market trends
- Case Study: Cybersecurity standards for the semiconductor industry
- Collaboration



Swedish enterprises in global lead

With a unique governmental and private sector mandate, Business Sweden provides support around the world

AN OFFICE NETWORK WITH INDUSTRIAL EXPERTISE ON ALL CONTINENTS



CONSULTING SERVICES

GOVERNMENT ENABLED SERVICES

MARKET EXPANSION <ul style="list-style-type: none"> Global Expansion Strategy Market Entry Product & Customer Mix Sales Channel Setup Global Operations Footprint Mergers & Acquisitions 	SALES ACCELERATION <ul style="list-style-type: none"> Customer Acquisition Partner search & Selection Sales & Partner Performance management Deal & Tender Support 	INVEST PROMOTION & ADVISORY
BUSINESS TO GOVERNMENT <ul style="list-style-type: none"> Business to Government Strategy Stakeholder Analysis Strategic Messaging & Communications Stakeholder Engagement 	BUSINESS INCUBATION & OPERATIONS <ul style="list-style-type: none"> Co-Working Space Finance & Controlling Employment & HR Services Incorporations & Registrations 	ECOSYSTEM GROWTH PROGRAMS
		SMALL BUSINESS PROGRAM
		BUSINESS DELEGATIONS & EVENTS
		TRADE & INVEST FACILITATION

We shorten time to market, find new revenue streams and minimise risks

40+ MARKETS From Helsinki to Hong Kong, Moscow to Mexico City – our business developers offer strategic advice and hands-on support	400+ PEOPLE Our multinational team collaborate across the globe with expertise rooted in local business cultures and network	45+ YEARS With a vast experience we help Swedish companies grow global sales and international companies invest and expand in Sweden
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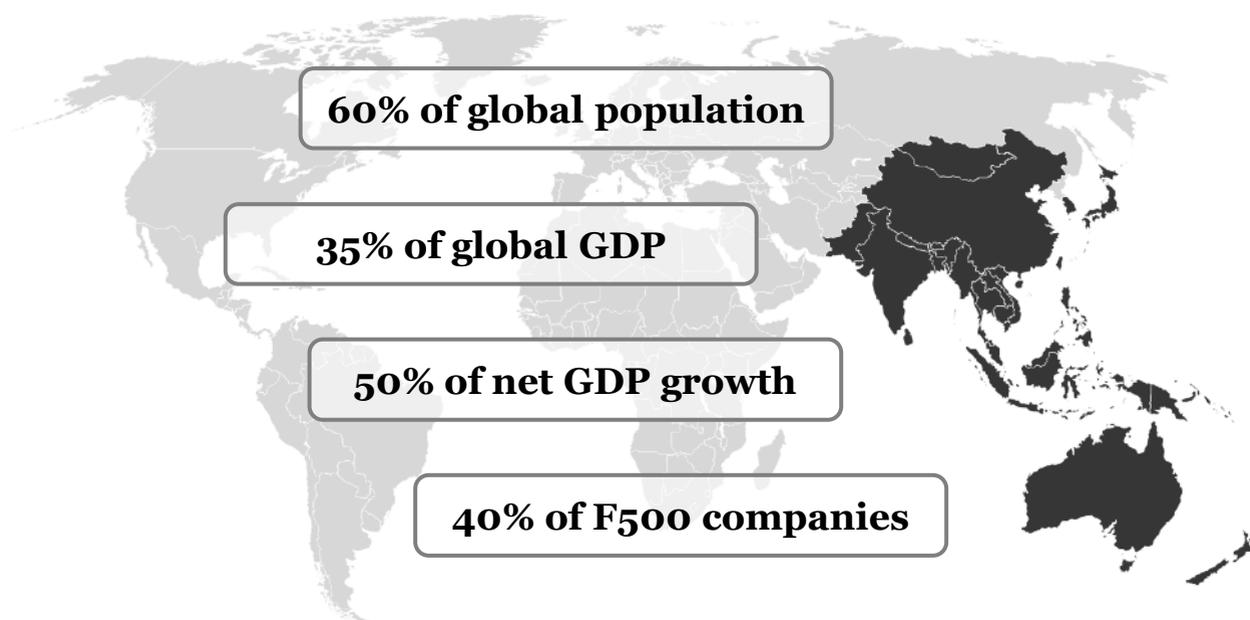


Long-term mega trends as well as recent developments create new opportunities & challenges for Swedish companies in Asia-Pacific – few can afford not to act

The APAC Imperative

A massive region...

...undergoing profound changes



Demographics

Urbanization, Aging, Education, ...

Economy

Growth, Investments, Consumption, New competition, Innovation, ...

Technology

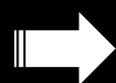
Rapid catch-up, Leap frogging in some areas, Digitalization, ...

Environment

Energy transition, clean air/water/soil, ...

Geopolitics

Trade agreements & conflicts, Territorial conflicts, Human rights, ...



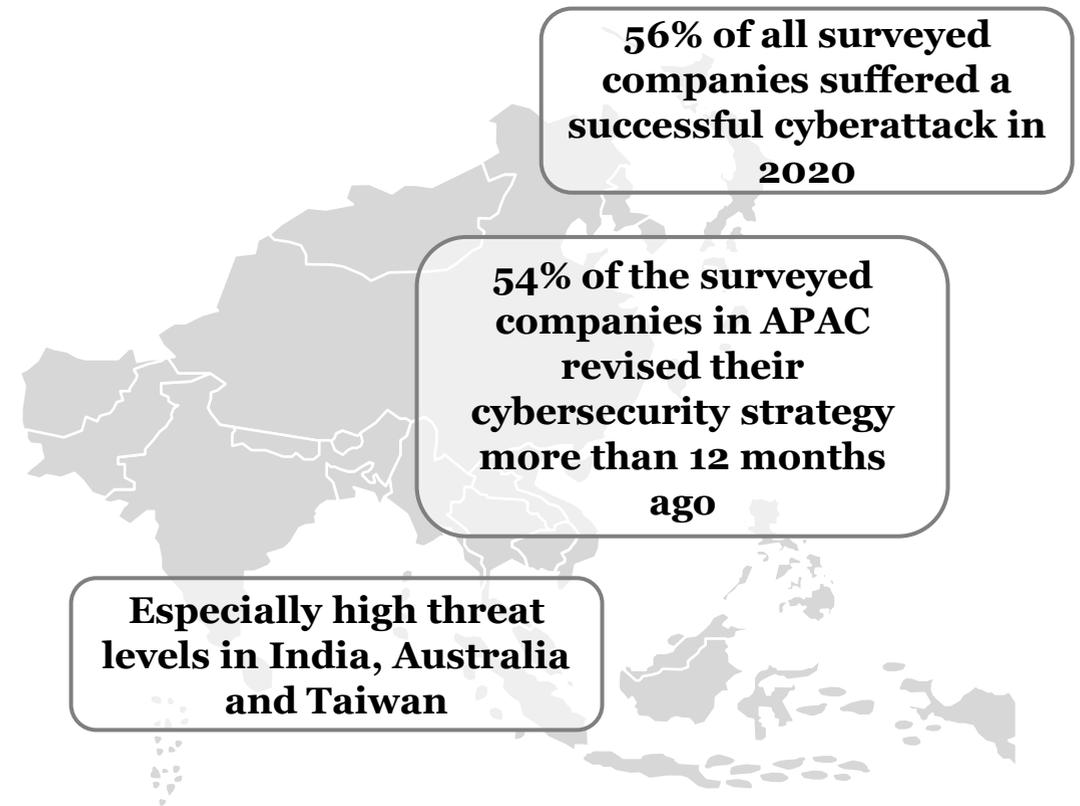
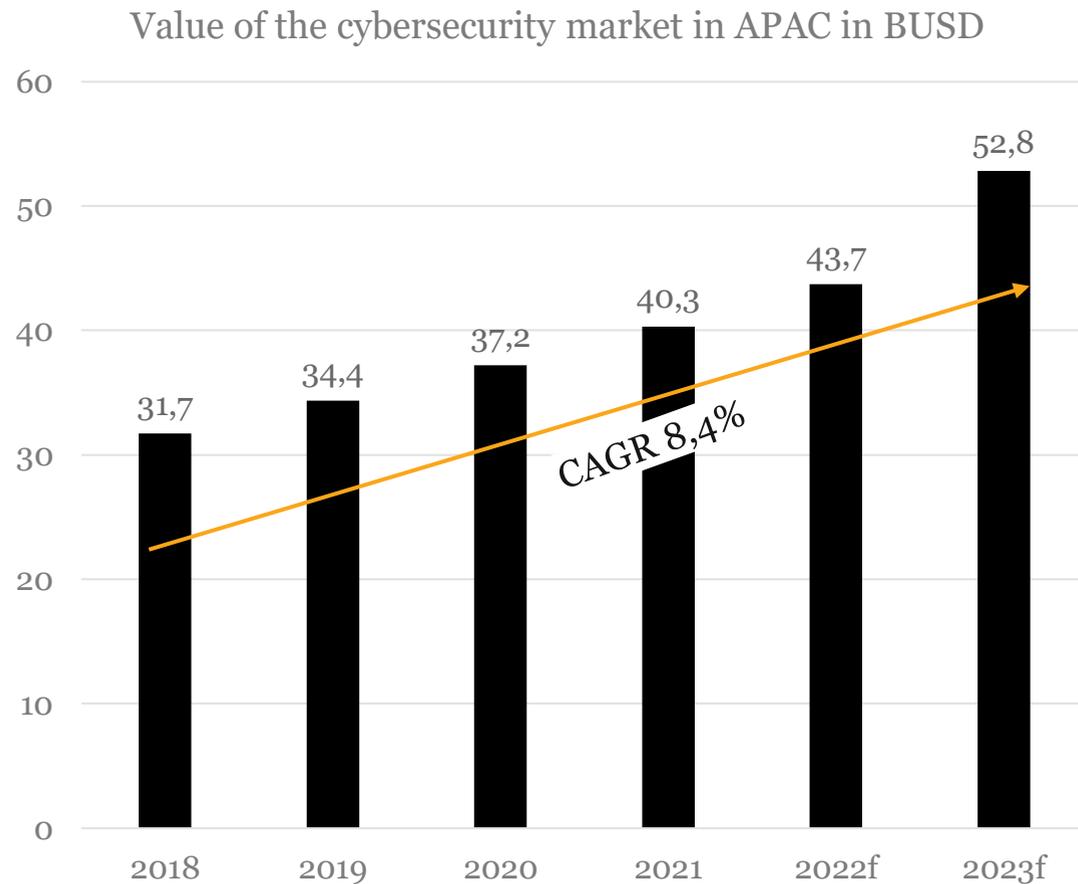
These mega-trends are re-shaping not only APAC but having a global impact and we believe many more companies need to take bold actions to be competitive in a new business landscape and capture new opportunities – we call it “The APAC Imperative”

Rising awareness and increased spending on cybersecurity throughout APAC

Cybersecurity in APAC

Steadily increasing market in APAC

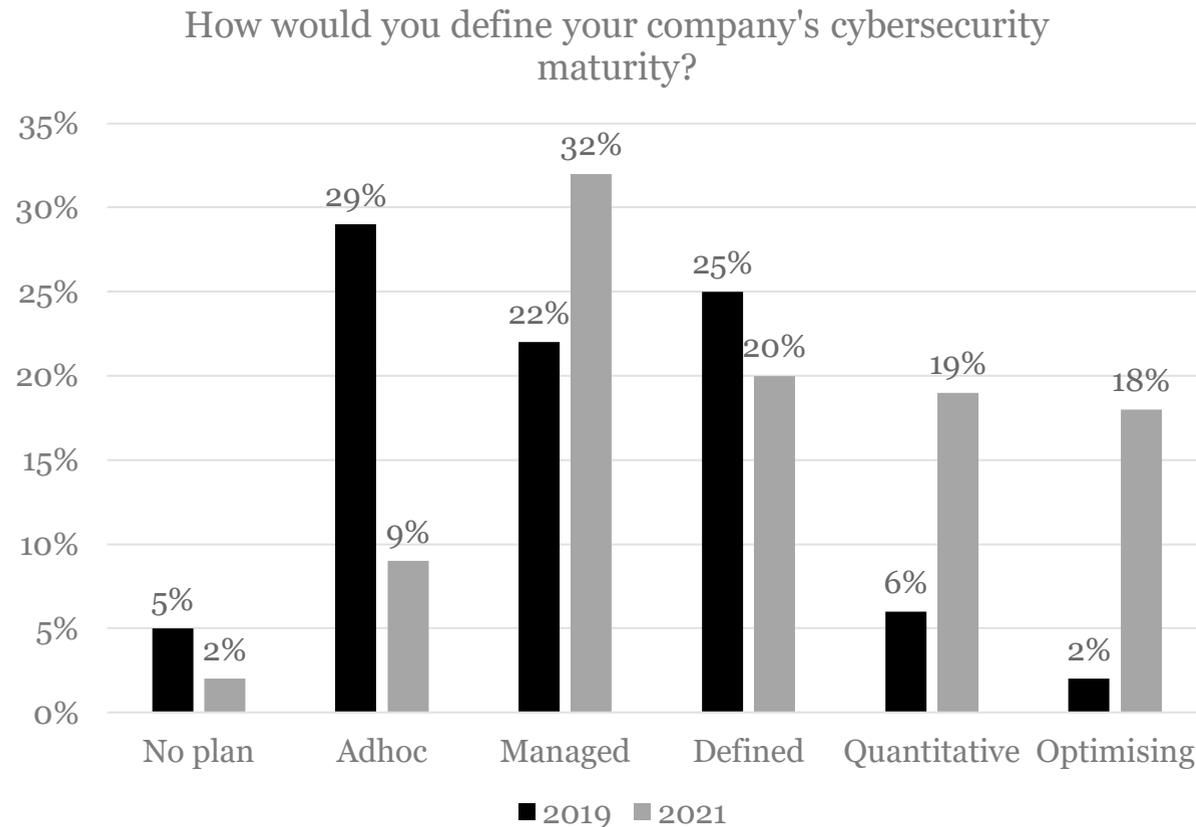
Cybersecurity awareness on the rise in APAC



Rising maturity among companies in APAC shows increased and stable interest in cybersecurity solutions

Cybersecurity in APAC

More and more surveyed companies' manage their cybersecurity in APAC



Several reasons behind the increased awareness

- Continues changes in regulatory requirements, personally identifiable information (PII) and mandatory breach disclosure legislation
- Accelerating digital transformation
- A sustained adoption of cloud-based technology, infrastructure as-a-service or software-as-a-service solutions

53%

of the surveyed companies in APAC agreed with the statement that they are not prepared for the digitalization caused by the COVID-pandemic

The Taiwanese IoT market is expected to grow by 30% by 2025

Cybersecurity in APAC

More and more companies' manage their cybersecurity in APAC

Entertainment, mMTC and manufacturing are key sectors

Global Scale of Taiwan's IoT economic business opportunity to increase 30% by 2025

Taiwanese IT hardware industry grows 15.4% year-on-year to US\$152.9 billion in 2021

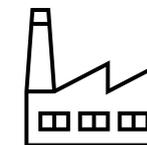
Supply chain disruption focused attention on Taiwan since the US-China trade wars

- Asia Silicon Valley Development Agency
 - Microsoft IoT Innovation Center
 - Qualcomm signs Memorandum of Technology Laboratory Cooperation with the Ministry of Economic Affairs



ENTERTAINMENT
INDUSTRY

Virtual reality and
augmented reality



mMTC

Smart cities and
smart homes



MANUFACTURING
INDUSTRY

Automated factories
and medtech 4.0

Agenda

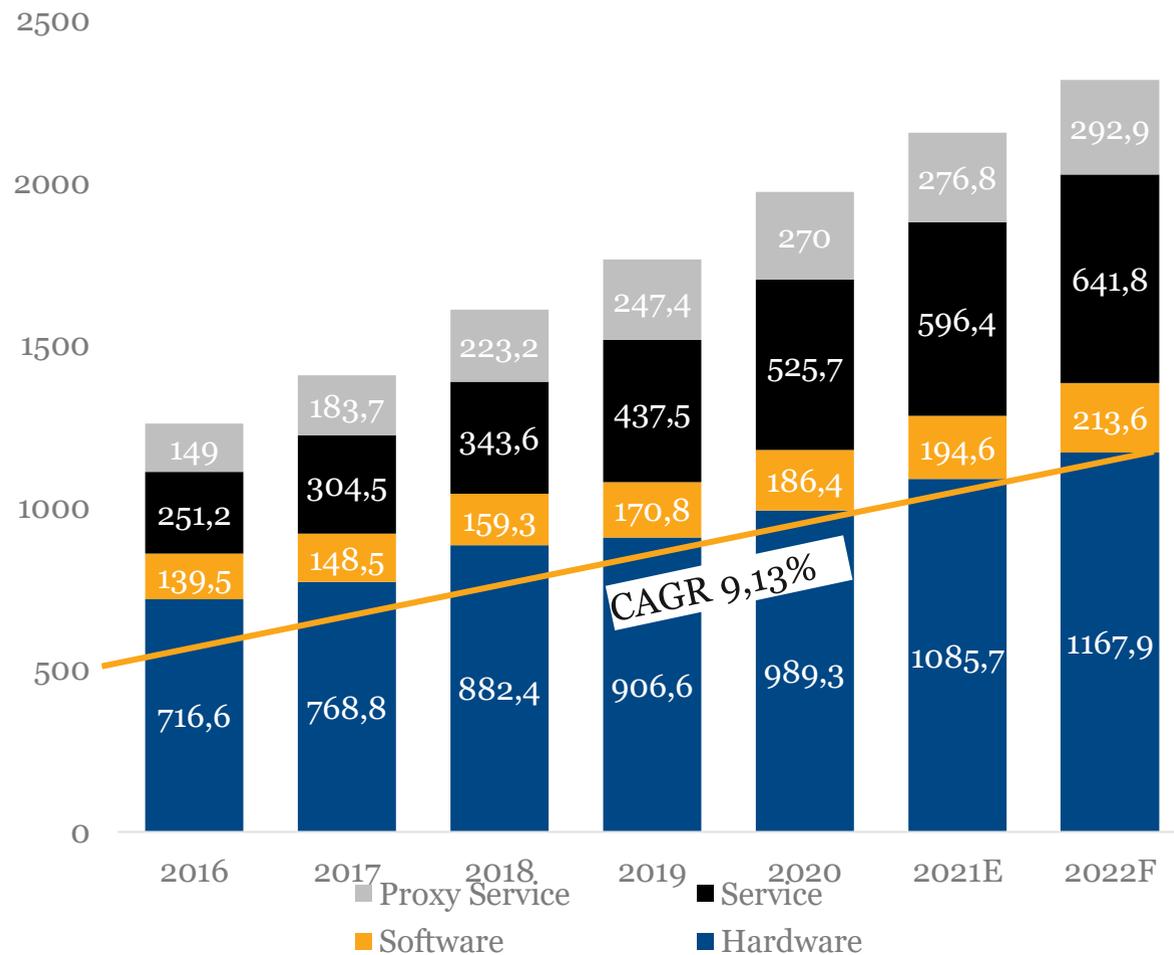
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Taiwan cybersecurity market shows robust growth even during the pandemic

Taiwan cybersecurity market size in MUSD

Unit: USD/Million

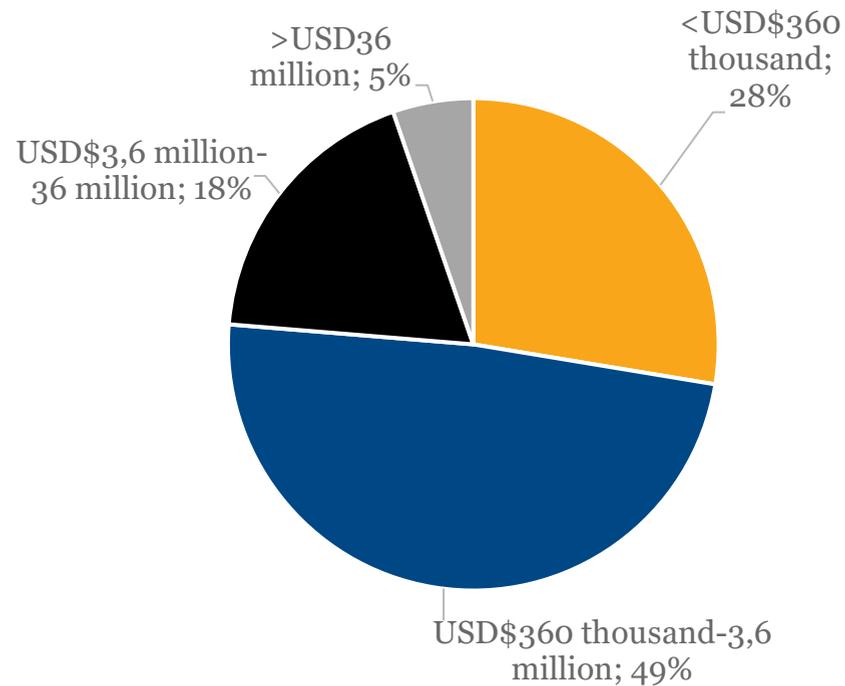


Summary of Taiwanese cybersecurity market

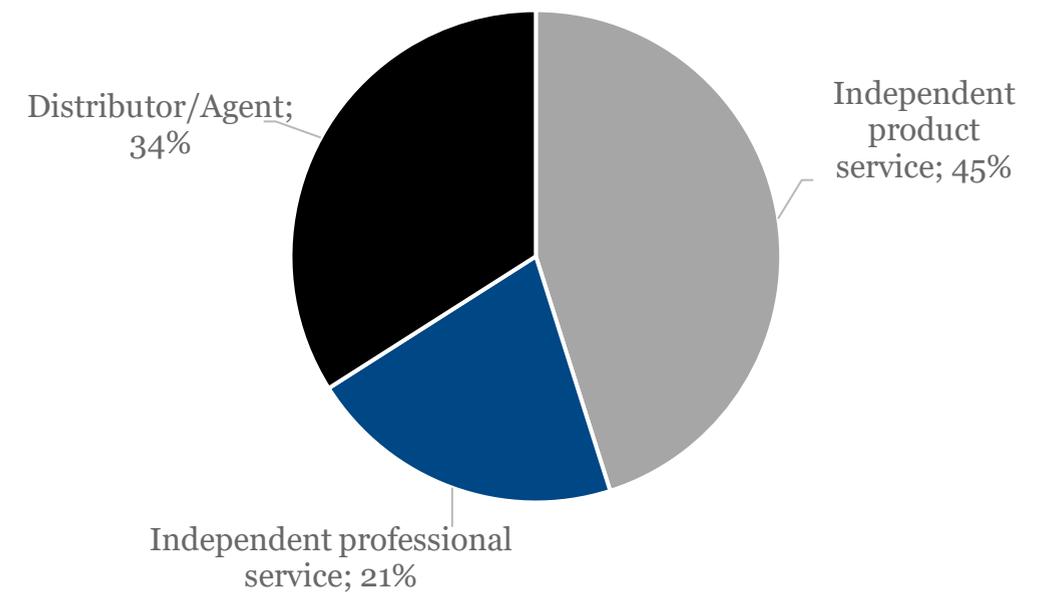
- Taiwan is a reputable ICT hub especially considering information security hardware such as devices, modules and chips
- Cybersecurity service sector contains the strongest growth momentum.
- Both cybersecurity service and proxy service sectors create the space for international cybersecurity companies to land on Taiwan market.

Due to a fragmented market that Taiwanese cybersecurity companies are comparably smaller in size

Taiwan Domestic cybersecurity companies by revenue in MUSD



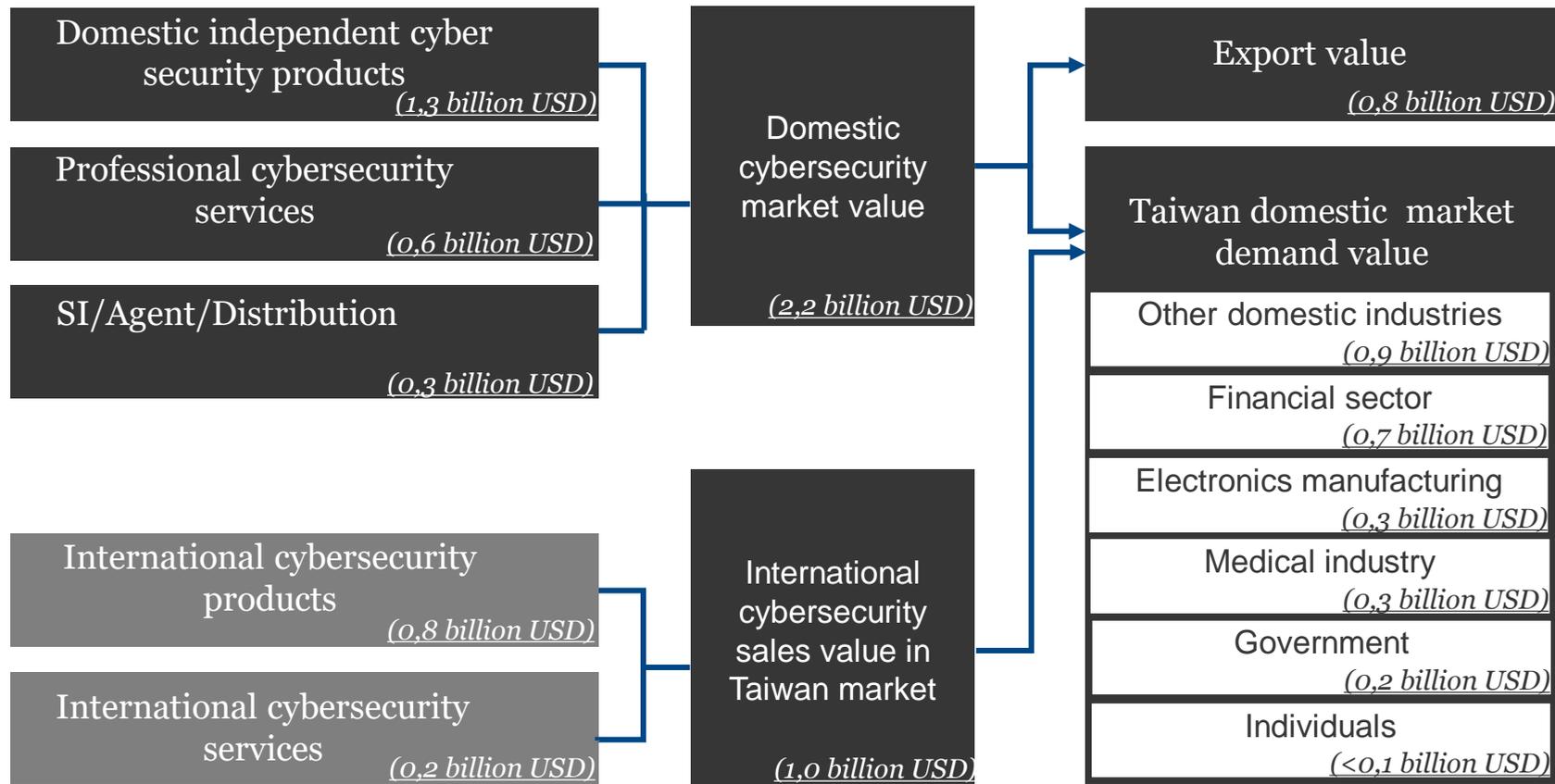
Taiwanese domestic cybersecurity companies by category



- There are approximately 350 cybersecurity companies in Taiwan, around 66% of them are developers and 34% are distributors or agencies
- Nearly 75% of Taiwanese cybersecurity companies are SMEs and have a revenue of <3,6 MUSD

International cybersecurity has good position in Taiwan market, finance and electronics manufacturing sectors contains momentum for target market

Export and Import status of Taiwanese Cybersecurity Market in 2021

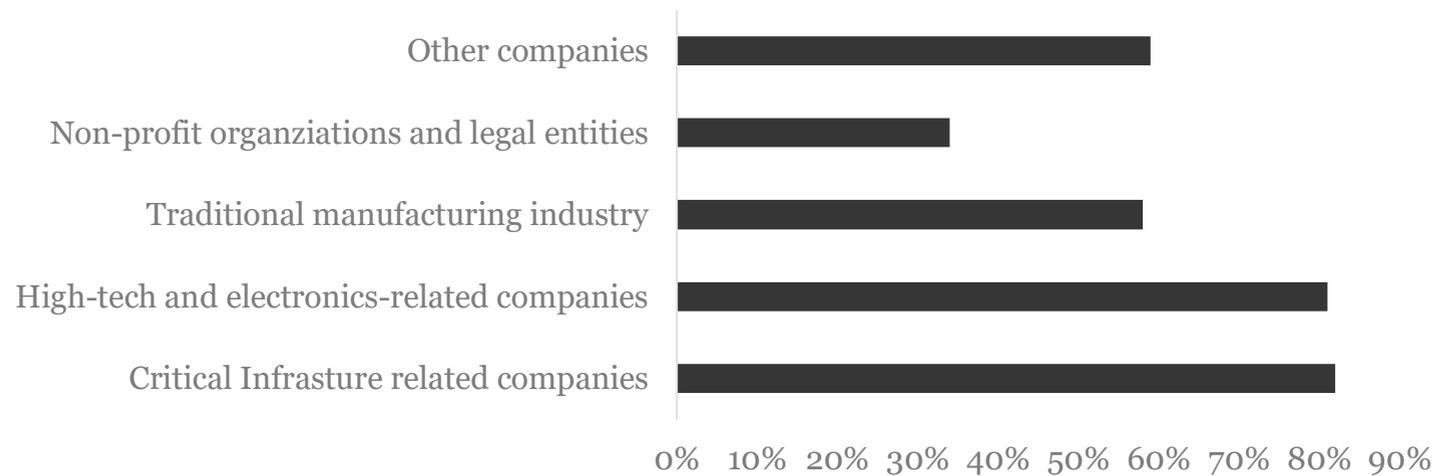


Key Takeaways

- 32% of Taiwan cybersecurity sales in Taiwan are conducted by foreign companies leaves a good benchmark for international cooperation.
- Financial sector and electronics manufacturing sector are accelerating and devoting investment on cybersecurity capability to reduce the operational risk from cyberattacks.

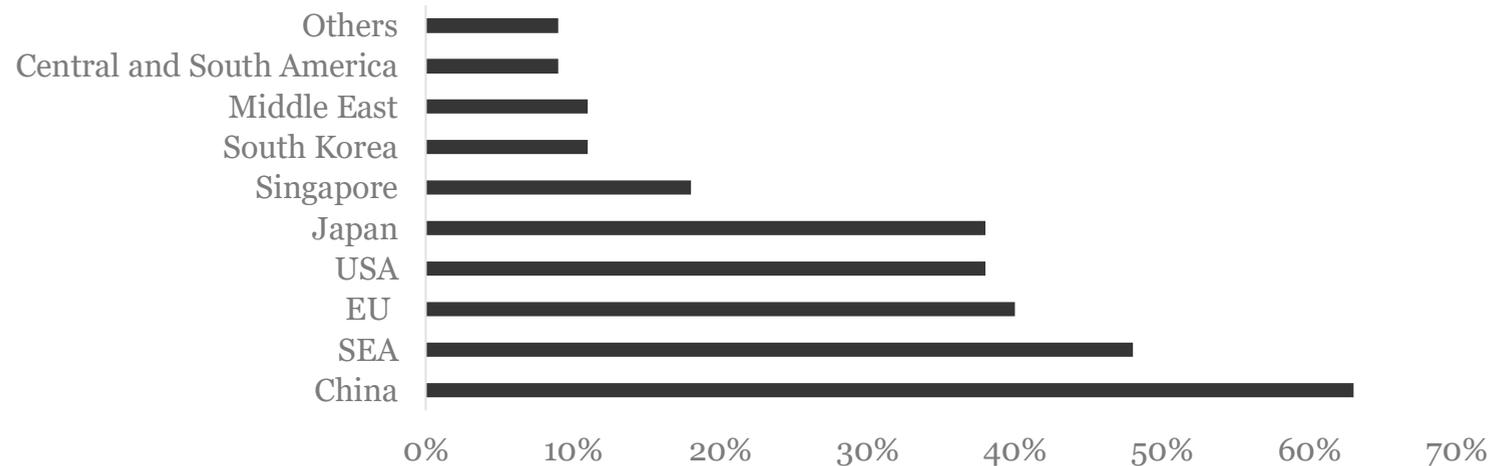
Critical infrastructure and high-tech companies are the two most targeted end-customers on the Taiwanese market

Taiwanese cybersecurity companies preferred targets



- “Critical infrastructure related companies” and “high-tech and electronics-related companies” are the favorable targets for Taiwan cybersecurity companies due to willingness to invest in cybersecurity

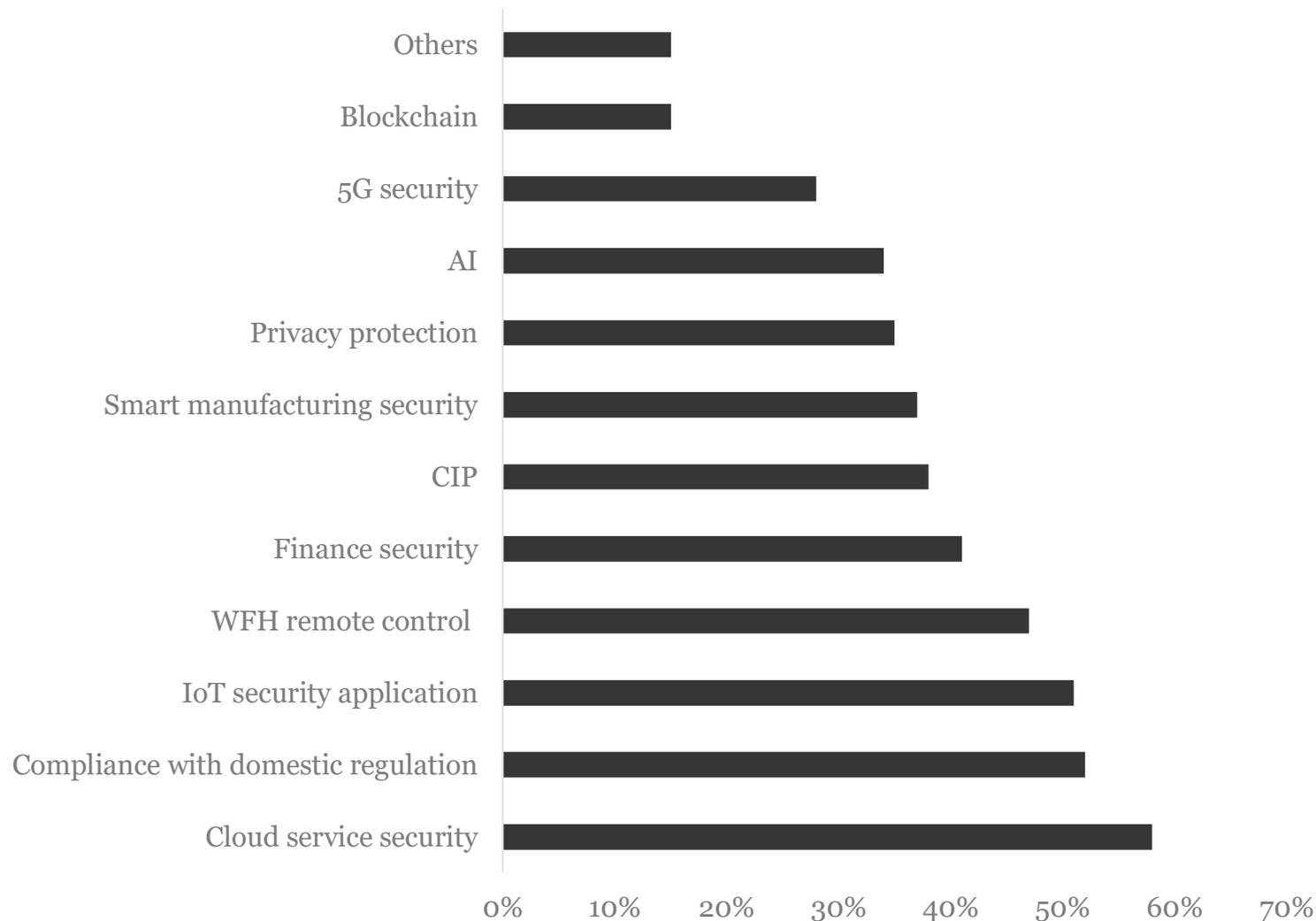
Which markets do Taiwanese cybersecurity companies sell to?



- China and southeast Asia remained top two overseas market for Taiwan cybersecurity companies given these two markets are traditionally the priority for Taiwan export and familiarity of the market status.

Cloud service security solution, compliance and IoT security are the most emerging concerns for Taiwanese corporates and enterprises

Emerging cybersecurity topics among the Taiwanese enterprises



- Cloud service security top concern among Taiwanese corporations.
 - Most of the IT and OT infrastructure has been transferred and operated in the cloud service platform (either public cloud or private cloud)
- Compliance with domestic security law also becomes the critical issue for Taiwan enterprises since government have been working heavily on cybersecurity regulation from 2017.
 - Financial sector and infrastructure sectors especially targeted
- IoT security concern quickly surged as #No.3 along with trendy for smart manufacturing and industrial IoT adoption in Taiwan market.

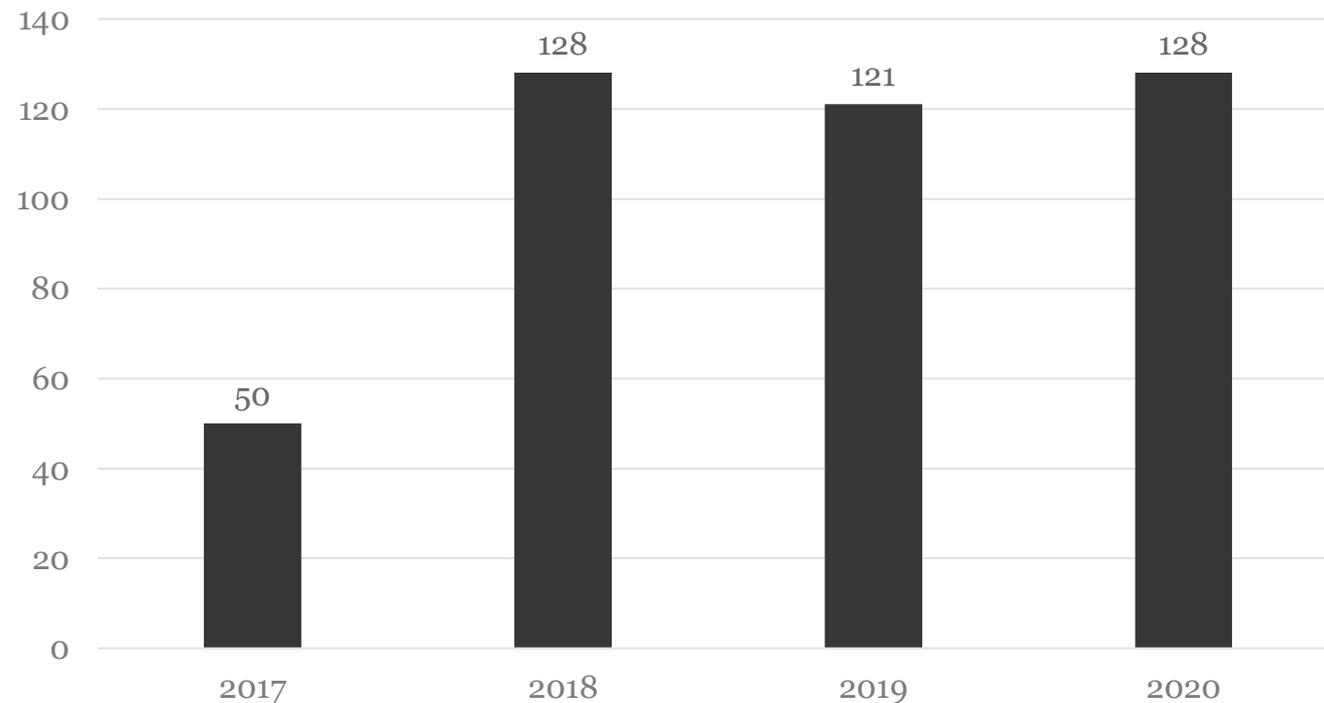
The Taiwanese market offers a vibrant cybersecurity eco-system

Sub-category	Exemple companies	Total number of companies identified
Endpoint prevention		56
Endpoint detection and response		39
Network firewall		39
Advanced threat protection		27
Encryption		38
WAF & application security		39
Application and security testing		25

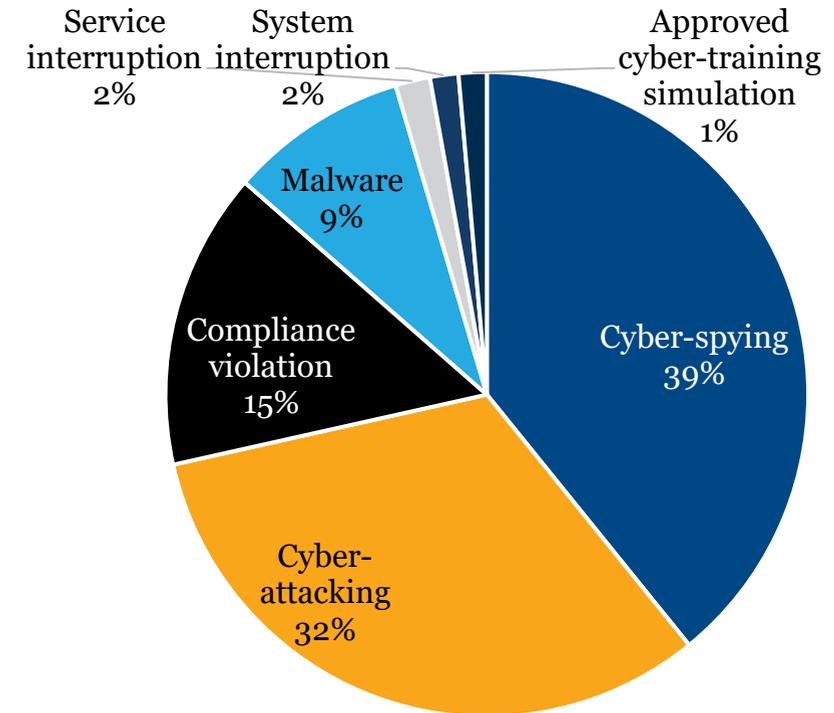
Government increased its budget on cybersecurity almost threefold since 2017

Taiwan central government budget on cybersecurity

Unit: million USD



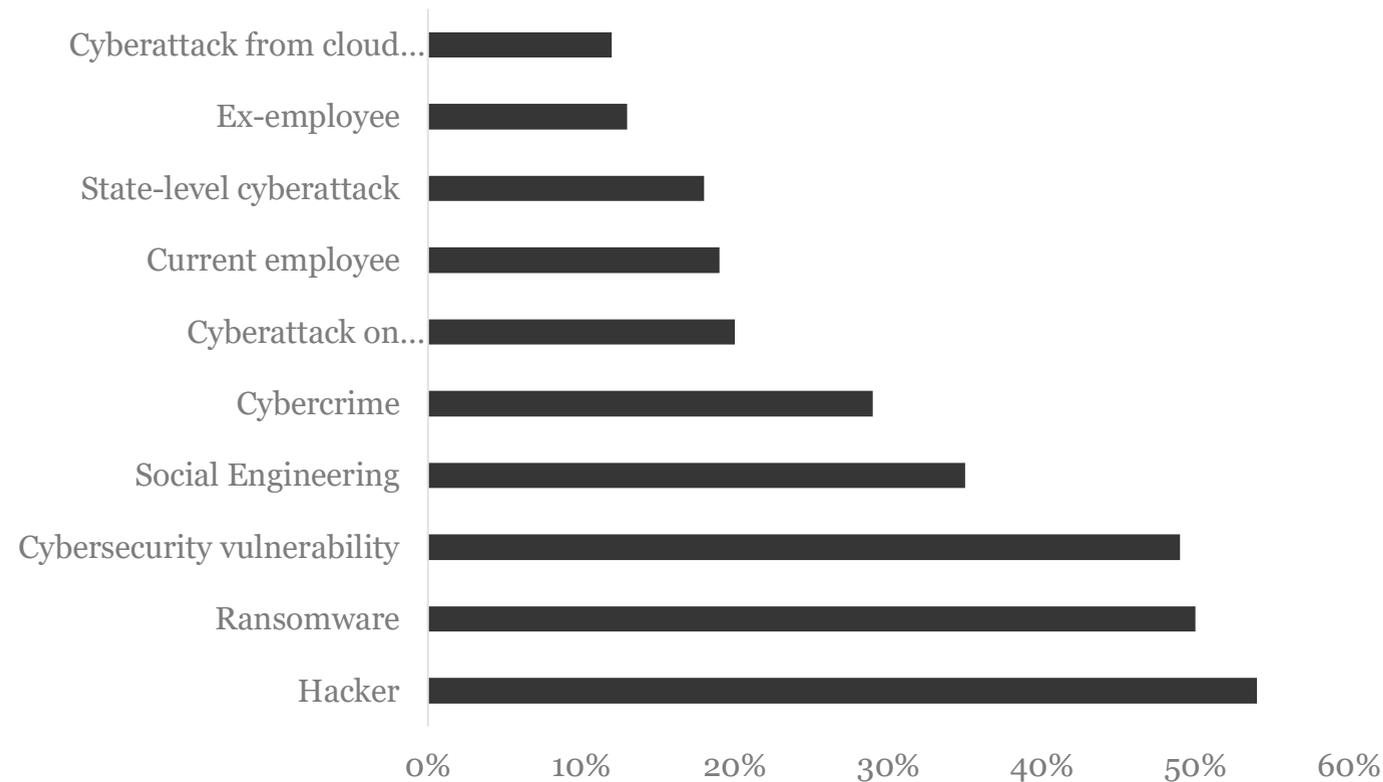
2020 statistics on cyber threat to Taiwan government



- Taiwan central government has planned to dedicated more funding on cybersecurity from year of 2018. The average cybersecurity budget has been tripled to average USD\$128 million per year in 2018 and 2020.
- Cyber-spying and cyber-attacking are the most critical threat for Taiwan government, accumulatively accounted for 70% of total cyber threat to the Taiwanese government.

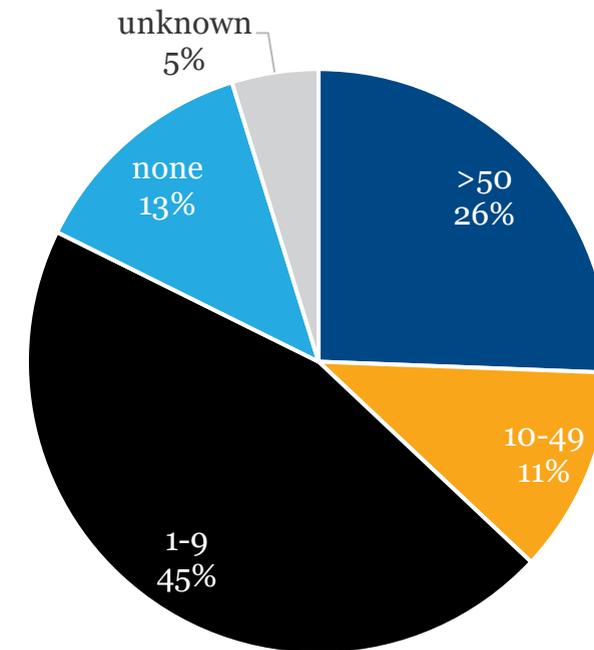
Hacker, ransomware and cybersecurity vulnerability are considered as the highest cybersecurity risk in coming 12 months

TOP 10 Cybersecurity risk for Taiwan enterprises in 2021



Cyberattack frequency in 2020

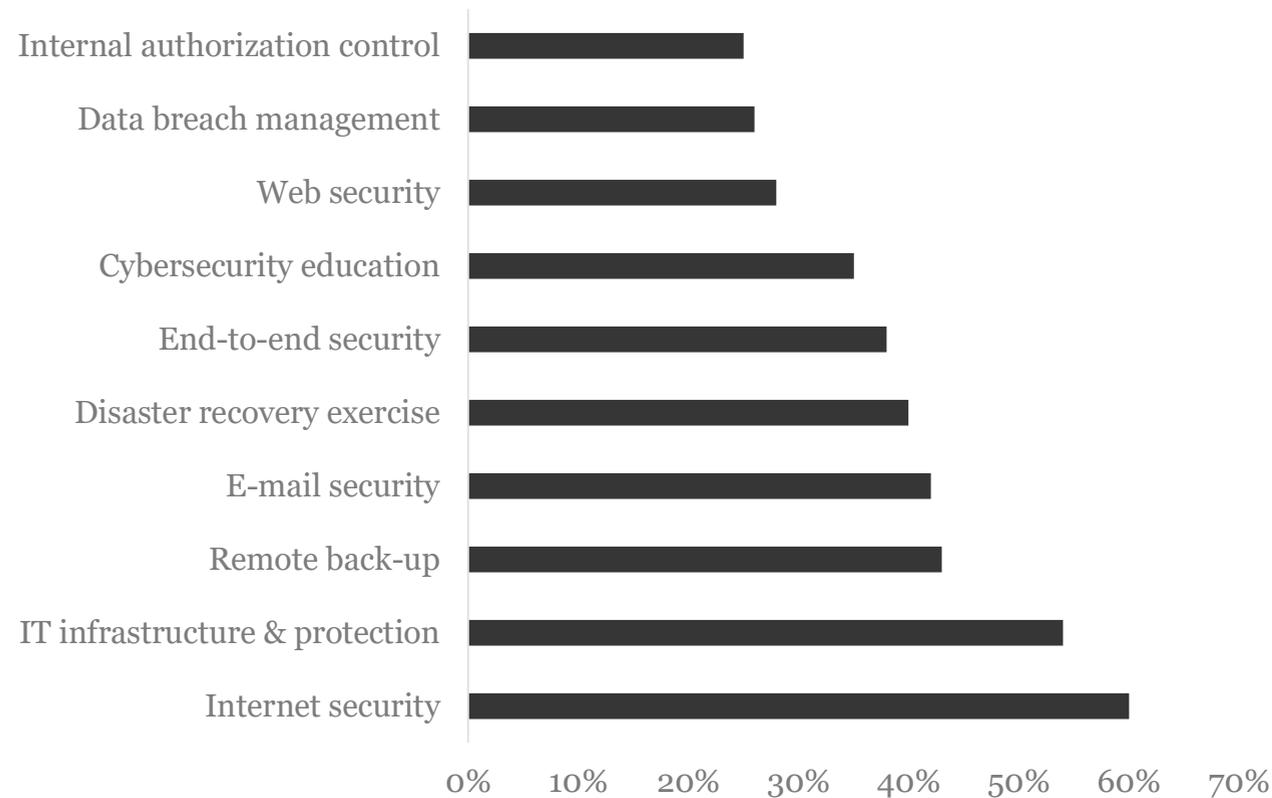
Unit: number of attacks in a year



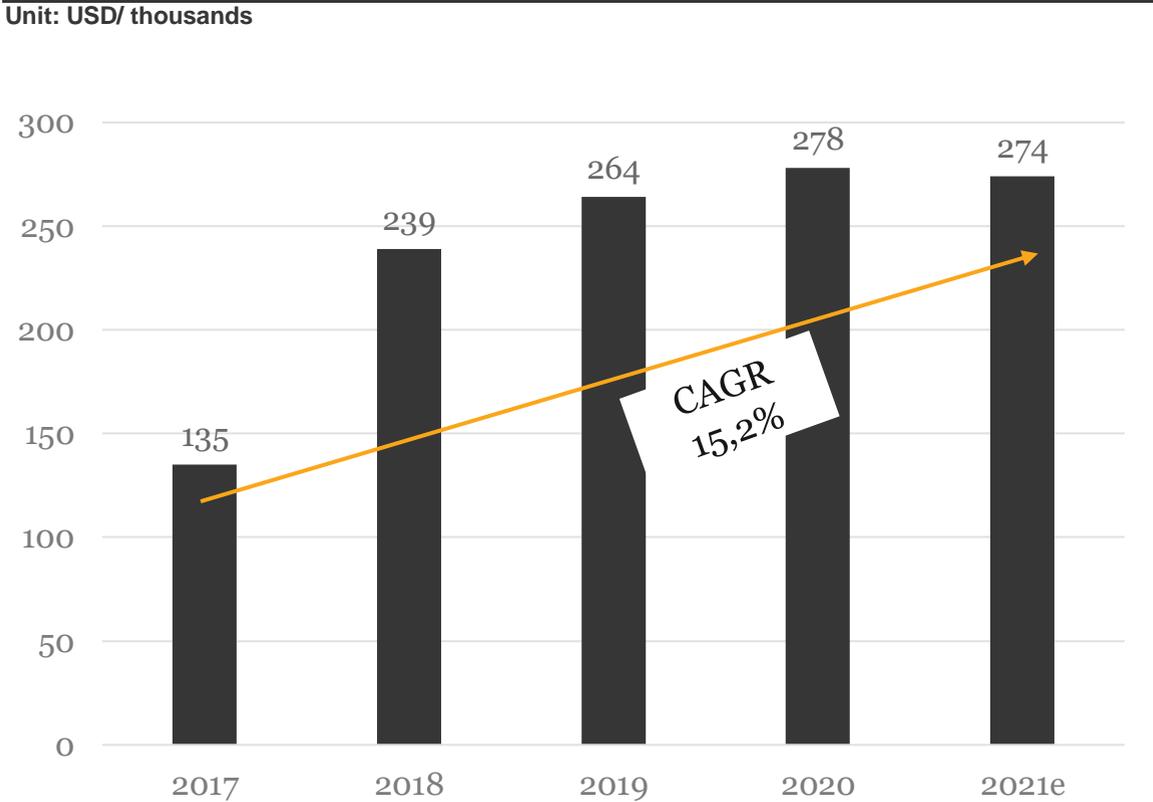
- Nearly half of the CIOs in Taiwan respond that hacker, ransomware and cybersecurity vulnerability are considered the highest cybersecurity risk in the upcoming 12 months, which reflects that operational damage and confidentiality is the major concern when facing cyber-attacks.
- In 2020, 25% of the interviewed companies have encountered more than 50 cyberattacks in one year and the ratio has continuously grown in the last three years.

Modest cybersecurity investment with the priority on internet security, Infrastructure protection and remote back-up

TOP 10 enterprise cybersecurity investment in 2021



2017-2021e Taiwan enterprise average cybersecurity investment



- While internet security and IT infrastructure remains the top two investment directions, demand for remote back-up and disaster recovery exercise shows strong momentum amid the uncertainty of covid-19 pandemic and supply chain disturbance.
- After increased cybersecurity investments in 2018 (mainly due to the compliance from government), the overall cybersecurity investment trend has come to normal pattern.

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Cyberattack on TSMC triggered nationwide cybersecurity regulations on the semiconductor industry

Taiwan Semiconductor Manufacturing Company sites



Cybersecurity Standard on Semiconductor industry

Name	SEMI 6506	SEMI 6565	SEMI 6566
Purpose	Ensure the cybersecurity fundamental facility	Application whitelisting	Standardization of the process of equipment delivery, installation and maintenance
Target Companies	1.) Equipment provider 2.) Tool provider 2.) system integrator	1.) Semiconductor equipment manufacturers	1.) equipment vendor 2.) system integrator 3.) Any other equipment stakeholders
Target application	Overall cybersecurity environment	Application software on equipment and tool.	Definition of equipment delivery and management

Source: TSIA and Business Sweden analysis

- TSMC, the worldwide leading semiconductor manufacturing company, suffered the cyberattack in August 2018 and resulted in operational loss of 90 MUSD. Multiple manufacturing sites in Hsing-Chu, Taichung and Tainan has been impacted.
- The attack on TSMC awakened the semiconductor industry, the government and associations to formulate the cybersecurity standard for semiconductor industry.
- SEMI E187 - Specification for Cybersecurity of Fab Equipment, the official document from SEMI 6506C draft, is the first international standard for semiconductor industry leaded by Taiwan, which is the strong approved evidence about the critical influence from Taiwan semiconductor industry.

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Don't hesitate to reach out to us regarding cybersecurity



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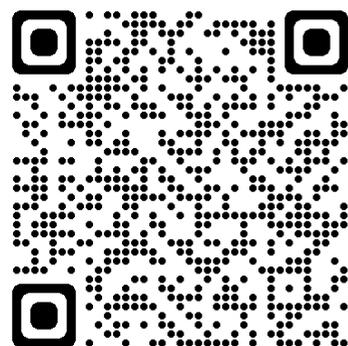
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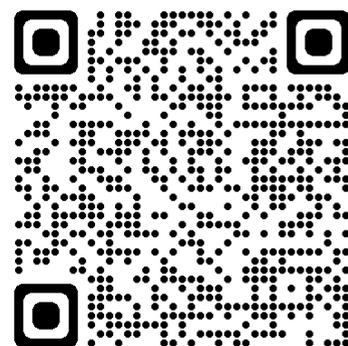
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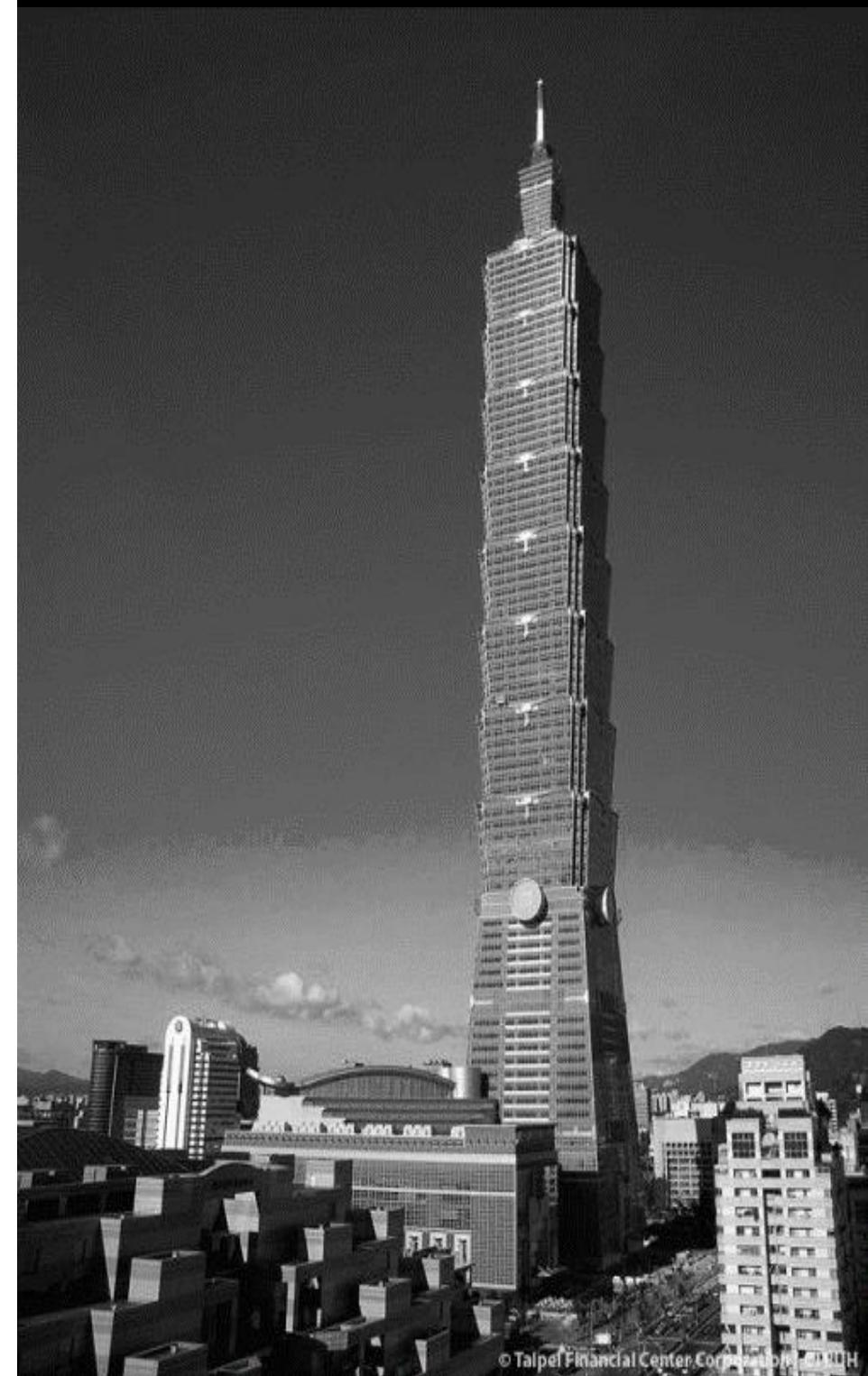
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