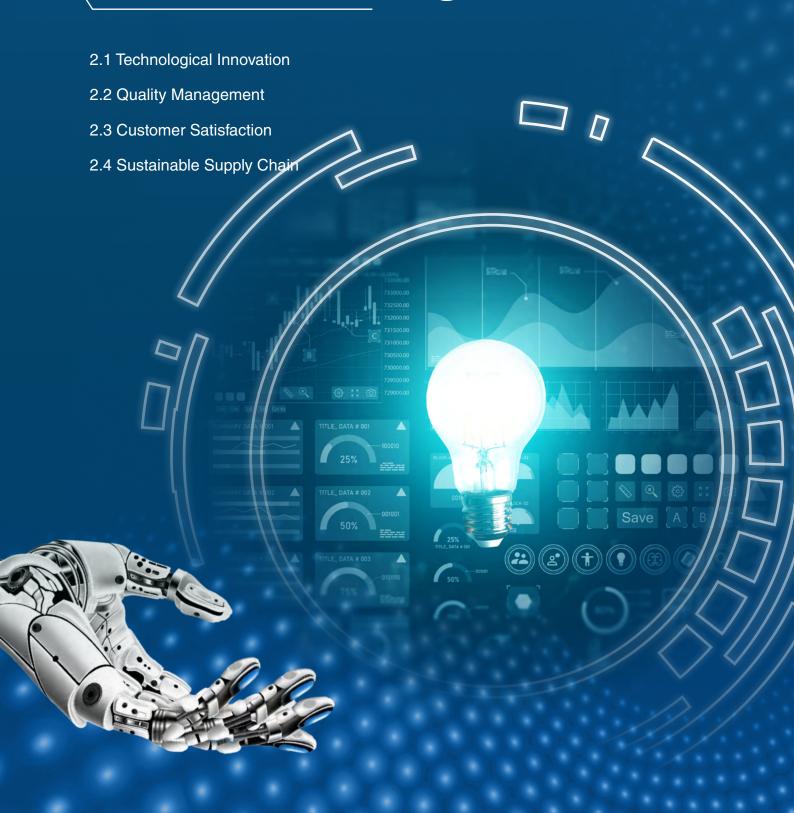# NEXCOM

2 Innovative Breakthrough

2.1 Technological Innovation

NEXCOM's Technology Innovation Strategy: Integrating Edge AI to Lead the Smart Future

NEXCOM is determined to become a world-renowned company, and technological innovation is the core driving force for us to achieve this vision. We firmly believe that only by continuously developing cutting-edge technologies and products that meet market needs can we win the recognition and trust of the market. To this end, we actively introduce forward-looking technologies such as edge computing and artificial intelligence (Edge AI). Through continuous technological development and innovation, we not only ensure the excellent quality and reliability of our products, but also strive to improve the intelligence and instant response capabilities of our products. We continue to optimize our research and development (R&D) systems and tools, pursuing the simultaneous improvement of R&D speed and quality. This unremitting pursuit of technology, quality and intelligence aims to exceed customer expectations and consolidate and enhance NEXCOM's competitiveness in the international market.

NEXCOM's innovative products are not only widely adopted and highly praised by customers, but also won the Taiwan Excellence Award. In the process of product design and operation, we attach great importance to ecological protection and sustainable development, such as promoting ecological balance in water management solutions. We incorporate green indicators into the monitoring and evaluation system to ensure environmental friendliness and continue to improve accordingly.

In order to exceed customer expectations, NEXCOM will continue to invest in technological innovation and product development. We firmly believe that only by deeply integrating advanced technologies such as Edge AI and developing smarter and more efficient products can we win long-term customer trust and market support. NEXCOM will continue to strive for excellence, provide customers with excellent products and services, and move towards the goal of becoming a world-class enterprise.

R&D Innovation - Short, Medium, and Long-Term Strategic Target

(1) Short-term goal (1-2 years): **Strengthen market competitiveness and market share and lay a solid foundation for smart manufacturing.**

Short-term goals include:

1. Maintain an excellent product foundation: Continue to ensure the high performance, stability and reliability of products, and maintain the product service life of at least 3 years longer than that of peers.
2. Optimize customer supply chain response: Strengthen cooperation between suppliers and customers, and respond to customer concerns 2 days earlier through smarter forecasting and communication.
3. Expand product portfolio: Each business unit will launch at least one new product series every year to meet the needs of multiple markets.
4. Invest in smart factories and Edge AI applications: Independently develop smart manufacturing solutions for the entire factory, use Edge AI for real-time quality monitoring, predictive maintenance and process optimization, and improve production through efficiency to more than 99%.
5. Introducing Edge AI technology: Integrate Edge AI technology into specific product lines to achieve real-time data analysis, local decision-making and intelligent early warning functions, and improve the intelligence and response speed of products.

(2) Medium-term goal (3-5 years): Deepen technology R&D and innovation capabilities and establish a leading position in Edge AI.

Medium-term goals include:

1. Strengthen low-carbon and sustainable technologies: Continue to invest more resources in low-carbon technology research and development every year, with the goal of reducing carbon emissions during the product use phase by 25%.

2. Launch innovative products integrating Edge AI: Launch at least two products that deeply integrate Edge AI technology and have significant innovation and leadership every year to meet the market's demand for new technologies and intelligent solutions.

3. Strengthen independent intellectual property rights: Continue to develop independent IP, apply for no less than 5 R&D patents each year (focus on Edge AI-related patents), and improve the company's core technology barriers.

(3) Long-term goal (more than 5 years): Achieve sustainable development and become a leader in smart solutions.

Long-term goal include:

1. Expand the global market: Strengthen internationalization strategy and significantly expand overseas market share, especially in the fields of intelligence and Edge AI applications.

2. Deepen the net zero emission industry: Promote and practice net zero emissions, aiming to reduce the overall carbon emissions of Scope 1 and 2 to below 55% by 2030, and develop smart solutions to support the net zero transformation of the industry.

3. Promote innovation culture: Share new technology knowledge (including Edge AI application cases) and corporate culture to improve employee cohesion and creativity.

4. Enhance corporate social responsibility: Actively fulfill social responsibilities, contribute to society through technological innovation (such as environmental monitoring), and enhance the company's image and brand value.
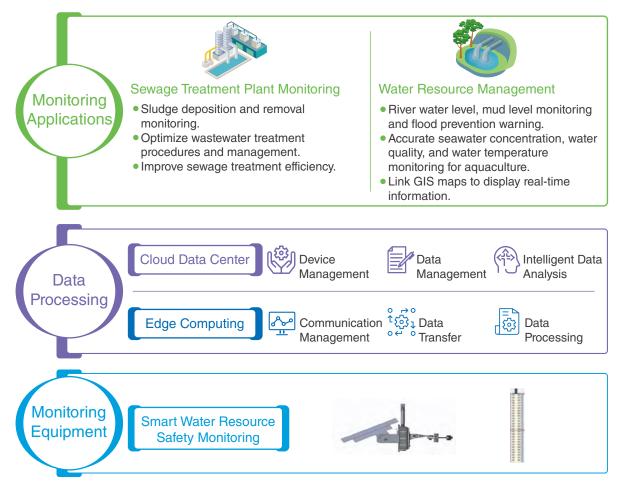
Application example: Smart water monitoring system with Edge AI

In response to the mid-term goal and reflecting the introduction of Edge AI technology, the design and operation of the Smart Water Area Monitoring System fully demonstrates NEXCOM's commitment to ecological protection, sustainable development and technological innovation:

1. Zero-carbon design: Using solar power generation and combining it with smart energy management to ensure stable power supply. Optimizing energy efficiency through intelligent control systems to achieve carbon-free emissions during operation. The product is sealed to avoid environmental pollution.

2. Collaborative operation and edge intelligent control: Collaborative operation of multiple monitoring devices (RN30) to establish a smart water management network. Devices can communicate and share data with each other. Through the built-in Edge AI engine, local real-time data analysis and collaborative judgment are carried out to achieve faster automated operation and response, significantly improving the efficiency and reliability of the overall system.

3. Real-time monitoring and edge intelligent analysis: The system not only monitors changes in water level, mud level, etc., but also uses Edge AI to perform real-time data processing, pattern recognition and anomaly detection on front-end devices. Important water information or abnormal events are efficiently transmitted back to the cloud situation center through wireless NBIoT or LoRA grid, and the latest situation of the basin is fully displayed on the map. Edge AI engines conduct local predictions and warnings, reducing latency and cloud workload while enabling faster field-level response. Meanwhile, the cloud platform aggregates advanced machine learning models for deeper analysis and long-term forecasting. Together, edge and cloud work in tandem to deliver timely, accurate, and actionable insights for decision-makers.

Monitoring Applications

Sewage Treatment Plant Monitoring
- Sludge deposition and removal monitoring.
- Optimize wastewater treatment procedures and management.
- Improve sewage treatment efficiency.

Water Resource Management
- River water level, mud level monitoring and flood prevention warning.
- Accurate seawater concentration, water quality, and water temperature monitoring for aquaculture.
- Link GIS maps to display real-time information.

Data Processing

Cloud Data Center — Device Management — Data Management — Intelligent Data Analysis

Edge Computing — Communication Management — Data Transfer — Data Processing

Monitoring Equipment

Smart Water Resource Safety Monitoring

Patent Accumulation

Actively investing in innovative research and development, we filed a total of 225 patent applications in 2024, with 159 of them being inventions, accounting for 71% of the total applications. This demonstrates our continued adherence to the principles of innovation and maintaining our R&D competitiveness. Additionally, we introduced the self-developed "NEXCOM Patent Management System Inquiry Platform" to incorporate intellectual property protection and trade secret protection into our network security management mechanism. This prevents hackers from accessing the company's advanced technologies, thereby safeguarding our intellectual property.

▶ Number of Patented Inventions Issued

Year	2022	2023	2024
Quantity	16	20	36

Sources: https://tiponet.tipo.gov.tw/gpss2/gpsskmc/gpssbkm?@@0.48432566753080486

R&D Investment

NEXCOM focuses on diverse hardware innovation and software integration solutions for research anddevelopment. The 2024 financial report disclosed that R&D expenses reached NT$586 million. By selecting strategies based on new generation development trends and positioning for market differentiation, NEXCOM aims to achieve industry leadership.

▶ R&D Investment Expenditure

(Unit: NT$ thousand)

Year	R&D Expenditure	Revenue	R&D Expenditure Proportion
2022	551,492	7,916,697	6.97%
2023	585,037	5,765,509	10.15%
2024	586,366	5,421,065	10.82%

Technology Innovation Column

NexMOV-2: Opening a new era of AI autonomous mobile robots

In the wave of AIoT technology driving smart manufacturing and green transformation, NEXCOM's Group officially released the second-generation autonomous mobile robot NexMOV-2 at the 2025 Consumer Electronics Show (CES) in the United States, and worked with strategic partner Kneron to integrate AI vision technology, Visual SLAM autonomous navigation system and multi-axis motor drive control to set a new generation of AMR (Autonomous Mobile Robot) product benchmark.

Comprehensive upgrade, setting a new standard in AMR intelligent navigation

The biggest technological breakthrough of NexMOV-2 is the introduction of AI visual recognition system to replace the traditional 2D LiDAR. Through 360-degree spatial image detection combined with Visual SLAM technology, it achieves high-precision autonomous positioning and obstacle avoidance decisions, greatly improving spatial adaptability and travel efficiency. The robot's core computing uses the KL730 edge AI chip, which supports high-speed neural network inference,while reducing sensor dependence and effectively controlling power consumption, achieving a technical milestone of both high efficiency and energy saving.

Integrated hardware and software with an open architecture to accelerate application diversification

NEXAIOT uses the open Robot Operating System (ROS 2) as the platform core to achieve flexible module expansion and heterogeneous system integration, covering smart factories, warehousing and logistics, hotel management and other fields,and supports deployment in harsh industrial environments, including waterproof functions and functional safety specifications (Functional Safety) expansion options to meet high safety standard application requirements.

From industry to defense, pushing the limits of application scenarios

NexMOV-2 is not only an intelligent partner for manufacturing and warehousing, but will also expand into food production, the chemical industry, and high-risk disaster response missions. NEXAIOT Intelligent and NEXCOBT robotics are actively developing tracked and quadruped mobile robots to support long-range autonomous disaster relief tasks. By leveraging the group's existing military-grade design capabilities and MIL certification experience, they are building a dual-use AI unmanned ground platform that integrates both military and civilian applications.

2.2 Quality Management

NEXCOM obtained ISO 9001 certification in 1999, initiating the implementation of a Total Quality Management (TQM) system aimed at developing a comprehensive quality system. In 2005, the company achieved ISO 14001 Environmental Management System certification and in 2013, OHSAS 18001 Occupational Health and Safety Management System Certification, which was updated to ISO 45001 in 2019, establishing an Environmental Safety and Health (ESH) Management System. Recognizing the significance of the medical system, NEXCOM obtained ISO 13485 Medical Devices Quality Management System Certification in 2017, ensuring a rigorous production process for medical device products.

NEXCOM sets various targets and management plans annually to enhance quality performance and improve occupational health and safety risks, consistently meeting these targets for several years. Additionally, annual audits by third-party verification companies ensure the effective implementation of all ISO management system.

Total Quality Management and Continuous Improvement

"Develop mutual understandings on quality control and strive for excellence (Consistent Quality), Regulate all workflows and checkpoints on professional standards (Total Quality Assurance), Strive to be impeccable and improve on performance for total customer satisfaction (Continual Improvement) - this is NEXCOM's quality policy." From the formulation of the quality policy, it is clear that NEXCOM direction in quality management adopts the concept of comprehensive quality. By involving all employees in quality improvement, the company continuously enhances various aspects, including product technology, manufacturing capabilities, employee skills, optimal quality costs, and satisfaction of both internal and external customers. In terms of specific practices, departments within NEXCOM including design, procurement and supplier management, manufacturing, post-sales service, and related support units are responsible for their performance of quality managing and monitoring. Top-level leaders are responsible for promoting the all employee involvement. Regular meetings are called for fundamental monitoring activities. Directors of inter-related departments should jointly establish annual work plan and key performance indicators (KPIs) for next year based on results of previous accomplishment in customer quality requirements, industry quality management indicators and future corporate operational strategies. Real-time monitoring of key indicators is conducted based on the SMART principles (Specific/Measurable/Attainable/Relevant/Time-bound) to enhance the effectiveness of continuous improvement and ultimately ensure product quality and customer satisfaction.

Green Product Supply Chain Management System

To efficiently manage all components to meet green environmental requirements, NEXCOM has implemented the (GPMS) Green Product Management System. This system is equipped with multi-national regulations, exemptions, and customer standards, allowing suppliers to quickly and easily update information on green components online. It effectively manages suppliers and tracks quality performance. The GPMS system can set regulations, substances, materials, documents, and audit processes. When new materials are updated, the system automatically notifies suppliers to upload relevant documents. After the suppliers upload the documents, the system notifies the NEXCOM green components product unit for review. When it is necessary to check if various models comply with green standards, quality management personnel can use the report generator to automatically produce complete customer declaration reports, including RoHS, REACH, and full material investigation reports. This also includes bringing out all related documents of parts for tracking and evaluation. Through the standardized automated platform of GPMS, NEXCOM 's green product management becomes more efficient, and the company continues to move towards the targets of green and sustainable quality in the future.

Quality - Short, Medium, and Long-term Strategic Targets

Short-term Quality Targets:

- Execute Conduct incoming quality inspections to reduce product defect rates and enhance customer satisfaction.
- Implement appropriate quality control measures to ensure products meet international standards.
- Aperiodically conduct education and training to enhance employees' understanding and awareness of quality to reduce errors and mistakes.

Medium-term Quality Targets:

- Continuously improving research and development (R&D) and design quality to enhance market competitiveness.
- Strengthen supplier management to ensure that materials and components obtained from suppliers meet standards.
- Enhance product safety and reliability to ensure customers' experience and reliability of products.

Long-term Quality Targets:

- Increase the use of IoT technologies to enhance overall management guidelines and achieve continuous improvement and innovation.
- Establish a comprehensive quality management digital footprint system to achieve long-term stability and ISO certification.
- Utilize AI for research and development innovation and process optimization based on historical records, continuously improving product quality and technological capabilities to meet market and customer demands.

2.3 Customer Satisfaction

NEXCOM is committed to establishing and maintaining strong customer relationships to provide the best products and services. In order to understand customer satisfaction with our products and services, we regularly hold customer satisfaction surveys every year. Targeting important customers of the previous year, we provide a channel for customers to immediately reflect their opinions, which is an important basis for continuous improvement of products and service processes. The survey items include "Sales Service," "Product Quality," "Customer Service," "Delivery," and "Website." Customer satisfaction survey results will be promptly feedback to various departments within the company for improvement and enhancement.

Through the customer satisfaction survey, we not only gain insights into how customers perceive our products and services but also receive positive reinforcement that encourages and supports our dedicated employees. Additionally, the surveys help us identify areas for improvement from an external perspective, allowing us to make timely adjustments. For customers whose satisfaction levels fall short of our set targets, we promptly report the issues to the responsible departments. These departments are tasked with formulating improvement measures and presenting them at management review meetings for follow-up and tracking.
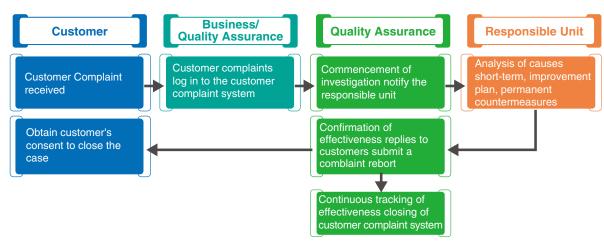
Additionally, we engage in regular communication with our customers to understand their needs and feedback, allowing us to make timely improvements and enhancements. We utilize various communication channels, including email, telephone conferences, video meetings, and business trips, to ensure close contact with our customers. We believe that through continuous improvement and enhancement of our products and services, we can build and maintain strong customer relationships, ultimately earning their long-term trust and support.

Overall, the average customer satisfaction score in 2024 is 86.8 points, which is a slight decrease of 0.2 points from 2023, but the change is not large, indicating that customers as a whole still highly appreciate the company's products and services. Further analysis shows that satisfaction continues to remain at a high level and has shown a stable development trend in the past three years, indicating that the customer relationship management and service quality improvement measures continuously promoted by the company are effective. In the future, we will conduct in-depth analysis on projects with slightly declining satisfaction, and continue to strengthen the communication and feedback mechanism with customers, in order to further improve customer satisfaction.

▶ Customer Satisfaction Score

Year	2022	2023	2024
Customer Satisfaction (%)	86.4	87.0	86.8

▶ Customer Complaint Handling Process

2.4 Sustainable Supply Chain

From a corporate sustainability perspective, suppliers are considered an extension of the company itself. If the source cannot maintain good operations or fails to adhere to the company's sustainability principles, it could potentially damage the collaborative relationship. Companies need to establish strong relationships with suppliers to ensure their products and services meet company requirements and standards, while also ensuring that their operations align with social responsibility and environmental sustainability principles. NEXCOM has always upheld the spirit of corporate sustainability and strives to achieve win-win goals with partners. NEXCOM aims to build a friendly and environmentally harmonious industry chain together with suppliers and contractors. All cooperating suppliers are required to comply with the company's procurement management practices and undergo regular evaluations and assessments.

New Supplier Evaluation

The procurement department selects suppliers based on the company's actual needs, using criteria such as quality, price, delivery time, quantity, and service attitude. Additionally, suppliers who have obtained ISO 14001 certification, are Green Partner certified, or have received recognition from government agencies for their environmental excellence are also eligible to become NEXCOM's suppliers. To ensure that suppliers clearly understand our environmental, safety, and health requirements, all new suppliers are required to complete and return our Environmental Safety and Health Guidelines form.

▶ **Number and Percentage of New Suppliers Meeting Environmental Standards Screening**

Year	2022	2023	2024
Number of New Suppliers	20	13	11
Percentage of Completion for Screening	95%	92%	92%

Annual Supplier Evaluation

Scores of quality, delivery and services are recorded quarterly in the evaluation database. Scores are divided into four Grades:

- Grade A - The score is 90 or above
- Grade B - The score is 80 or above
- Grade C - The score is 70 or above
- Grade D - The score is below 69

For those whose scores are below 69 points, NEXCOM requires suppliers to submit improvement countermeasures reports within a time limit and requires relevant units to continue to pursue them. If the total evaluation score is lower than 79 points, NEXCOM will also reduce the procurement ratio of suppliers, and if necessary, tighten their purchase control according to inspection and control procedures.

Corporate Social and Environmental Responsibility Code of Conduct

NEXCOM implements the "Corporate Social and Environmental Responsibility Code of Conduct" to ensure that suppliers meet sustainable standards, this code includes requirements related to human rights issues (no child labor, no discrimination, and no forced labor), environmental responsibility, and ethical business practices. In 2024, a total of 12 new raw material suppliers signed the Corporate Social and Environmental Responsibility Code of Conduct.

▶ **2024 Statistic of Suppliers Signed Corporate Social and Environmental Responsibility Code of Conduct**

Year	2023	2024
Number of New Suppliers	12	12
Suppliers Response	12	12
Percentage of Response	100%	100%

Supplier - Corporate Social Responsibility Questionnaire

NEXCOM conducted a survey to understand its suppliers' commitment to protecting labor rights, promoting fair employment conditions, ensuring safe working conditions, managing environmental issues responsibly, and upholding high ethical standards. In 2024, a total of 457 were issued and 457 were collected, achieving a 100% return rate.

▶ **2024 Supplier Social Responsibility Questionnaire Return Rate Statistics**

Year	2023	2024
Number of New Suppliers	466	457
Suppliers Response	466	457
Percentage of Response	100%	100%

Conflict Minerals

NEXCOM upholds the core values of corporate sustainability and social responsibility by actively promoting supply chain transparency to ensure that metals such as gold (Au), cobalt (Co), mica, tin (Sn), tantalum (Ta), and tungsten (W) are sourced in compliance with conflict-free mineral principles. We firmly oppose the use of minerals mined or smuggled by illegal armed groups from the Democratic Republic of the Congo (DRC) and neighboring conflict-affected regions. According to the United Nations Security Council, the following countries are identified as non-compliant with conflict-free mineral standards for related metal exports: Democratic Republic of the Congo (DRC), Rwanda, Uganda, Burundi, Tanzania, and Kenya.

To implement our responsible sourcing policy, NEXCOM has fully promoted the Conflict Minerals Reporting Template (CMRT) / Extended Minerals Reporting Template (EMRT) surveys, issuing requests to 446 suppliers, of which 439 have responded. We will continue to collaborate with our supply chain partners to build a transparent, sustainable, and responsible supply system.

As a global corporate citizen, NEXCOM declares and commits not to accept metals sourced from conflict-affected areas. At the same time, we require our suppliers to:

1. Fulfill social and environmental responsibilities;
2. Refrain from using "conflict minerals" sourced from the DRC and surrounding countries and regions;
3. Trace the origin of all gold (Au), cobalt (Co), mica, tin (Sn), tantalum (Ta), and tungsten (W) contained in their products;
4. Communicate these requirements to their upstream suppliers.

In 2024, all products supplied by NEXCOM to customers will be guaranteed conflict-free metal products.

Restricted Substances

NEXCOM ensures that all raw materials used comply with the EU's RoHS, REACH, and halogen-free standards. This ensures that our products not only meet customer requirements but also protect our employees and the ecological environment.

In 2019, NEXCOM established the "Green Product Management System," which includes the use of non-toxic raw materials, modular design for product interchangeability, and pollution reduction during the manufacturing process. This system aims to increase the recyclability of products and waste, and reduce the impact on the environment.

Local Procurement

NEXCOM continues to practice corporate social responsibility starting from the procurement end. NEXCOM progressively promotes the concept of local procurement (within Taiwan). Through local procurement, we can stimulate local economic development and support business growth, while also reducing environmental impact and lowering carbon emissions caused by long-distance transportation. NEXCOM will continue to advance the concept of local procurement, moving towards sustainable development.

▶ **Local Procurement Amount Statistics** (Unit: NT$ thousand)

Year	2022	2023	2024
Local Supplier Procurement Expenditure	3,081,005	2,221,583	2,601,589
Total Procurement Amount	3,502,407	2,356,402	2,808,832
Percentage of Local Supplier Procurement Expenditure	87.97%	94.28%	92.62%

Note 1: Since the procurement amounts are converted from USD to TWD, this amount is calculated in TWD.
Note 2: The data source is NEXCOM.