

Integrity and Transparency

P135. Corporate Governance

P138. Risk Management

P145. Information Security

P149. Business Integrity

P153. Customer Service

A Trustworthy Company

Nanya adheres to regulations and abides by moral standards. We continue to strengthen corporate governance and risk management mechanisms and use comprehensive education and training programs to improve the professional ethics of all employees and build common prosperity in the industry to become the most trustworthy company.

DJSI World Index

Inclusion as Constituent of "DJSI World Index" and "Emerging Markets Index"

98.5%

98.5% of customers were satisfied with the overall performance of Nanya

Top 5%

Top 5% in the 8th Corporate Governance Evaluation of TWSE Listed Companies





Strategy and Performance of Material Topics



Risk Management

Risk management: Establish effective risk improvement mechanisms and procedures
Loss management: Operating stress test and lowering operating costs.
Effectiveness: Mobilize all employees for risk management training and regular drills for operating risks.

2022 Goals	2021 Goals	Target achievement status
Regular quarterly meetings and annual reports to the Board of Directors	4 times	● 4 times
Emergency response plan completion rate: 55 items	55 items	● 63 items
Stress test: Implement 7 aspects each year	7 aspects	● 8 aspects
Education and training: 100% of all employees	100%	● 100%



Business Integrity

Focus on both internal and external operations: Implement regular internal education and training sessions and expand them to include external entities. Provide sufficient reporting channels and protection to cultivate professional ethics and legal compliance culture.

2022 Goals	2021 Goals	Target achievement status
Material violations of regulations: 0 cases	0	● 0
Corruption cases: 0 cases	0	● 0
Employees' labor ethical training completion rate: 100%	100%	● 100%
Employees' antitrust training completion rate: 100%	100%	● 100%
Workplace violence: 0 cases	0	● 0



Customer Service

Design and testing: Use global engineering support services to resolve issues with customer design and testing.
Production and sales: Implement rigorous control of quality and improve delivery efficiency.
After-sales services: Use the customer complaint management system to quickly resolve customers' issues

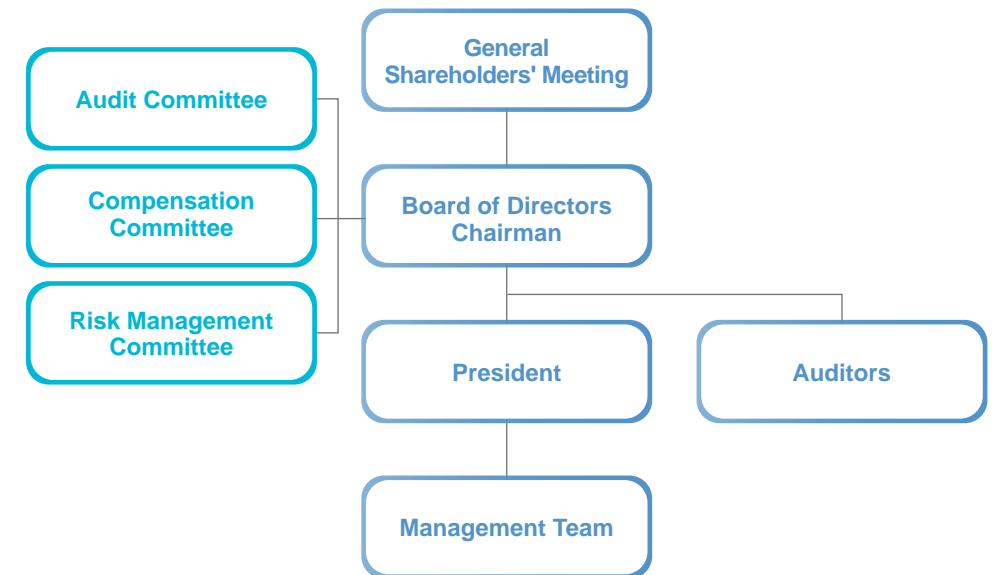
2022 Goals	2021 Goals	Target achievement status
Customer satisfaction score: Over 90 points	90 points	● 93.8 points
Customer participation in platform parameters measurement services: 930 cases	930 cases	● 1,036 cases
Joint product verification services for customers: 24 cases	24 cases	● 29 cases
Customer technical exchange and courses: 88 sessions	80 sessions	● 90 sessions

● Goal exceeded ● Goal achieved ● Not achieved



Corporate Governance

Nanya believes that through comprehensive and efficient corporate governance mechanisms, we are able to reinforce the Company's operations and protect shareholders' interests. Nanya was selected as a constituent of the Dow Jones Sustainability Indices (DJSI) World and Emerging Markets in 2021 and was awarded a Bronze Class Medal in the S&P Global Sustainability Yearbook 2022. Currently, the Company is also one of the constituent stocks of the FTSE4Good TIP Taiwan ESG Index and the TWSE Corporate Governance 100 Index. Moreover, Nanya was also ranked in the top 5% for the fourth time in the 8th Corporate Governance Evaluation of TWSE Listed Companies released in 2022. The aforementioned performance shows that our continued efforts in corporate governance are recognized.



Operations of Board of Directors and Functional Committees

Nanya's Board of Directors complies with relevant laws and regulations and resolutions of shareholders' meeting in its operations. The Board members possess professional knowledge, skills, and qualifications required for the performance of their duties, and they shall maximize the interests of the shareholders based on sustainable development of the Company. The Board of Directors' primary responsibilities are to ensure information transparency and legal compliance, appoint senior managements, formulate earnings distribution proposals, and supervise and provide guidance for the Company's operations. To establish a sound governance system for the Board of Directors, Nanya formulated its "Rules of Meetings of the Board of Directors" to stipulate that if a Director is an interested party in relation to an agenda item, the Director shall recuse himself or herself from participating in voting on that agenda item at a meeting. Besides, the Company established the "[Codes of Ethics of Directors and Managers](#)" to require related personnel to uphold moral principles in the performance of their duties and prevent acts that damage the Company and its shareholders' interests. A total of 6 meetings of the Board of Directors were held in 2021, and the average attendance rate of the Directors was 100%, including attendance in person (96%) and attendance by proxy.

► Nomination and Election of Board Members

Nanya established fair, just, and open [rules for the election of Directors](#), encouraging shareholders to participate in the nomination and election of Directors. The candidate nomination system and the cumulative voting method are adopted for the election of Directors pursuant to the Company Act and relevant laws and regulations. The Company has 9 to 12 Directors, including at least 3 independent Directors. Moreover, at least one of its independent Directors is required to have accounting or financial expertise and any of its independent Directors shall not concurrently hold independent director positions in more than three other public companies. The Company also established the regulations of "Performance Evaluation of the Board of Directors" and conducts the performance evaluation every year. The evaluation results serve as a reference for the nomination and re-election of the Board members.

► Diversity of Board Members

Nanya's [Corporate Governance Principles](#) stipulate that the composition of the Board of Directors shall be determined by taking diversity into consideration, including but not limited to gender, race and nationality. The Board of Directors consists of 12 members^{Note} with different professional backgrounds and they serve for a three-year term. The Board members include 3 independent Directors, 2 female Directors (independent Directors and female Directors account for 25% and 17% of all members, respectively), and 8 Directors who do not serve as managerial officers of Nanya (they account for 67% of all members). In particular, the Chairman also does not concurrently serve as a senior manager of Nanya, which promotes the Company's sustainable governance by a clear division of duties. As of the end of 2021, 3 Directors were aged 50-59 and the others were over 60 years old. In addition, the average tenure of the Directors is 9 years, which is calculated on an annual basis.




Implementation of Board Diversity Policy

Note: Due to the expiration of the Director's three-year term, Nanya's general meeting of shareholders re-elected 12 Directors (including 4 independent Directors) on May 26, 2022. Please refer to the "Board of Director" information on the website for [Nanya's new Directors](#).

► Professional Courses for Board Members

To strengthen the Directors' professional competencies, the Company arranges for the Directors to take at least 6 hours of training courses every year. In 2021, the total training hours for all Directors reached 109 hours with an average of 9.1 hours per Director, including various courses such as economics, corporate governance, legal compliance, information security, global risk trends, development trends of international carbon tariff, etc. Please refer to pages 57 to 58 in Nanya's 2021 [Annual Report](#) for the Directors' training situation.

In addition to having different professional backgrounds, Nanya's Directors have experience as senior managers, government officials, or public representatives, so they possess diverse abilities required to perform the duties of Directors. In 2022, the Company plans to arrange for the Directors to take training courses in sustainable development, corporate governance, or risk management in order to conform with the development trends in sustainability topics and corporate governance, and strengthen comprehensive competencies of the Directors.



A total of **6** meetings of the Board of Directors were held in 2021

the average attendance rate of the Directors was **100%**, including attendance in person (96%) and attendance by proxy



the total training hours for all Directors reached **109** hours

with an average of **9.1** hours per Director

Functional Committees and Main Duties

For developing supervisory functions and strengthening management mechanisms of the Board of Directors, an audit committee, a compensation committee, and a risk management committee were set up under Nanya's Board of Directors. Each functional committee is responsible to the Board of Directors and submits proposals to the Board of Directors for resolution.

Audit Committee



- The Committee consists of 3 independent Directors and Mr. Ching-Chyi Lai serves as the convener.
- 6 Audit Committee meetings were held in 2021 with an attendance rate of 100%.

Authority and responsibility: The Committee supervises the Company's business execution and finances and reviews the financial books. It assists the Board of Directors in its supervisory duties and it is responsible for tasks specified in the Company Act, Securities and Exchange Act, and other relevant laws and regulations.

Compensation Committee



- The Committee consists of 3 independent Directors and Mr. Shu-Po Hsu serves as the convener.
- 2 Compensation Committee meetings were held in 2021 with an attendance rate of 100%.

Authority and responsibility: The Committee establishes and periodically reviews the policies, systems, standards, and structure for the performance assessment and compensation of the Directors and managerial officers.

Risk Management Committee



- The Committee consists of 5 Directors (including 3 independent Directors) and Mr. Ching-Chyi Lai serves as the convener.
- 2 Risk Management Committee meetings were held in 2021 with an attendance rate of 100%.

Authority and responsibility: The Committee reviews the policies and frameworks of risk management, risk appetite and tolerance levels, oversees the operation of risk management mechanisms, reviews the management reports for material risk issues, and timely reports to the Board of Directors.

Performance Evaluation of Board of Directors and Functional Committees

To implement corporate governance and enhance the Company's Board functions, Nanya's Board established the regulations of "Performance Evaluation of the Board of Directors". An internal Board performance evaluation shall be performed every year. In 2021, the performance evaluation was conducted on the Board as a whole, individual Directors, the Audit Committee, the Compensation Committee, and the Risk Management Committee. The evaluation results were all "Good". Moreover, the performance evaluation results were reported to the Board of Directors in December 2021. Please refer to pages 31 to 32 in Nanya's 2021 [Annual Report](#) for the implementation of the performance evaluation.

Compensation of Senior Executives

The compensation of managerial officers of the Company includes monthly salaries and various bonus systems, pension systems, and evaluation systems approved by the Compensation Committee. They are reported to the Board of Directors for approval before implementation.

The salary adjustment, bonuses, and other compensation of senior executives are determined in accordance with the Company's operations and personal performance and contributions. The Company included their economic, environmental, and social contributions and other corporate governance indicators for sustainable development. The Company also references salary standards in the industry and assigns the Human Resources Department to draft recommendations and report them to the Compensation Committee. The Committee Member shall review the recommendations and submit them to the Board of Directors for approval and execution.

Shares Held by Senior Executives

March 28, 2022

Title	Name	Shareholding (shares)
President	Pei-Ing Lee	1,155,098
Executive Vice President	Lin-Chin Su	370,601
Vice President	Joseph Wu	460,000
Vice President	Rex Chuang	459,000
Vice President	Yau-Ming Chen	0
Assistant Vice President	Chi-Meng Su	0
Assistant Vice President	Mark Mao	0
Assistant Vice President	Jeff J.P. Lin	216,027
Assistant Vice President	Rex Chen	62,000
Assistant Vice President	Chuan-Jen Chang	173,048



Risk Management

To reinforce functions of the Board of Directors and risk management mechanisms, Nanya established the Risk Management Committee under the board in 2020. In accordance with the Risk Management Committee Charter, the number of committee members shall not be fewer than three members, and half of the members shall be independent directors. Currently, the Risk Management Committee consists of three independent Directors and two Directors.

Nanya formulated the Risk Management Regulations, which was approved by the Board of Directors. In accordance with the Risk Management Regulations, the risk management policies are effective identification, analysis and assessment, control and action, ongoing supervision of various risks, and enhancement in risk awareness of the staff, with the aim of controlling risks within the tolerance level, and ensuring the integrity, effectiveness, and efficiency optimization of risk management.

Missions and Commitments

Risk Management Commitments

All employees shall adhere to their commitments and managers in particular should lead by example and fulfill their supervisory responsibilities.

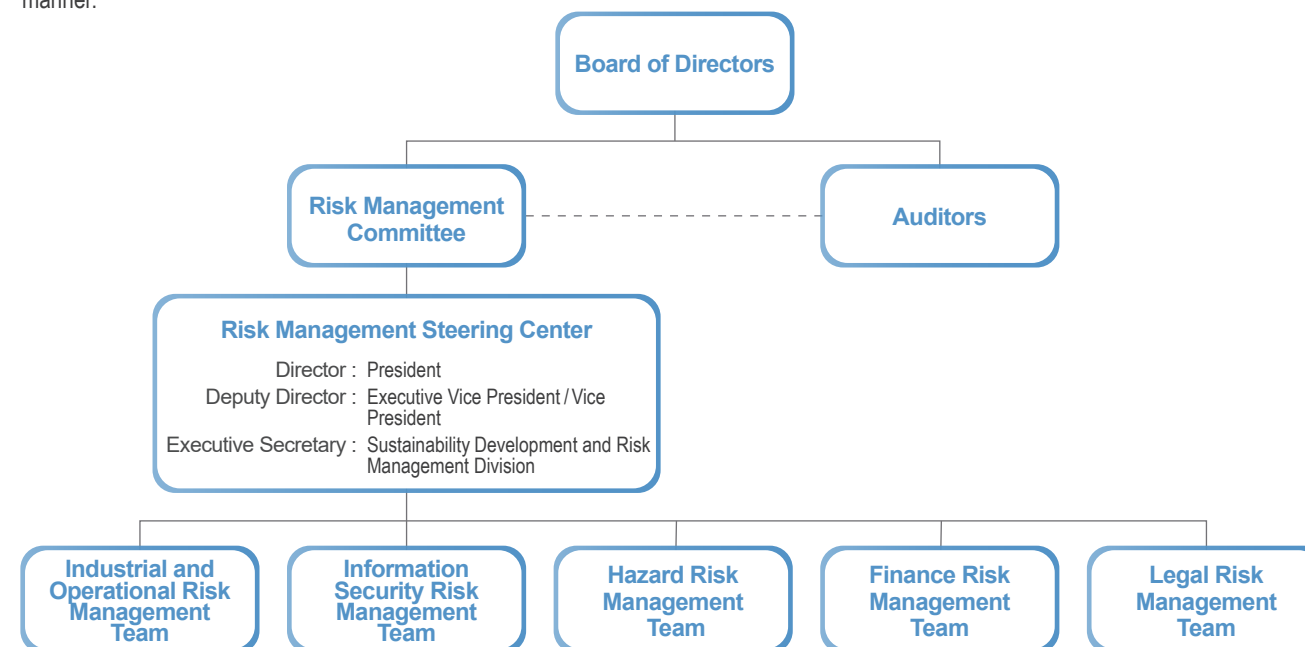
- We shall ensure that employees of all levels receive adequate training and have the skills for performing various risk management tasks to ensure the normal operations of the Company.
- The Company shall provide necessary resources to maintain the effective operations of risk management mechanisms and continue to implement improvements to reduce risks.
- We shall strengthen communication with stakeholders, increase the risk management awareness of all employees, and fulfill our risk management policy.

Risk Management Missions

We will establish and maintain effective risk management systems and constantly improve them, lower operation cost to ensure corporate sustainable profits, and create a quality working environment to achieve the goals of corporate sustainable operation.

Organization and Operations

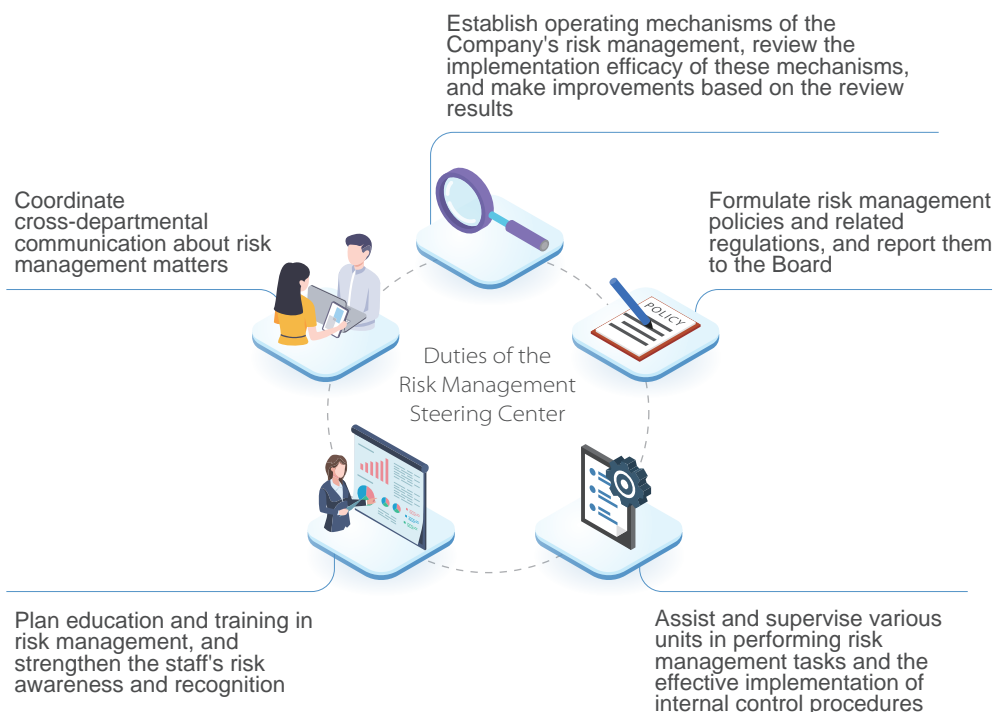
Our Board of Directors is the highest decision-making and supervision unit, responsible for approving risk management policies and related regulations. Moreover, the Risk Management Committee under the board assists in reviewing risk management policies and frameworks as well as risk appetite and tolerance, and supervises the implementation of various risk management systems along with the effective operation of the systems' mechanisms so as to reach the goals of risk management. The Risk Management Committee shall meet at least once a year (two meetings were convened in 2021) and report the situation of risk management or major risk items to the Board of Directors in a timely manner.



In accordance with the [Risk Management Regulations](#), Nanya established the Risk Management Steering Center. The President serves as the center's Director and members are assigned by each department head based on tasks. The Steering Center is responsible for promoting and supervising the work implementation of each risk management team as well as the entire risk control. Moreover, to conform with the Company's operational strategies, the Steering Center set up five functional teams, i.e., industrial and operational, information security, hazard, finance, and legal, under its purview. Each risk management team not only shall gather risk information on internal and external environments to perform daily risk monitoring, but shall also constantly follow up and assess the risk level of risk factors, take improvement measures, and report implementation results of risk management to the Steering Center.

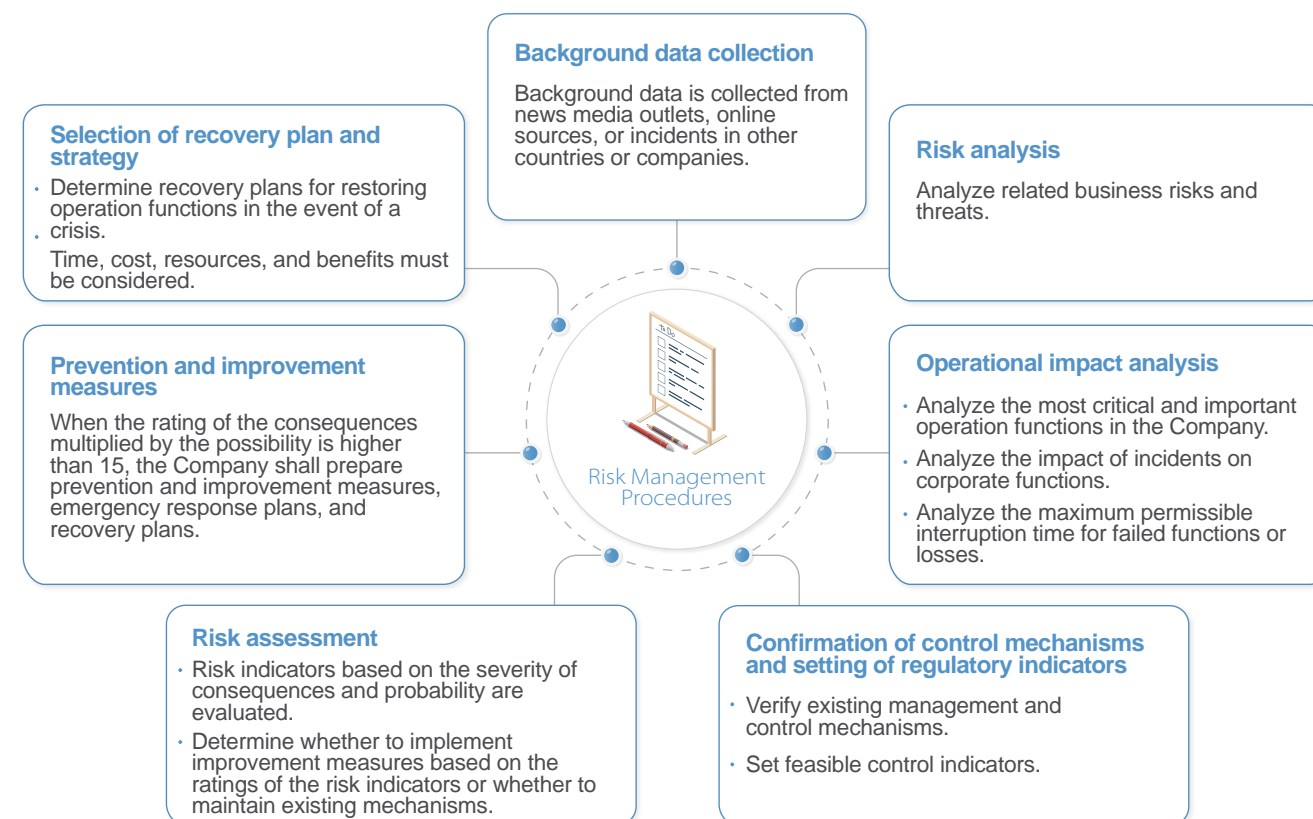
The Risk Management Steering Center shall meet quarterly to review the operational performance and business continuity plans of each risk management group to ensure the applicability, suitability, and effectiveness of the ongoing operations of these risk teams.

The Auditors shall annually check the implementation status of risk management policies and higher risk items at irregular intervals, provide suggestions for improvements in a timely manner, and follow up the improvement results.



Risk Management System

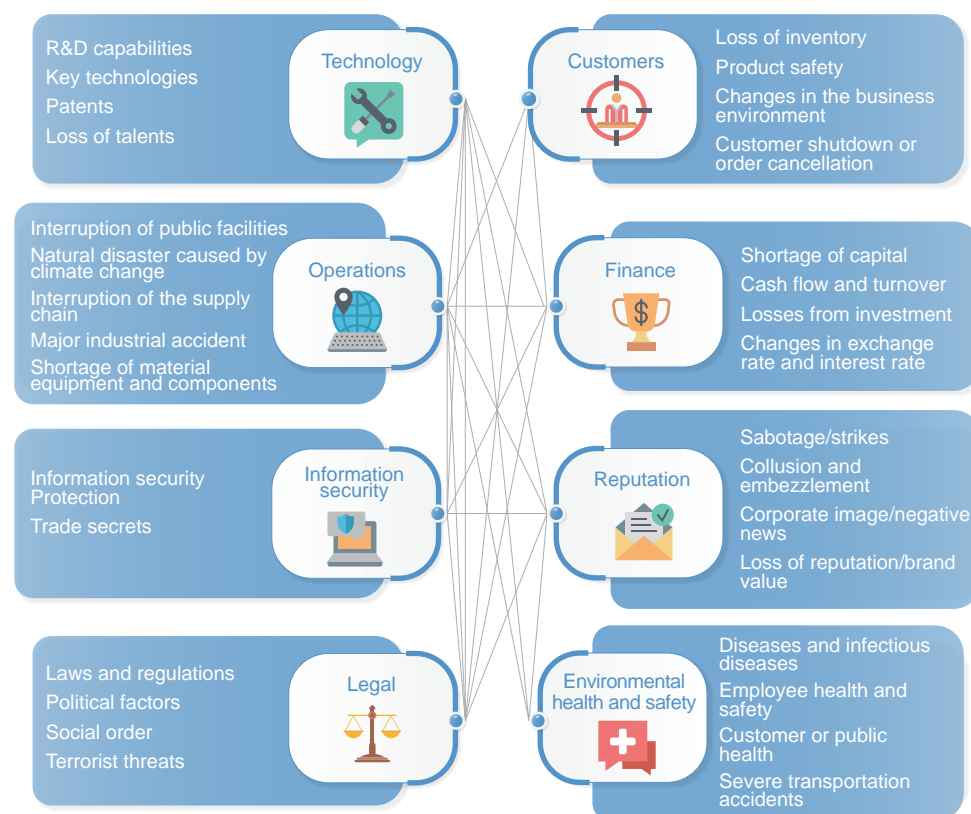
Nanya's risk management systems are used to identify and analyze risks currently faced by the Company, establish suitable risk limits and control procedures, and supervise compliance with various risks and risk limits. We adopt risk management systems and uncover the Company's potential risks and opportunities to effectively execute risk management and ensure normal operations of the Company. We create value for shareholders, employees, customers, and society to achieve sustainable development goals for the Company.



In accordance with the mechanisms and values of the ISO 31000 Enterprise Risk Management (ERM) Guidelines, Nanya formulated risk management policies and procedures in combination with our long-term goals of business strategy to serve as guiding principles. We shall annually review emerging risks in the near three to five years and follow them up. Through long-term planning and promotion, we aim to establish the staff's risk awareness and further internalize the awareness in daily management to ensure the normal operations of the Company.

Relevance of Risk Factors

In accordance with the Risk Management Systems, on the aspects of the Company's operations, technologies, customers, finance, reputation, environmental health and safety, legal, and information security, we confirmed the factors of potential risks, threats, and operational impacts in internal and external environments, and found the following highest relevance of risk factors after analysis: interruption of public facilities, natural disasters caused by climate change, interruption of the supply chain, major industrial accidents, and shortage of important equipment or components. These factors are shown to have the most extensive impacts on the Company's overall operations. We therefore use quarterly meetings to discuss related prevention and improvement measures on a regular basis to enhance our standard operating procedures. We also conduct regular drills for emergency response measures to effectively minimize risks.



Emergency Response Mechanisms and Measures

Nanya abides by the principles set forth in ISO 22301 for implementation in emergency response mechanism and measures in ISO 9001, ISO 14001, ISO 50001, ISO 27001, and ISO 45001, and obtained certificates. To reduce risks and damage of emergency incidents, Nanya has a complete set of operational norms and methods for handling emergency anomalies, covering manufacturing, supply chain and warehousing, information security, human resources and other aspects. We can immediately take response measures in the event of an emergency, mitigate the impact of the incident and quickly recover, and ensure normal operations to meet client needs. For example, raw material shortage, incidents that affect 10% of output (such as earthquakes, typhoons, toxic gases, fire alarms, labor shortages etc.), abnormal utilities systems, abnormal automation systems, abnormal outsourcing capacity, and large number of customer returns, all have specific treatment steps and improvement measures.

In addition, the emergency response to personnel safety, such as fire alarm, gas leakage, leakage, odor, earthquake and radiation leakage, emergency response measures, notification procedures and command systems are all in accordance with relevant environmental health and safety regulations. Nanya organizes at least one emergency evacuation drill and two fire safety drills each year to ensure the effectiveness of emergency response measures. We use quarterly meetings to discuss related prevention and improvement measures on a regular basis to enhance our standard operating procedures. We also conduct regular drills for emergency response measures to effectively minimize risks.

Risk Identification

Risk Identification Results

Nanya annually identifies risk items proposed by the Risk Management Steering Center. We took response measures against identified risk items based on risk levels. A total of 180 risk items were proposed in 2021, and the risk profile and the distribution of risk items and quantities were specified below after identification. Based on the statistics, 0 items needed immediate improvement; 9 items required improvement plans, 104 items should have indicators set up for monitoring, and 67 items were kept under observation.

Distribution of risk items

Consequence (C)		Likelihood (L)				
		1	2	3	4	5
5	3	1				
4	9	2				
3	30	27	3			
2	31	33	5			
1	27	9				

Evaluation criteria of consequence: 1 = mild; 5 = severe

Evaluation criteria of likelihood: 1 = rare; 5 = always

Response measures: ■ Kept under observation

■ Set up indicators for monitoring

■ Require improvement plans

■ Immediate improvement

► Response Measures to Risks

After the risk identification, items that required improvement plans were mainly on the aspects of operations, accounting for 7 items, and information security, accounting for 2 items. Each team had formulated response measures against these items, and the measures were implementing. Moreover, related handling mechanisms were established.

Operational risk

- **Electricity:** Important equipment comply with SEMI-F47 (Semiconductor Equipment Materials International) for the response ability of power system to voltage sag, in order to ensure continued operation when there is a sudden drop in voltage within the controllable range. DUPS (dynamic uninterruptible power supply) and diesel emergency power generation system may be installed for important equipment and systems, so that it can continue operations using oil in the underground storage tank and supply from Formosa Petrochemical Corporation. Simulated different power rationing scenarios for emergency response drills each year.
- **Manpower:** Strengthened elite talent training, improved salaries and benefits, and maintained the employees' loyalty to the Company. Collaborated with high-quality universities and colleges on internships to prevent unstable manpower condition, and cooperated with manpower agencies for a long time to recruit short-term manpower immediately
- **COVID-19:** Established a pandemic management center; formulated pandemic prevention and management plans; set up reporting mechanisms and environmental disinfection operating procedures; and monitored real-time pandemic risks of each plant area through seat management, electronic supplier health declaration forms, pandemic prevention promotion, and regular audits. We established a Pandemic Response Task Force, which monitor domestic and foreign pandemic situations at all times, and promoted various pandemic prevention and response measures so as to ensure normal operations of the Company.

Information Security Risk

- Computers of relatively high risk endpoints are managed using ACL (Access Control List), and some important equipment have UTM (Unified Threat Management) system to lower the scope affected by risks.
- We plan to install an information security monitoring system to monitor the list of assets and network topology, implement vulnerability management and risk assessment, and use AI for big data analysis to achieve early discovery of potential threats.

Finance Risk

The sales of DRAM products are mainly conducted in US dollars. Nanya established an offshore subsidiary at the end of 2018 to reduce the impact of exchange rates on the US dollar positions held by the parent company. In the future, we will continue to periodically review and manage the US dollar positions and implement the following practices:

- Convert the US dollar cash to the New Taiwan dollar and keep the lowest US dollar positions;
- Evaluate the use of pre-selling Foreign Exchange Forward to lower the exchange rate risk of accounts receivable;
- Evaluate the increase in debt denominated in US dollars to offset the exchange rate risk of accounts receivable for retention of reasonable US dollar net positions to reduce the impact of appreciation (depreciation) in New Taiwan dollars on profit and loss

Hazard Risk

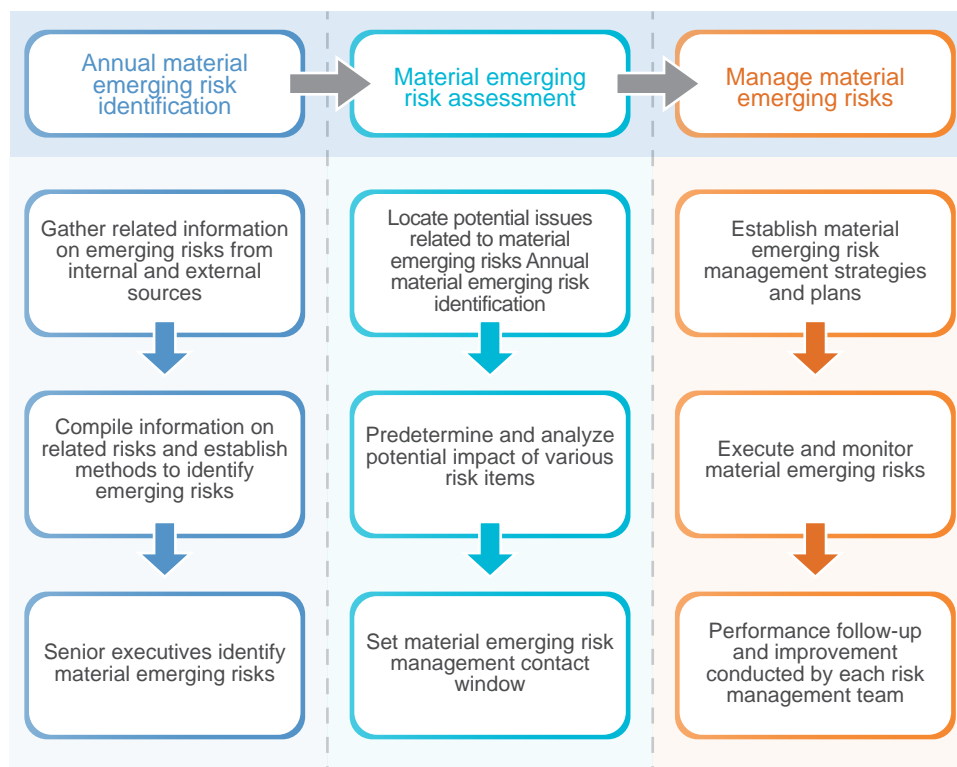
- Under the continued operation of EHS management systems (ISO45001 & ISO14001), the Safety and Health Committee is convened by the manager of operations each month, and the Safety and Hygiene Division continues to identify potential EHS risks. We have established indicators and continue to monitor low risk hazards. For medium and high risks, we proposed and implemented improvement plans, and presented the risks that were identified and their control measures in quarterly risk management meetings.
- In 2021, we found vulnerabilities in the pipelines of our natural gas supply system when reviewing medium risks, specifically the risk of natural gas supply being interrupted if an accidental collision causes leakage and the gas cannot be bypassed during repair. In response, we immediately reviewed the design to strengthen current pipelines and increase backup pipelines for natural gas supply to effectively control this risk. For medium high risks, in response to the construction of the parking tower in preparation for future factory expansion, Nanya sent personnel to step up daily inspections and audits of the construction site and conduct monthly reviews of deficiencies, in order to lower the risk of severe occupational accidents from occurring in the process.
- We have consistently directed our efforts to the implementation of Enterprise Risk Management (ERM), and we continue to identify potential risks and implement management measures for different levels of risk to mitigate the impact of incidents. We continue to improve our BCP/BCM to rapidly recover from impacts and reduce losses.

Legal Risk

- **Compliance with the Personal Data Protection Act:** In response to the personal data protection regulations of the European Union, United States, China, and Taiwan, Nanya has obtained the consent or authorization of employees and customers and updated labor contracts and employee manuals of overseas subsidiaries to ensure employee and customer privacy. With regard to cross-border transmission of information, we have signed cross-border agreements that comply with the regulations of each country or the official version agreements, and immediately update the versions to ensure their effectiveness.
- **Compliance with the climate change regulations:** We will cooperate with the government's long-term goals and implement carbon emission reduction measures, which are also included in the planning and design of new factories. The best available control technology (BACT) is used for air pollution prevention equipment. The prohibition or restricted use of GHG with high warming potential are prohibited or restricted, and may affect the use of process raw materials. We will evaluate a voluntary reduction plan to offset our emissions, and pay carbon fees according to the type of emissions, which may increase operating costs. A late penalty equal to 0.5% the amount of carbon fees payable will be imposed for each day payment is overdue, and a maximum fine of NT\$1 million may be imposed. Nanya has low risk of being ordered to suspend operations.
- **Intellectual property protection:** Due to the industry's characteristics, it is inevitable that we will face lawsuits filed by non-patent entities (NPEs). Nanya has formulated intellectual property management strategies, strengthened its patent portfolio, effectively defended against frivolous lawsuit, and established a trade secret registration system to systematically manage trade secrets. The implementation progress is reported to the Board of Directors each year, and is disclosed on the official website.
- **Compliance with antitrust regulation:** During the era of global commercial activities, many countries have strengthened antitrust law enforcement. The awareness of and compliance with antitrust regulations are highly associated with corporate development and reputation, and the management may bear civil liability for non-compliance with such regulations. Nanya has collaborated with legal experts of different countries, periodically gathered international antitrust standards and enforcement status, and comprehensively promoted the compliance with antitrust regulations to the staff. Currently, we have only one antitrust lawsuit case being appealed in the courts in Brazil, and this has no material impacts on our operations.

Emerging Risks

Nanya pays close attention to changes in the economic environment. We identify long-term risks and opportunities and adapt our business strategies to ensure sustainability and long-term operating performance. Each risk management team or managers at each level gathers related domestic and international information to evaluate potential risks in the Company's long-term operations. They used questionnaires or evaluations in meetings of senior executives to identify emerging risks with the highest level of potential impact in the future and review mitigation and response strategies. The topics and strategies are reported to the Risk Management Steering Center for resolution and used as important references for formulating future business strategies.



Department heads gathered emerging risks in 2021, and senior executives identified four material emerging risks. Nanya has formulated response countermeasures while continuing to implement improvements with the aim of mitigating related impacts.

Other Risks

Emerging Risk 1

Information Security-Hacking/Viruses may cause production, operations, or financial losses

Risk description

- The rise and convenience of the Internet and rise of cryptocurrency provides an excellent environment for cyber criminals to hide. The number of information security incidents (mainly extortion) has significantly increased due to cyberattacks from hackers/viruses. The number of major information security incidents among public companies in Taiwan in the fourth quarter of 2021 was higher than the total of the first three quarters (as shown in the table below).

Quarter	2021Q1	2021Q2	2021Q3	2021Q4
Number of suppliers	1	4	2	9

Source: TWSE

- According to Nanya's internal statistics, the number of hacking attempts has significantly increased since the beginning of 2021; information security risk significantly increased as the number of hacking attempts in 2022Q1 increased 174% compared to the 2021Q4, and increased 702% compared with the first quarter of 2021.

Impact

- If hackers use system vulnerabilities or social engineering to obtain classified and sensitive data of the Company or customers, they will be able to threaten or extort the Company or customers and cause financial loss or customer/business loss.
- Nanya has successfully developed process technology and designed products. If hacking causes R&D data to be stolen or leaked, it will threaten the Company's sustainable development and profitability.
- If hackers damage the Company's system or database, it will paralyze the Company's operations or cause production or operational losses.

Response measures

- Step up network monitoring mechanisms to immediately discover abnormal conduct and lower the probability of hacking or data leakage.
- Strengthen the depth of defense between the physical layer and data layer to increase the difficulty of hacking and encrypt classified documents to protect them from being used or threatened after being leaked.
- Continue to patch system vulnerabilities to lower known risks.
- Continue to analyze emerging hacking methods, patch system and network vulnerabilities to block attacks.
- Continue to conduct information security incident drills to improve emergency response abilities for hacking.
- Evaluate the purchase of information security insurance to reduce the losses caused by hackers.

Environmental risks

Emerging Risk 2

China accelerating the development of DRAM technology may hinder Nanya's business development in China

► Risk description

- The COVID-19 pandemic disrupted global supply chains and increased dependence on technology products. The US-China conflict caused each country to expand the scope and scale of technological developments, and build self-sufficient supply chains.
- China already decided to develop a self-sufficient semiconductor supply chain before the COVID-19 pandemic and US-China trade war. Hence, as the US and China continue to decouple, we expect China's government to continue supporting DRAM manufacturers, and it will affect our business development in China.

► Impact

- Nanya does not have any factories in China, and we expect Chinese companies to give priority to the products of local DRAM manufacturers to avoid geopolitical risk.
- At present, China's DRAM products are mainly used in mobiles and consumer electronics products, and partially overlap with Nanya's products. We expect the products to start affecting our sales in China's market in 2023.
- In the future, if Chinese DRAM manufacturers make a breakthrough in the development of technologies and products, it will increase their output and may hinder our business development in China.

► Response measures

- Continue to observe developments in US-China relations and make timely adjustments to sales strategy in response.
- Monitor the progress of new demand from customers and commence mass production in a timely manner to increase global sales capacity; actively expand customers in sales regions around the world and increase the percentage of sales accounted for by European and American markets.
- Continue to research and develop new technologies and products, actively expand the market with higher added value, and increase the proportion of revenue from the markets, to reduce the potential impact of Chinese DRAM manufacturers

Geopolitics

Emerging Risks 3

The government's energy transformation and carbon reduction policy may put pressure on Nanya's operations

► Risk description

- Taiwan's government adopted a new energy policy to achieve a non-nuclear homeland and international carbon reduction commitment by 2025, and is thus promoting the energy transformation of Taiwan Power Company and general enterprises.
- Taiwan's government may begin collecting carbon fees in 2023, which might increase Nanya's operating costs.
- The government is expected to set carbon emission limits for each industry in 3-5 years to control total GHG emissions.

► Impact

- During peak electricity usage in the future, if the power generators or transmission and distribution systems of Taiwan Power Company malfunction and renewable energy supply is unstable, it may result in power rationing.
- When Taiwan begins to collect carbon fees in the future, Nanya expects expenses to increase NT\$47-150 million each year in 2023-2025. Starting in 2026, carbon fees will gradually increase as the new factory is completed and machinery is installed, which will impact profits.
- Additional expenses are required to purchase carbon rights when GHG emissions exceed the total limit.

► Response measures

- To respond to and prevent the risk of power rationing, we have installed diesel fuel power generators and Dynamic Uninterruptible Power Supply (DUPS) to increase the operational resilience of our factories, and planned the following measures:
 - a. Set electricity saving plans and reduce overall electricity consumption.
 - b. Reduce electricity use for non-production purposes when there is insufficient power supply.
 - c. Review available space and install solar panels to generate electricity for self use.
- In response to future limits on GHG emissions, Nanya began implementing the SBT project in 2022 to reduce GHG emissions (please refer to the Feature Stories: [Towards a Future with Net Zero Emissions](#) for details).

Geopolitics

Emerging Risk 4

The war between Russia and Ukraine may prevent Nanya from obtaining sufficient supply of special gases, and cause production to be suspended.

► Risk description

- Nanya uses neon, krypton, and argon gas mixture in its processes, and indirectly uses neon. The supply of neon has been impacted by the war between Russia and Ukraine.
- Two Ukrainian companies Ingas (located in Mariupol) and Cryoin (located in Odessa) supply approximately 45%-54% of the world's neon. According to a report by Reuters in March 2022, Ingas and Cryoin have been forced to suspend operations. The damage to their neon production lines remains unclear.

► Impact

- The price of neon, krypton, and argon gas mixture to be used in 2022 Q4 was significantly higher compared with the same period last year (before the war), causing procurement cost to significantly increase.
- There is significant uncertainty in the neon, krypton, and argon gas mixture that Nanya will need to purchase in 2023. If neon production lines are severely damaged, even if the war between Russia and Ukraine ends, it will take time for Ingas and Cryoin to return to normal supply. It will also take time for companies in other regions to increase production, so there might continue to be a shortage of neon supply starting in 2023. Failing to stock up might cause production to be suspended.

► Response measures

- Nanya has a safety stock of neon, krypton, and argon gas mixture until the end of 2022, and also required suppliers to increase their stock.
- We are negotiating long-term contracts with current suppliers to ensure sufficient supply for 2023.
- We will continue to use diverse supply sources and monitor subsequent developments to lower our risk.

Risk Culture Construction

To establish comprehensive risk management culture, Nanya established the Risk Management Committee under the Board of Directors to supervise the Company's implementation of various risk management systems along with the effective operation of the systems' mechanisms so as to reach the goals of risk management. In accordance with the defined scopes, organizations, duties, and risk management procedures stipulated in the Risk Management Regulations, the committee has fully implemented risk management tasks and held meetings twice in 2021 to review the implementation and operation of risk management.

The Risk Management Steering Center consists of three directors and managers (the President, the Executive Vice President, and Vice President Wu), who serve as the center's Director and Deputy Director to instill risk awareness in the management and enhance risk management. Moreover, the center annually reviews the performance of risk management implementation and emerging risks facing in the future. Nanya shall also include the results of risk management into annual performance evaluation items for the management (President and supervisors ranked Assistant Vice President and above). They shall execute operations based on the approval of the Board of Directors and use target management for senior managers to expand risk management measures and fully enhance the Company's risk awareness.

Nanya provides a variety of incentives to encourage employee proposals and stimulate peers to think innovatively and reduce potential risks. The proposals are reviewed based on the expected benefits, creativity, application scope, completeness, and quality contributions, and incentives are provided as encouragement accordingly. Nanya set up a 24-hour instant case report system information security line, employee feedback mechanisms etc. to provide employees with immediate response. We have deep-rooted the risk management culture among all employees through TV walls, posters, and computer wallpapers.

Our performance evaluation regulations have incorporated the risk management awareness and implementation status of employees into evaluation items of quarterly performance evaluation and year-end performance evaluation to serve as the basis for performance rating, promotion, bonuses, issuance of stock option while having risk management measures been implemented. Furthermore, Nanya also irregularly organizes management activities to raise employees' risk awareness, such as the "Information Security Month" in 2021, during which information security seminars, online Q&A, information security challenge, and information security angel selection built employees' consensus of information security, and created a culture in which all employees participate in the prevention and improvement of risks.

	2018	2019	2020	2021
Number of improvement proposals put forward by employees and benefits				
Number of proposals (case)	51	225	207	207
Proposal (case-closing) bonus (Thousand NTD)	128	583	414	412
Proposal benefits (Thousand NTD)	311,059	368,722	1,583,318	882,517
Number of proposals in each category				
Process and equipment risks	19	105	67	61
Productivity and quality risks	23	91	114	85
Environmental health and safety risks	4	13	9	26
Other risks	5	16	17	35
Total	51	225	207	207

Risk Management Education and Training

Nanya annually arranges for the directors in the management to attend corporate governance and risk management courses held by institutions approved by the government. Moreover, Nanya also arranged for Risk Management Committee members to attend risk management courses on the aspect of business strategies in 2021, so as to assist and strengthen the Company's risk management operations. In addition, we also compiles risk management education materials and requires employees to read on the computer system each year, in order to improve risk awareness of all employees. The completion of employee risk management education and training achieve the goal of 100% coverage rate in 2021, with a total of 1,724 training hours. We hope that through the education and training, the staff could fully understand the Company's risk management operation status and implement the risk management awareness in daily management.



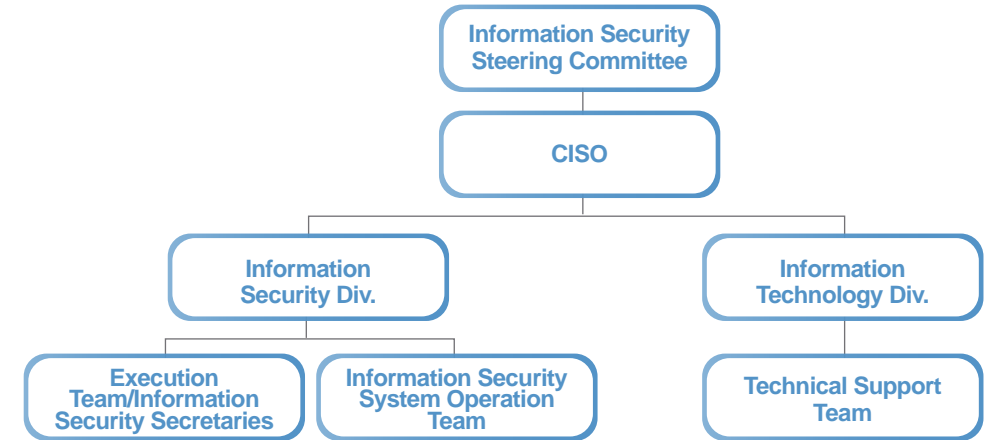
The completion of employee risk management education and training achieve the goal of **100%** coverage rate in 2021, with a total of **1,724** training hours.

Information Security

Nanya has actively promoted related information security systems to ensure the security of the information of the Company and customers. In 2019, we obtained the ISO 27001: 2013 Information Security Management System certification. The initial verification scope included DRAM technology transfer documents and information on process technologies we independently developed, as well as information flows of the Information Security Management System, including maintenance of related facilities, network services, and the development, operation, and maintenance of information systems. The verification scope covered DRAM R&D, information security management of the production system (including OA and network systems, design and mask tape out system EDA, product testing services, and laboratory management system and PIS system), and all the staff at all plants, so that information security control measures could be strengthened to ensure the smooth operations of the Company and we could earn trust from suppliers and customers.

We established an inter-departmental Information Security Committee to advance information security management. The President serves as the convener and five level 1 supervisors were appointed as Committee Members. They include the Information Security Officer (Special Assistant Shin-An Niu) and heads of the Quality Assurance Division, Legal & IP Division, Human Resources Division, and Automated Information Division. Meetings of the Information Security Committee are convened every week. The committee is mainly responsible for the planning, formulation, approval, and supervision of the Information Security policies, goals, and related regulations. In addition, the committee quarterly reports the results of the operations of the Information Security Management System to the board of directors. In addition, our four executive directors (President Pei-Ing Lee, Executive Vice President Lin-Chin Su, Vice President Joseph Wu, and Vice President Rex Chuang) also actively participate in the Company's quarterly information security meetings and annual information security management review meetings to ensure the effectiveness and benefits of the management.

In coordination with the enactment of the Cyber Security Management Act, Nanya is required to obtain 4 effective cyber security certificates the same as government agencies with Grade A information security responsibilities. We have already obtained EC-Council CCISO (Certified Chief Information Security Officer), EC-Council ECSA (Certified Security Analyst), EC-Council CEH (Certificated Ethical Hacker), and ISO/IEC 27001: 2013 Information Security Management System (ISMS) Lead Auditor (ISMS chief auditor) to enhance the professional competencies and efficiency of information security personnel.



我們堅持持續強化本公司之資訊安全，確保資訊的機密性、完整性及可用性，以保障本公司客戶、股東、員工及供應商之權益，並善盡社會責任。

李進安
總經理
2018年08月



Certified Chief Information Security Officer



EC-Council Certified Security Analyst



Certified Ethical Hacker

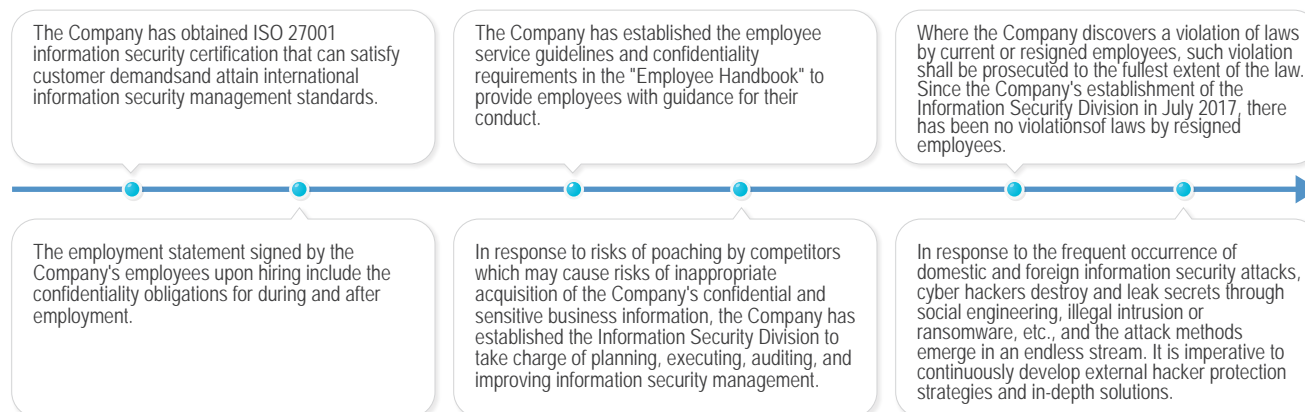


ISO 27001 Lead Auditor

Information Security Policy

ISO 27001 Statement

Nanya's improvement measures for information security management



Nanya's main measures for information security management



Information Security Risk Assessment and Drills

As different departments have different information system structures, we have performed risk evaluation and identification on these systems based on the severity of the impact of each system on key operation procedures so as to define the degree of severity of each system. The severity degrees are to serve as the basis for determining the frequency of post-disaster recovery exercises. The severity is classified into three degrees from important to minor (Degree 1 to 3). Description of each degree is explained below:

Degree of severity and recovery cycle table

Degree 1	Degree 2	Degree 3
The suspension of operations of the system will suspend services provided with the primary functions.	The suspension of operations of the system will suspend services provided with the secondary functions.	The suspension of operations of the system will not affect the services provided or the system can continue operations with other remedial measures to provide services.
Recovery drill cycle Half a year	Recovery drill cycle Two years	Recovery drill cycle No drills required

The recovery drill cycle is also divided based on the severity degrees (semi-annually, every two years, no drills required). Each department shall register the rating of the systems they are responsible for operations and maintenance in the list in the "information system severity degree classification" document. All Degree 1 systems are provided with multiple backup mechanisms placed in different server rooms in different buildings. All production information is provided with remote backup through encryption and the Company conducts recovery exercises each year to ensure the regular operations of the system. The Company has a total of 17 systems that required drills in 2021. We completed drills for 17 systems and the completion rate was 100%. Each information system management unit notifies the response units in the execution of response measures in accordance with the response procedures in the "Information System Response Plan" in the event of major anomalies.

Information Security Training and Objectives

In terms of information security training, Nanya has invested many resources in hopes of improving information security protection awareness. It also organizes information security month activities each year to consolidate consensus for information security protection. Social engineering exercises are also implemented each quarter. The Company organizes training sessions for information security officers in routine information security meetings and monthly information security meetings. The Company compares the performance of reports from supervisors ranked level 1 or above in quarterly information security meetings. To develop a culture for the management of confidential information, all employees of the head office must complete the online assigned reading courses of the "Company Confidential Information Management Regulations" each year. The completion rate in 2021 was 100%.

Subjects (department and title)	Number of people	Hours	Training completion rate
Social engineering exercises All employees (excluding TA)	27,583	2,299 hours	100%
Social engineering training Employees who clicked on the link	140	70 hours	100%
Monthly information security activities Information Security Month event - online questionnaire with gifts All employees	3,423	1,712 hours	99%
Analysis and identification of common social engineering attack methods (A)(B) All employees	3,442	1,147 hours	100%
Information security seminars Information security relationship between development and operation & maintenance from the perspective of hackers System Management Department, Information Security Section	43	43 hours	100%
Information security seminars New perspective of information security threat management in the IoT era Information security officers, Information Security Section	58	87 hours	100%
Information security seminars Insights and quantification of asset vulnerabilities to eliminate information security risks Information security officers, Information Security Section	42	84 hours	100%
Information security seminars Techniques of several hacker groups – Understanding and information security habits that employees should have Information security officers, Information Security, Section Employees who clicked on the social engineering link	63	126 hours	100%
Total		5,568 hours	

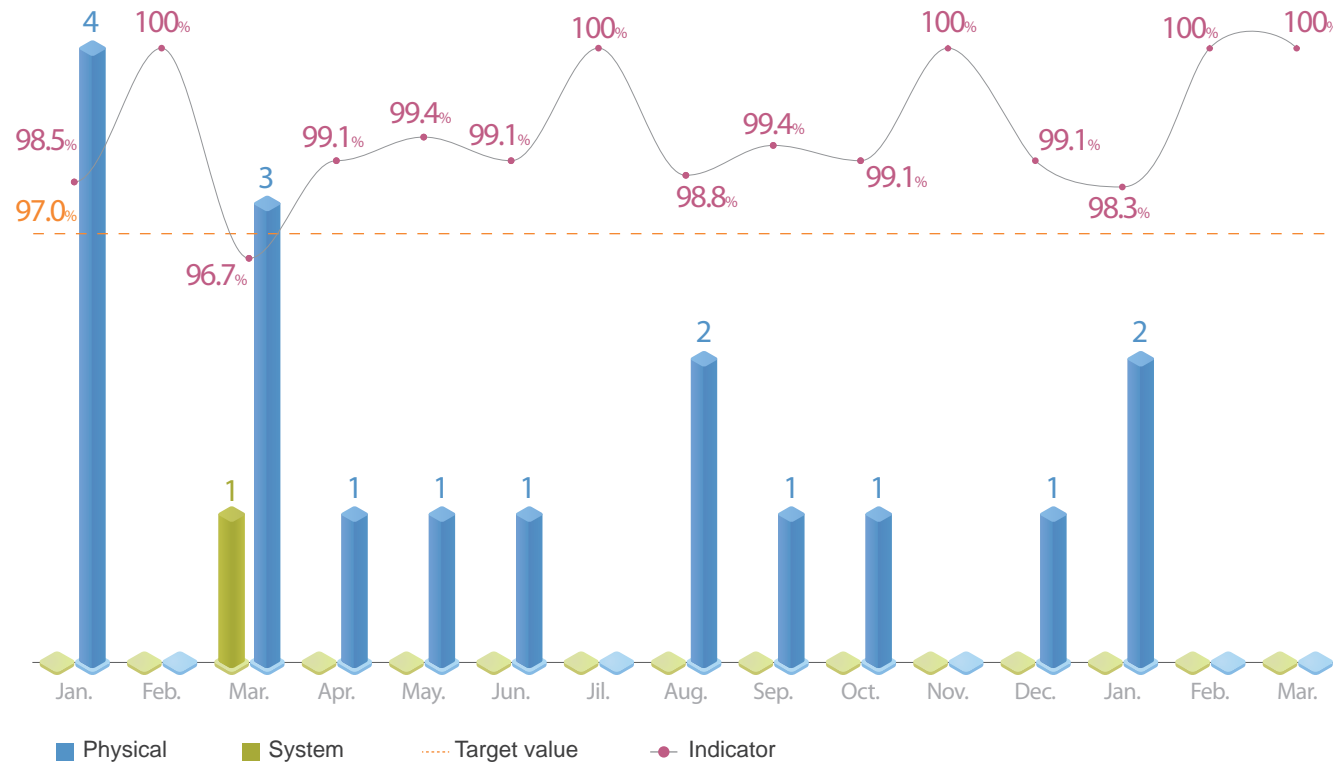
Information Security Goals

To implement information security management and strictly review the implementation status, we set quantitative management goals for information security. In 2021, a total of 10 information security goals were set on the aspects of confidentiality, integrity, and availability. Because we use realistic cases for the exercise and some employees, who lack of information security awareness, click links, which lead to "Click rate and attachment opening rate in social engineering exercises" did not achieve the goal. The other 9 items have all achieved the goals.

Confidentiality		2021 Goals	Annual average	Description
Information security indicators		≥ 97%	99.1%(Average for the year)	Goal not achieved 1 time in 12 months (2021/03)
Number of unauthorized access or use of technology transfer documents		0 times each year	0	All goals were achieved
Number of times AIP encrypted files being opened successfully without authorization outside of the plants		0 times each year	0	All goals were achieved
Completeness		2021 Goals	Annual average	Description
Click rate and attachment opening rate in social engineering exercises (%)		< 0.5%	1.0%	Goal not achieved, conducted 8 drills Goal not achieved 3 times (Q1、Q3、Q4)
OA Client Hot-Fix Deployment completion rate (%)		≥ 99%	99.3%	All goals were achieved
Implementation completion rate of OA active anti-virus protection operations (%)		100%	100%	All goals were achieved
(New) Major cybersecurity incident caused by hackers		0 times each year	0	All goals were achieved (Newly added item)
Availability		2021 Goals	Annual average	Description
OA System Down Time(Year)		< 1 min	0	All goals were achieved
R&D Database Down Time (Year)	Design	≤ 1 time, < 24 hours	0/0	All goals were achieved
	Technology development	≤ 1 time, < 24 hours	0/0	All goals were achieved

Note: Review and improvements are reported during quarterly meetings for items that do not reach the performance goal, and an e-CAR is issued to make improvement according to the PDCA cycle of ISO 27001.

Information security indicator ^{Note}



Note: The information security indicator is the monthly statistical indicator for information security violations. It is calculated based on the weight of the risks and threats of violations. A higher value indicates a lower number of information security violations or a lower level of information security threats.

Information Security Risk Protection

We understand that we must face information security risks at any time, so the Company's computers all have a SEP (Symantec Endpoint Protection) system, and computers for production machinery in the clean room have Media Access Control Address to prevent them from being targeted by computer viruses. We use Tenable and Nessus vulnerability scanning tools to find major vulnerabilities and risks that online systems, applications, and computers may have. Scanning results and virus prevention reports are provided to system administrators as reference for necessary updates and upgrades. We immediately execute updates for high risk system vulnerabilities, in order to improve system security and stability.

In response to the frequent cyber security attacks in Taiwan and overseas, as well as the endless stream of attack methods used by hackers for sabotage and data leakage, such as social engineering, illegal invasion, or ransomware, we have no time to delay the development of hacking prevention strategies and defense-in-depth plans. We are using AI technology for analysis and CDR (Content Disarm and Reconstruction) to lower the risk of social engineering, and looking into emerging information security issues and cyberattack methods, in order to predict the development and trends in information security threats. We are also looking into information security risks of future information technology applications, so as to take preventive measures in advance.

Results of information security management

	2018	2019	2020	2021
Violations of information security or network security incidents (number of cases)	0	0	0	0
Data leakage incidents (number of cases)	0	0	0	0
Number of information security violations involving customers' personal data	0	0	0	0
Number of customers and employees affected by data leakage	0	0	0	0
Amount of fines due to information security or network security incidents (NTD)	0	0	0	0



Business Integrity

Nanya upholds the corporate culture and spirit for "Diligence". We use ethical, honest, fair, transparent, and responsible business philosophies to strengthen legal compliance. We established the "[Code of Conduct for Directors and Managerial Officers](#)" for senior executives and the "[Ethical Corporate Management Best Practice Principles](#)," "Labor and Ethical Work Guidelines" and "Antitrust and Competition Legal Compliance Principles" for employees. We established the digital transaction platform for suppliers and a comprehensive auditing system to implement ethical governance and prevent violations of laws. Nanya stipulates in the Business and Ethical Code of Conduct that it will not make donations other than to charity (such as political donations), in order to remain politically neutral and encourage employees to perform their civic duties.

Antitrust

To ensure employees understand and abide by the Antitrust Law and reduce the risks of violations, Nanya established the "[Antitrust Policy](#)," "Antitrust and Competition Legal Compliance Principles" and the "Antitrust and Competition Legal Compliance Operating Procedures" to strictly require employees and managers to abide by laws and regulations and report the compliance status to the Board of Directors. We also organize regular training courses for related employees and require them to sign the compliance handbook. As of the end of 2021, the Company had one antitrust litigation in process. Please refer to page 159 of Nanya's 2021 [annual report](#). The Company has engaged counsels to deal with the case to protect its interests.

Anti-Corruption

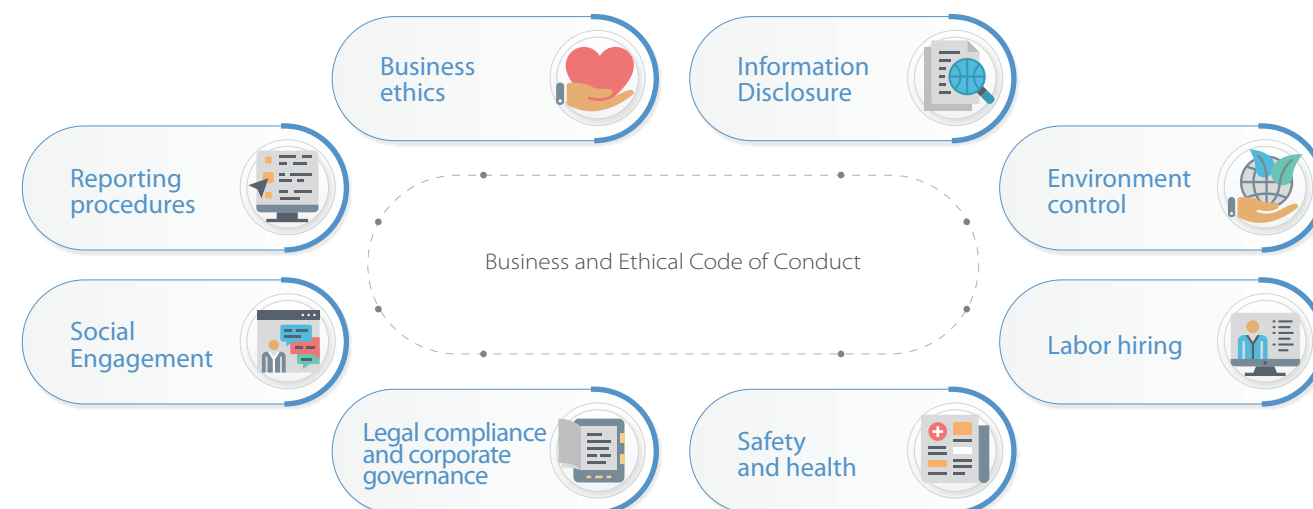
All employees must abide by Nanya's "[Business and Ethical Code of Conduct](#)," "Human Resources Management Regulations," and "Work Rules" for related personnel. Any abuse of powers, embezzlement, bribery, acceptance of commissions, once verified, shall result in termination of employment without exception. The direct supervisors shall also be punished accordingly based on the circumstances. Personnel holding positions involved in business, procurement, outsourcing, construction supervision, and budget and other interests of vendors may not accept the invitation of vendors to any form of entertainment, and may not accept money or other benefits from vendors, in order to prevent all forms of corruption. We have implemented periodic job rotations for related positions. We also prepare anti-corruption education materials to educate all employees. We completed 100% of anti-corruption training courses in 2021 and provided 1,718 hours of training, in hopes that all employees can abide by ethical principles in both work and life and fulfill the corporate culture of "diligence". No cases of corruption had occurred from 2018 to 2021.

Ethical Code of Conduct

Nanya referenced the Code of Conduct of the Responsible Business Alliance (RBA) and established the "[Labor Ethical Management Policy and Business](#)" and "[Ethical Code of Conduct](#)" as the basis for business conduct, in which the "Business and Ethical Code of Conduct" is applicable to all employees of the Company (including managerial officers), and is also applicable to employees of subsidiaries, customers, suppliers, and stakeholders. The Company also commits to respecting human rights in the "Business and Ethical Code of Conduct", established a human rights policy, and performs due diligence to ensure there are no violations of human rights. The "Labor and Ethics Policy" and "Business and Ethical Code of Conduct" have been published on the internal and external websites and made available to all employees and external personnel at all times.

To strengthen employees' integrity and ethical awareness, we required all the staff and the staff of subsidiaries to sign the code of conduct. The signing coverage rate was 100%. The Company continued to organize the "RBA Labor and Ethical Code of Conduct Course" and "Business and Ethical Code of Conduct Course" for all employees (including the staff of subsidiaries) in 2021. The training coverage rate was 100%. The Company provides the virtual "RBA Labor and Ethical Code of Conduct Course" for all new recruits.

Employees may not provide (or accept) bribes or participate in insider trading or other actions that violate moral standards and damage the Company's reputation. In the event of a material or corruption violation (e.g., employees abuse their powers and accept bribery), they shall be immediately terminated once such violations are verified. Where such violations damage the interest of the Company or lead to severe violations, the Company shall pursue their legal liabilities.



To continue to optimize the workplace environment, Nanya implements related training by setting labor moral goals each year. We organized five courses including "Labor and Ethical Code of Conduct Course" and "Anti-corruption Course" with "Anti-corruption Course", "Business and Ethical Code of Conduct Course", "Senior Executive Ethical Corporate Management Course", and "Occupational Hazards and Preventive Training" based on the management objectives of "zero corruption", "zero sexual harassment", "prevention of insider trading", and "zero illegal infringement in the workplace". The training completion rate was 100% for all courses.

Ethical corporate management and labor ethical education results

2019	2020	2021	2022 Goals
"RBA Labor and Ethical Code of Conduct Course" completion rate <small>Note 1</small>			
100%	100%	100%	100%
"Business and Ethical Code of Conduct Course" completion rate <small>Note 2</small>			
100%	100%	100%	100%
"Anti-corruption Course" completion rate <small>Note 3</small>			
100%	100%	100%	100%
"Senior Executive Ethical Corporate Management Course" completion rate <small>Note 4</small>			
100%	100%	100%	100%
Completion rate of "Advocacy Briefing on Prevention of Insider Trading" <small>Note 5</small>			
-	100%	100%	100%
"Occupational Hazards and Preventive Training" completion rate <small>Note 6</small>			
100%	100%	100%	100%

Note 1: A total of 3,417 individuals completed the "RBA Labor and Ethical Code of Conduct Course" in 2021. (organized in October 2021).

Note 2: A total of 3,407 individuals completed the "Business and Ethical Code of Conduct Course" in 2021. (organized in October 2021)

Note 3: A total of 3,435 individuals completed the "Anti-corruption Course" in 2021. (organized in July 2021)

Note 4: The "Senior Executive Ethical Corporate Management Course" was incorporated into the "Business and Ethical Code of Conduct Course" and a total of 10 individuals completed the training in 2021.

Note 5: A total of 3,417 individuals completed the "Insider Trading Prevention Training" in 2021. (organized in October 2021)

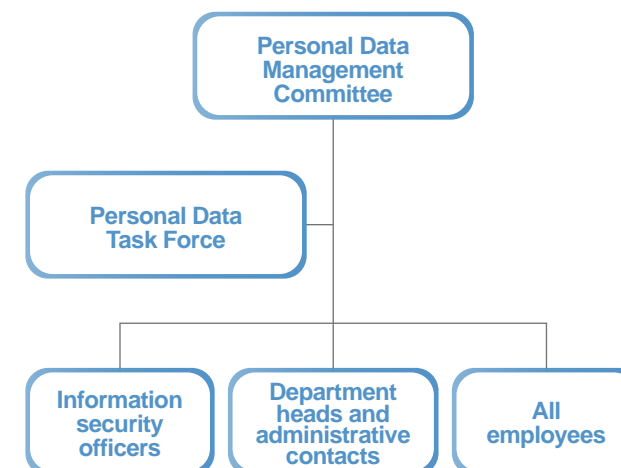
Note 6: The "Occupational Hazards and Preventive Training" course includes both physical and digital courses. In 2021, a total of four physical courses were held, and the attendees consisted of department heads, project supervisors, chief engineers/managers, and entry-level managers of direct units (197 individuals received training), and the digital courses were provided to all employees (3,417 individuals received training).

Note 7: Trainees of the courses listed above are all employees who receive training that year. New employees take the courses during orientation.

Protection of Personal Data

The Company has established the "Personal Data Management Procedures" to ensure that our employees, suppliers, clients or outsiders may abide by the personal information protection regulation. The procedures specify the organization and duties for personal data protection, and provide regulations on the collection/processing/use of personal data as well as information on how data subjects shall exercise their rights and how their data is processed. Departments are required to comply with the Procedures when collecting and processing personal data. If a department commissions other individuals, other departments, or other companies to collect or process personal data, it must ensure that the individual, department, or company's conduct complies with the Procedures and related laws and regulations. Unless consent is obtained from the owner of personal data or due to special provisions of other laws and regulations, the Company will not disclose personal data to a third party or use the personal data for other purposes. To implement personal data processing risk management, the Company reviews and evaluates if assets are compliant with current policy once a year, and performs improvement measures based on risk levels. We set controlled access for personal information of employees or customers and apply strict restrictions on the use of such information. No high-risk items were found in 2021.

Structure of the Personal Data Management Committee



Duties of the Personal Data Management Committee

Evaluate and review the compliance and appropriateness of mechanisms for protecting personal data



Conduct regular tests to evaluate and assess the effectiveness of technologies and organizational functions used for processing personal data



Provide resources necessary for the establishment of personal data management mechanisms



The European Union's General Data Protection Regulation (GDPR) entered into force in May 2018. As the Company has established a subsidiary company in the European Union, the legislation provides a certain level of regulations on measures for managing the personal information of European customers, clients, and suppliers. Nanya has adopted response measures based on the requirements in the GDPR and implemented related systems in subsidiaries to increase employees' awareness for personal information protection and reduce the risks of violations. We organized personal data protection courses for personal data officers and personal data custodians (31 in total) in departments in 2020. We further provided training for all employees (3,417 in total) in 2021, and the training result was positive. The Company annually conducts internal audits of personal data to ensure the implementation degree of personal data management. Nanya announced its ["Privacy and Cookies Policy"](#) on the official website. Within the authorized scope of certain purposes, we use safe and reasonable methods to collect, process, or utilize personal data. Moreover, we ensure that clients may exercise their rights stipulated in the Personal Data Protection Act. As the Company's personal information protection has been rigorously and effectively executed, there were no violations in 2021. Furthermore, the data is not used for other purposes.

Number of violations of personal data regulations and fines

	2018	2019	2020	2021
Personal data complaints (Number of cases)	0	0	0	0
Fines for violation of personal data (Number of cases)	0	0	0	0
Fine (NTD)	0	0	0	0
Number of complaints to external units (number of cases)	0	0	0	0
Number of complaints to the competent authority (number of cases)	0	0	0	0

Internal Control

Internal Control System

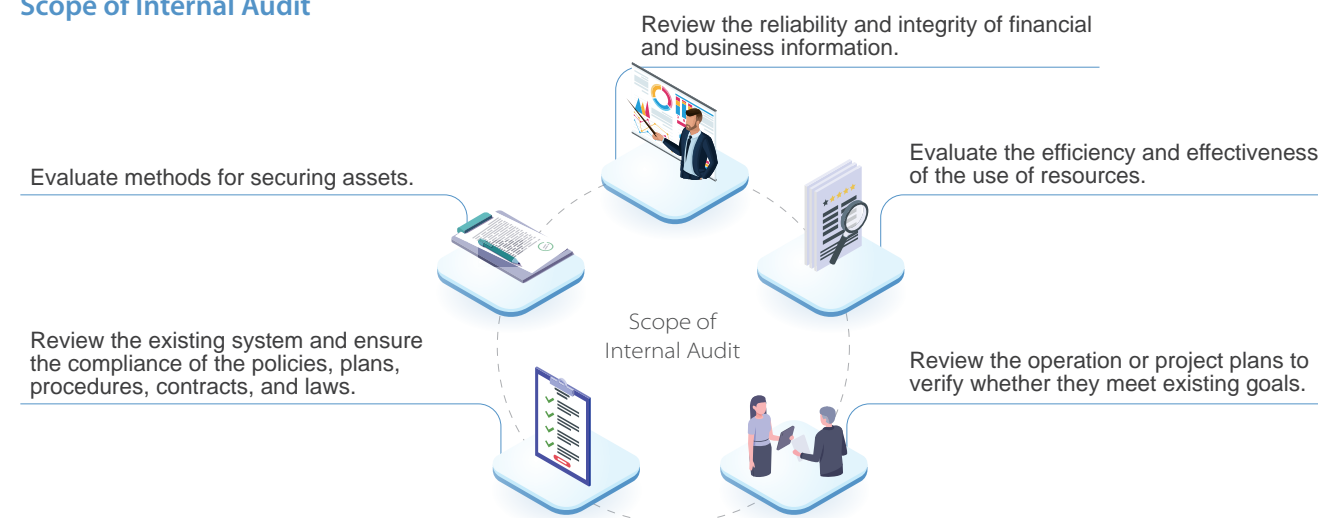
Nanya established an effective internal control system based on the Company and its subsidiaries' overall operation activities and its industry in accordance with the "Regulations Governing Establishment of Internal Control Systems by Public Companies". The Company conducts reviews at any time to respond to changes in the Company's internal and external environment as well as to ensure that the system design and implementation remain effective.

The implementation of the internal control system is a continuous operation. We continue to inspect various business and management operations and detect deviations from company policies, operating procedures, existing goals, or standards. We use a feedback system to respond to the appropriate management level and take necessary corrective actions for the issues to ensure the Company's operations are implemented in accordance with the original plans. We use the internal control system to complete audits and prevent abuse in operations.

Internal Audit

Nanya established Corp. Audit under the Board of Directors and appoints three dedicated auditors who participate in related auditing courses organized by professional training institutions each year to improve their professional skills. We also use the professional and independent internal audit operations framework to implement internal control in all levels of the Company.

Scope of Internal Audit



In addition to the audit report on the status of correction of defects and irregularities of internal control systems, the internal auditors shall follow up and provide reminders to ensure that relevant units take appropriate improvement measures in a timely manner. They shall submit the measures to the Independent Directors for review before the end of the following month after the completion of the audit report. Internal audit is not merely the responsibility of the independent audit department. The Company's units must complete independent business inspections within the specified cycles for specific audit items. Independent audit units shall review the results of the self-inspections and implement review inspections regularly or from time to time to ensure the execution of the internal control systems of each unit.

Internal audit items

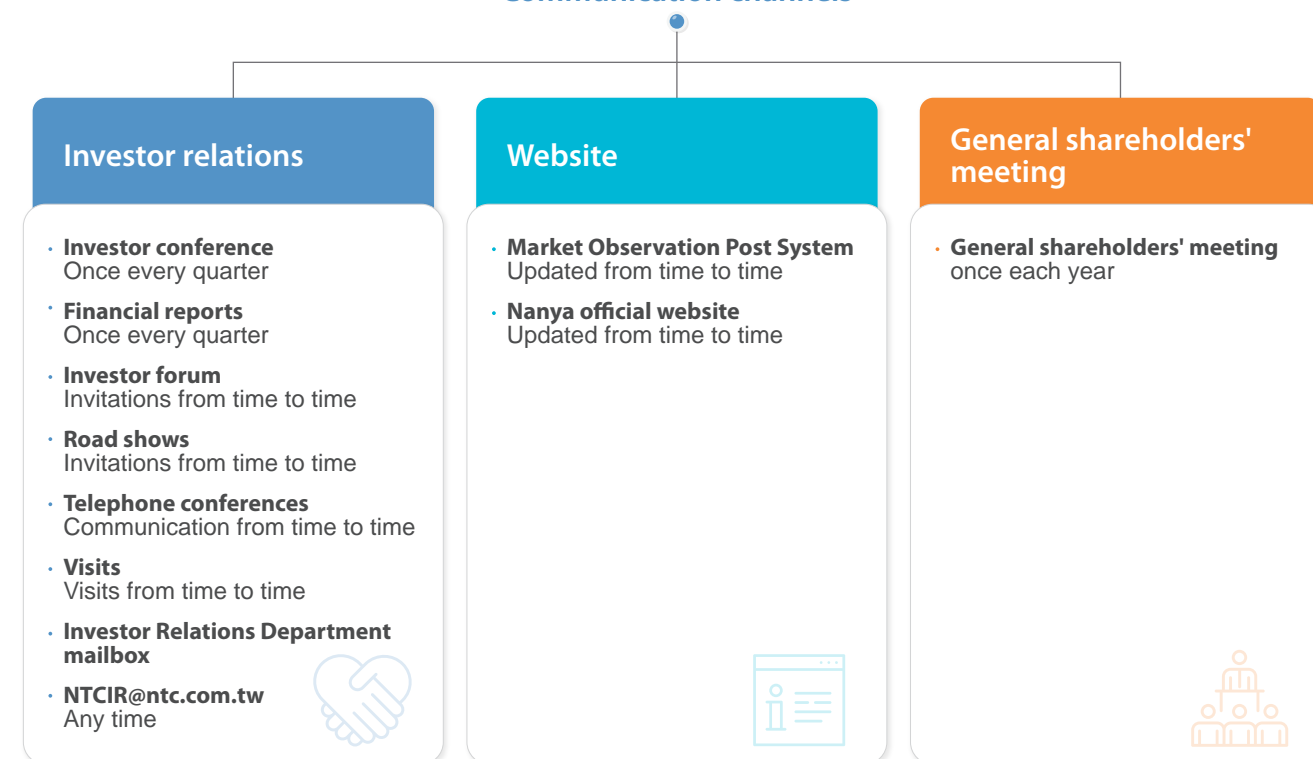
	2018	2019	2020	2021
Number of audit items	44	45	45	42
Number of anomalies discovered	7	4	3	2 ^{Note}
Anomaly improvement rate	100%	100%	100%	100%

Note : Both items are categorized as financial and improvements have been completed

Information Disclosure

Nanya uses diverse, updated, and transparent channels to disclose related information to external stakeholders comprehensively. Nanya participated in 4 external investor conferences and 28 forums and seminars in 2021. We also uploaded financial data and various information and video files to the company website and Market Observation Post System in accordance with requirements of the competent authority, in order to provide investors with updated, correct, and transparent operation conditions and financial statistics.

Communication channels

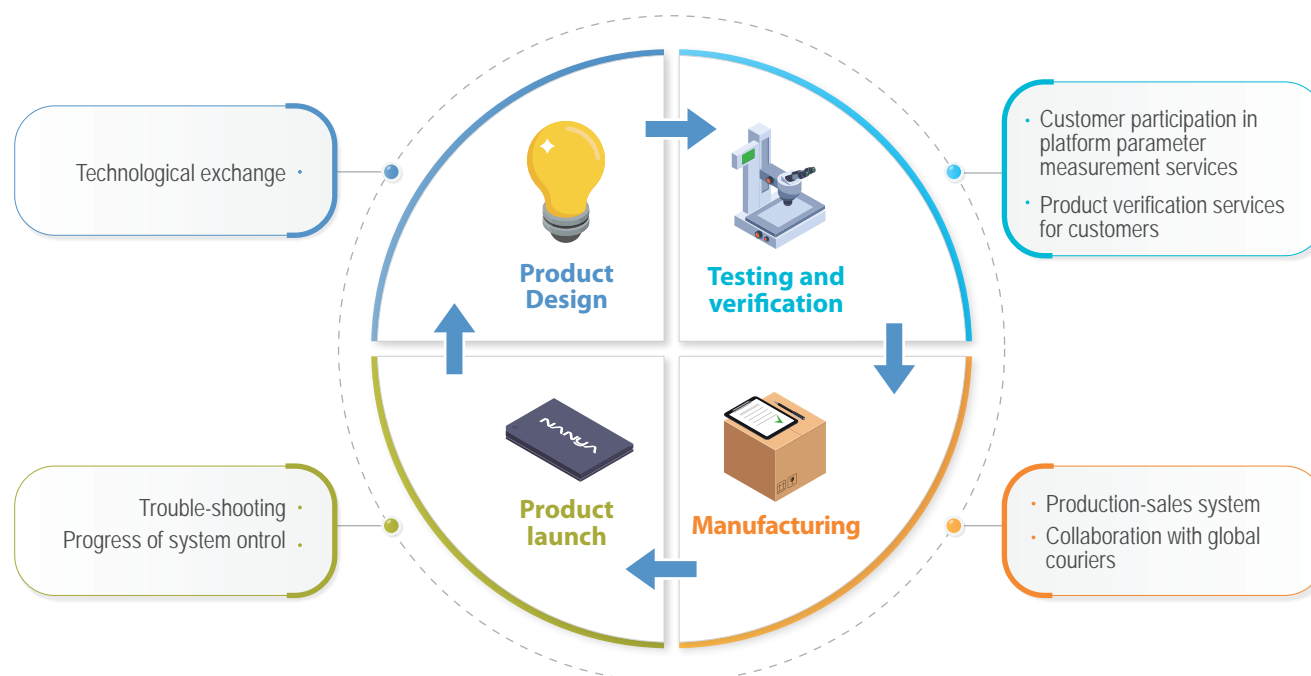




Customer Service

Nanya is committed to providing the best customer service and is convinced that quality and timely customer service is crucial to the maintenance of customer relationships. Good customer relationships will help us build customer loyalty, and consolidate the good and trusted partnerships with customers. Our vision is to become the best memory partner in the smart era as well as a service-oriented enterprise. Through close cooperation with MCU Makers and customers, we will strengthen product R&D and manufacturing in order to satisfy diverse requirements, provide customers with comprehensive products and system solutions, and offer better and more trustworthy service.

Customer Service Process



Product Design and Testing Verification Stage

In order to improve the efficiency and frequency of customer service and effectively build close relationships with customers, the Field Application Engineering Division provides technical supports to customers in Taiwan, China, Southeast Asia, Europe, the United States, Japan and South Korea, organizing irregular technology exchange events to meet the technical needs of customers. In 2021, the Division held a total of 93 events, providing technical supports and assisting customers' engineering personnel to solve problems in design and testing.

In addition, through the highly efficient, intensive, and high-quality customer platform parameter measurement service, of which 1036 cases were completed in 2021, Nanya assisted customers in understanding the characteristics of their product platforms so that the new product development progress and verification cycles of customers were significantly accelerated, reducing investment risks and helping final products to be launched in a timely manner in the demand market. Nanya also provides joint product verification services for customers to assist them in development and verification at the initial stage of products. Therefore, compatibility issues may be detected early, and improved before mass production. A total of 29 cases were completed under the joint verification services in 2021.

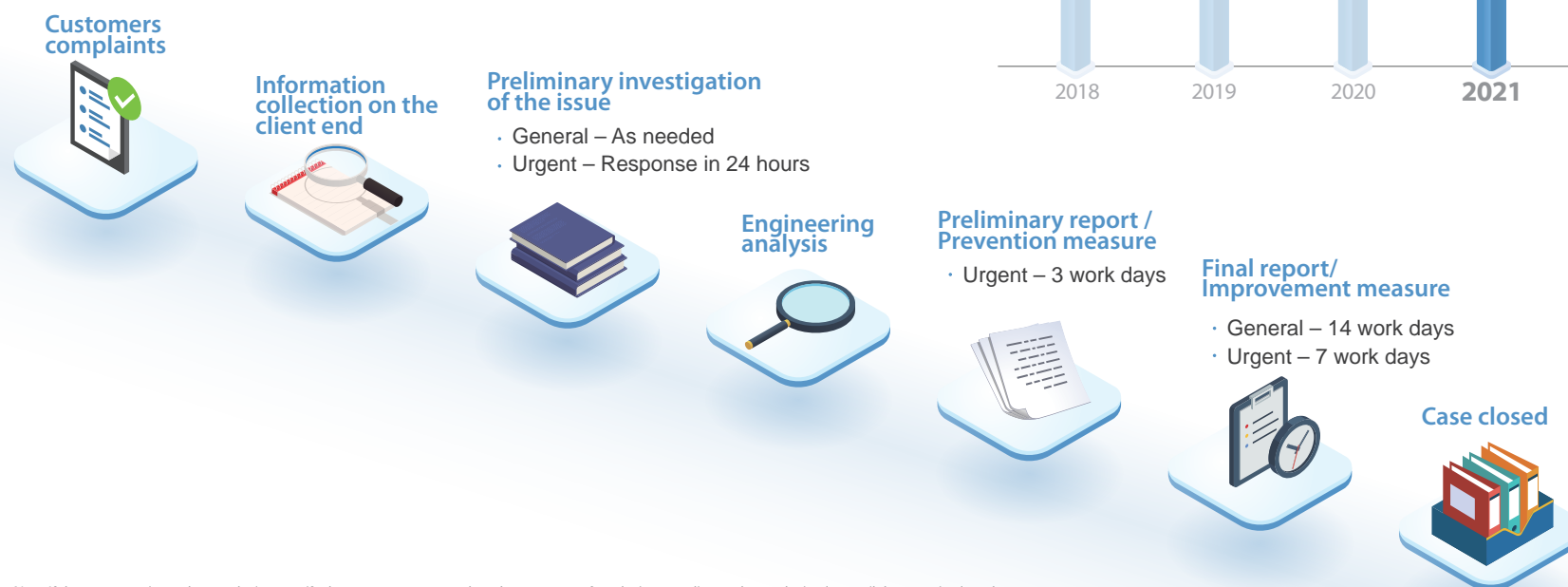
Production and Sales Stage

Nanya has been certified for ISO 9001: 2015 and IATF 16949: 2016 quality system. The Quality Assurance Division monitors and controls product quality as well as implements improvements in order to make sure that all production processes are fully optimized. Moreover, the Division includes each stage of the production process into a well maintained and tightly controlled system, manufacturing the products that meet the customers' requirements. The sales staff continuously communicates with the customer and sends the weekly projections of the customer's future demand forecast back to the Company. The Company's production and sales system converts the information into a production plan after the head office aggregates the needs of global business feedback and the plan is adjusted according to the weekly feedback from sales staff so as to meet customer needs.

After-sales Service Stage

Nanya is committed to enhancing product quality and rapidly responding to customers' quality issues to meet their expectations. In order to accelerate the efficiency of problem analysis, the Nanya's service team will fully understand the problems reported by customers first, arrange FAE on-site support to verify the problem if necessary, if the problem is related to Nanya's product or required further analysis, it would be registered in RMA system and arrange sample back. After received RMA sample, Nanya will update failure analysis report to customers based on analysis plans, and provide improvement actions and disposition plan once analysis is completed. Through the cooperation among the divisions of Field Application Engineering, Quality Assurance, Product Engineering, and Manufacturing Process along with the process management conducted with a customer complaint handling system, over the years, Nanya has been able to reply to over 90% of customers' complaints within target deadlines.

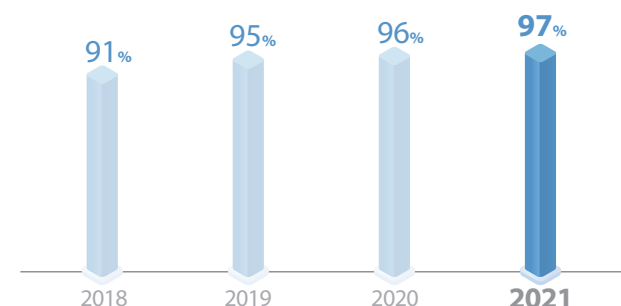
Customer complaint handling process



Note: If the case requires other analysis to verify the root cause, we update the progress of analysis according to the analysis plan until the case is closed

Achieving rate of customer complaint cases

In 2021, Nanya completed 97% of customer complaint cases within target deadlines. The Company will continue to maintain frequent communication with customers and understand how customers use our products and failure conditions in the shortest time possible to accelerate problem analysis and solve problems.



Customer Privacy Protection

Customers are extremely important partners for Nanya. Therefore, we are obligated to rigorously safeguard their privacy and confidential information as if it is our own. To ensure confidential information is well protected, Nanya has formulated the Confidential Information Management Procedure. Regarding the documents provided by customers, after internal filing procedure and the confidentiality classification, these documents are archived in the document control center. In the future, if employees require access to these documents, they have to go through the document application procedure. Based on the level of document confidentiality and the purpose of use, corresponding supervisors give their approval and then the document control center will authorize the access and distribute the documents to the applicants. In 2021, no case involving violation of customer privacy occurred. If a customer suspects or discovers evidence indicating an information leak, a complaint can be lodged through the Nanya [Complaint Mailbox](#) and Complaint Hotline.

Customer satisfaction

Nanya strive for continuous improvement, working in a practical way, with a spirit based on exceeding our customers' requirements in quality, delivery and service. In relation to customer satisfaction, Nanya employs an impartial third-party consultancy company and Internal survey to conduct satisfaction survey for direct and end-customers through the internet or interviews, that Nanya can understand customers' needs from a fair and objective perspective. The content of the survey includes the dimensions of "Product", "Delivery", "Quality", "Technical service", "Communication", "Commercial" and "Comparison with competitors".

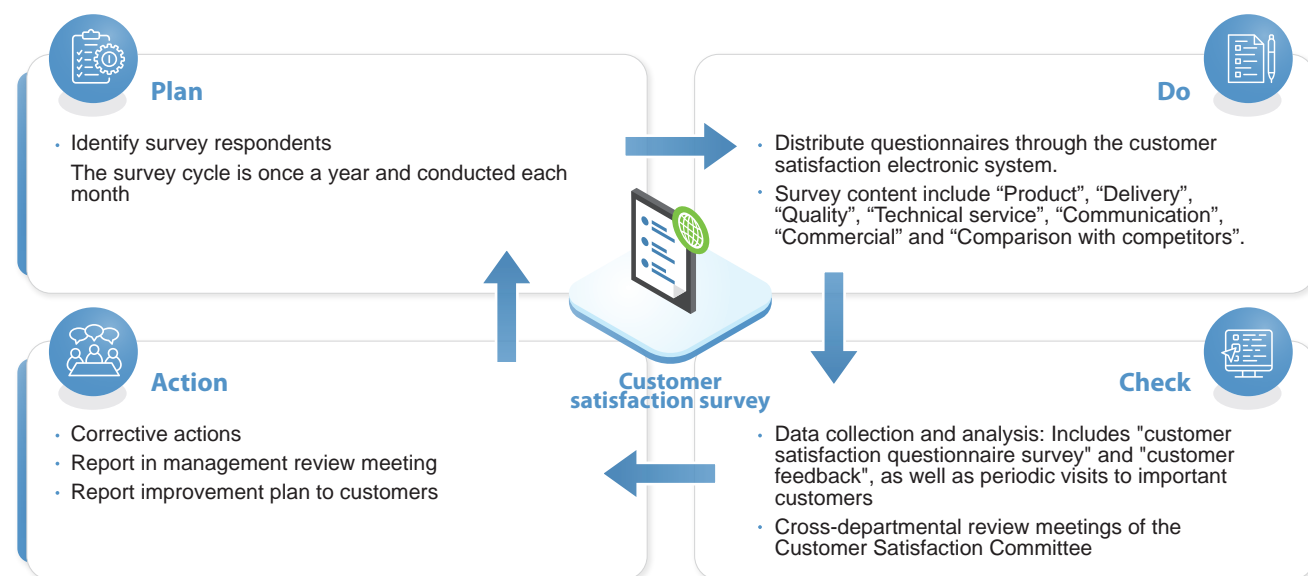
Nanya has a complete customer satisfaction procedure standard and a customer satisfaction committee, and uses the PDCA (Plan, Do, Check, Action) management cycle to form the common goal of improving customer satisfaction.

The committee is composed of cross-function department, and is participated by the directors of marketing, business, operation management, market application engineering and quality assurance departments.

The main function include the selection of survey objects, sending questionnaires, collecting questionnaires, data analysis, regularly reviewing customer comment, coordinating and proposing appropriate improvement plans. and report the results of customer satisfaction in the top manager review meeting. Finally, feedback the continuous improvement plan to customers, Integrate into a complete and effective cross-function service team, Customer relationship management that creates coexistence and co-prosperity value through "service", and continuously improve customer satisfaction.

In addition to the customer satisfaction survey, customers regularly conducts business and technical review meetings with Nanya's service team, Nanya is able to keep close relationships with customers and provide better service. In order to improve customer satisfaction, Nanya has established a special review platform, which prioritizes handling and improving customer needs. Customers can find and contact our customer service platform through the company homepage of Nanya, input your suggestions and requirement, and continue to improve customer relations. We will commit ourselves to strengthening the collaborative cooperation among internal relevant divisions in response to urgent or sudden demands from customers. Moreover, we will continuously strive to improve product quality and the timeliness and efficiency of communication on quality issues with customers while keeping smooth communication with customers, making every effort to satisfy customers' requirements.

Customer Satisfaction Survey Procedure



The average overall satisfaction score of 2021 was 93.8 points, reaching the target of 90 points. Continue to maintain a high level of customer satisfaction above 90 points.

Our customer satisfaction has gradually increased and the target score for 2022 is 91 points and above. The target setting of the customer satisfaction survey is to consider the fluctuation of the industrial characteristics and the annual regular review of the performance and benchmarking, and set a reasonable target, submitted to the President for approval by the Quality Assurance Division.

The overall performance of Nanya over the years has been affirmed by customers. In 2021, 98.5% of customers are satisfied with the overall performance of Nanya. It has maintained a high level of customer satisfaction ratio of more than 95% for four years. The target value of the customer satisfaction ratio in 2022 is set to be above 95%. customers highly recognize the Nanya's performance on delivery, technical service and communication, Mainly Nanya assists the client in accelerating the verification of new products and technical exchanges during the product design, testing and verification phase.

In addition, based on market supply and demand and product application status, Nanya accelerates the development of new products, strengthens communication with customers and faces various improvement issues with a positive attitude, adheres to product quality control, and listens to customers' voices for continuous improvement. Thus, in 2021, there were no product recalls.

Results of Customer Satisfaction Survey

