



# eMemory Technology Inc.

2023  
ESG Report



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## A Word from our Chairman

Despite the challenging environment, the weak semiconductor market, and the geopolitical impact on the supply chain in 2023, eMemory continued to build a solid foundation for the future by achieving many goals and projects and record-breaking licensing cases. We'd like to thank our employees, customers, shareholders, and partners who have accompanied us along the way and allowed us to share our rich achievements.

Regarding operating performance, royalty income declined due to the economic downturn and slow inventory correction. However, under these circumstances, we actively promoted various technologies and applications and built up our manufacturing platforms, which resulted in a continuous increase in royalty income from each product line. eMemory embedded IPs have achieved 55 million wafer production and have been successfully incorporated into more than 6,900 new product designs worldwide. The development of embedded non-volatile memory devices has entered the advanced process, with IP and technology platforms available up to 3nm, and 2nm pre-development has started. In addition, we have been actively developing and improving our products, such as NeoFlash and RRAM, to strengthen our product portfolio to meet customer and market needs. NeoFlash's excellent performance has been recognized by the EE Awards in the "Best IP-Memory Category" and "Best R&D Innovation Award".

Our PUF-based security IP has brought nearly 60 licenses, and more than 80% of them are for new processes below 28/22nm. In December 2023, NeoPUF was awarded the Hsinchu Science Park's "Outstanding Vendor Innovation Product Award", demonstrating the value of our patents and applications. We are also actively working on alliances with world-class leading CPU IP companies, design service companies, and foundries, and we believe that PUF-based security IP will be an indispensable part in

helping customers secure their products and supply chains, and sustainable operations of companies.

As the process technology continues to shrink, our IPs further help improve the chip's manufacturing yield and performance stability, which reduce source consumption and carbon emission. In 2023, eMemory and PUFsecurity also passed the ISO26262 automotive process and obtained the certificate to meet the quality and requirements of automotive applications.

Even though eMemory does not have any physical production or manufacturing, we are still committed to environmental protection and sustainable development. In terms of environmental sustainability, we endeavor to implement energy saving, waste reduction, and environmental sustainability goals, such as planning for a ten-year green power purchase, with the goal of achieving more than 15% green power by 2024 and have passed the external verification of ISO 14064-1:2018 greenhouse gas inventory. Meanwhile, we also continued to proliferate the sustainable management standards to our supply chain by auditing. Internally, we strengthened our whistle-blower system last year for clearer and more transparent reporting procedures to ensure a friendly working environment and smoother internal communication.

With our core values, expertise, and enthusiasm, as well as the long-term support of our partners and investors, eMemory will continue to grow. We are fully committed to the challenges and opportunities that come our way to create a sustainable business.

 Charles Hsu  
Chairman



## About This Report

This report aims at disclosing transparent and comprehensive information regarding impacts from eMemory Technology on economic, governance, environmental, and social sustainability to our stakeholders. It has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option, Sustainability Accounting Standards Board (SASB) Standards, and recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

### Scope of This Report

This is an annual report, covering information from January 1st, 2023, to December 31st, 2023, which is the same period as our annual report. The report is published in August 2024 in both Chinese and English on our company website and TWSE Market Observation Post System.

The scope of the information disclosed is the same as the consolidated financial report, including eMemory Technology, eMemory Japan Corporation and PUFsecurity Corporation, PUFsecurity USA Corporation, and PUFsecurity Technology (Shanghai) Corporation.

## Reporting Guidelines

To identify the major topics that our stakeholders value the most, eMemory conducted the materiality analysis on different aspects of environmental, social, and corporate governance topics. This report discloses information based on the material topics identified. The report is composed following the reporting principles by GRI, including Accuracy, Balance, Clarity, Comparability, Completeness, Sustainability Context, Timeliness, and Verifiability. We also apply the SASB Standards and Recommendations of TCFD for providing high-quality reporting.

eMemory had established the "Sustainable Development Practice Principles" and appointed the Sustainable Management Committee as the dedicated unit for leading sustainable business development. The Sustainable Management Committee was formed to further promote sustainable practices in our daily operation and decision-making process. Information disclosed in this report is collected from each department and reviewed by its managers for its comprehensiveness and accuracy. The report is reviewed and approved by the highest governance body before publication.

### eMemory Technology Inc.

- Founded: September 2, 2000
- Headquarter: 8F, No.5, Taiyuan 1st St., Jhubei City, Hsinchu County 302, Taiwan
- Public Listing: Taipei Exchange Stock Code 3529
- Industry: Semiconductors
- Capital: NTD 746,562,420
- Products: Logic non-volatile memory (NVM) silicon intellectual properties (IPs)
- Contact Information:

☎ 886-3-5601168

✉ ESG@ememory.com.tw

## 2023 ESG Performance Highlights



### Governance

- ✓ Rank Top 20% Corporate Governance Evaluation
- ✓ ISO 9001 : 2015 Quality Management Systems certification
- ✓ ISO 26262 - Functional Safety of Road Vehicles Certification
- ✓ ISO 27001: 2013 Information Security Management System Certification
- ✓ 55,000,000+wafer shipment
- ✓ 95.81/100 customer satisfaction
- ✓ Receives TSMC's IP Partner Award for 14 consecutive years



### Environment

- ✓ Obtained ISO 14064-1 : 2018 GHG inventory external verification
- ✓ NT\$ 19.5 billion wafer production cost saving
- ✓ 1300+ worldwide patents issued
- ✓ 100% return rate of Supplier Checking List
- ✓ 0 complaint or penalty on environmental related issues



### Social

- ✓ Total 6,696 hours of training
- ✓ 3.83% turnover rate
- ✓ Provided health examination for all employees
- ✓ 0 compliant or penalty on human right related issues
- ✓ 0 work-related hazard or incident
- ✓ Sponsors NGO "Teach for Taiwan" for 11 years
- ✓ Established eMemory Academic Research Fund



# About eMemory

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Corporate Overview

eMemory's Business Model

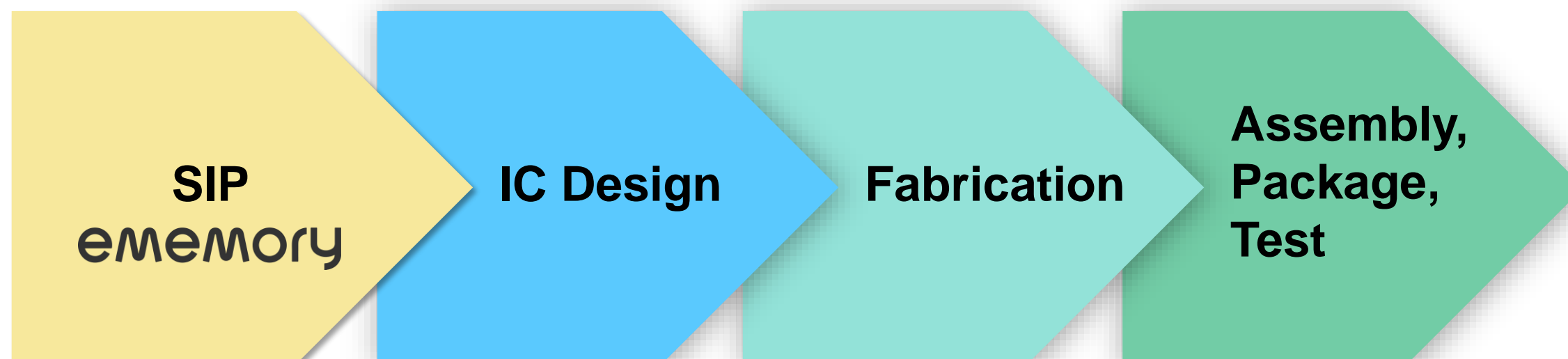
eMemory's Milestones

Our Approach to Materiality

## 1.1 Corporate Overview

eMemory Technology Inc. is the world's largest pure-play developer and provider of Logic Non-Volatile Memory (Logic NVM) technology. The proprietary technologies include NeoBit, NeoFuse, NeoMTP, NeoEE, NeoFlash, and NeoPUF. Furthermore, based on NeoFuse and NeoPUF technology, our subsidiary, PUFsecurity Corporation, develops PUF-based hardware security IP solutions. Products developed with these core technologies have been made into more than 85 billion ICs used in various applications in Consumer products, 5G/4G Mobile Devices, Data Centers, Automotive, Internet of Things (IoT), and Home Appliances.

eMemory licenses silicon intellectual properties (SIPs) to semiconductor foundries, integrated device manufacturers (IDMs), and fabless design houses around the world. Our IP platform provides fabless design houses with superior design flexibility and manufacturing process portability. We provide IDMs process scalability and valuable process engineering know-how that shortens their product development time to market. Furthermore, our foundry partners could gain access to hundreds of potential customers through us for sustainable business development.





## 1.1.1 eMemory Achievements

Ending on December 31st, 2023, the total number of employees at eMemory and PUFsecurity was 351, located mainly at the Jhubei headquarters in Hsinchu County, Taiwan. The revenue in 2023 was NT\$3,050,325 thousand, which was 5.2% lower than in 2022. Our earnings per share (EPS) in 2023 was NT\$19.76, which was 8.6% lower than in 2022. With our continuous investment in Research and Development (R&D), which was around NT\$850 million in 2023, equating to 62.3% of total operating expenses, eMemory is able to provide advanced memory technologies as well as high-quality products and services to our customers and partners (See [eMemory 2023 Annual Report](#) for more details).

eMemory has adhered to the corporate spirit of innovation and honesty, continued to develop advanced technologies, and cultivated and recruited outstanding R&D talents to provide customers with comprehensive design resources and reliable technical support. eMemory's important progress in 2023 includes a diversified process deployment and the launch of new products and services. In addition to continuing to follow the development of TSMC's advanced processes, completing the verification of OTP (One-Time-Programmable Memory) in the N5 process in 2023, and carrying out the development of N5A, N4P, and N3P, we are also working with major foundries on different application processes, making significant progress. In terms of new products and services, eMemory has launched SONOS Flash (NeoFlash) after years of R&D and improvement. At the same time, we also followed the needs of emerging memories and launched RRAM and MRAM design services.

We have over 2,400 macros verified and over 6,900 design licenses until 2023, and the numbers are consistently growing. eMemory works closely with foundries, IDMs, and fabless design companies to develop the most competitive Logic Non-volatile Memory solutions. Our goal is to maintain the innovation momentum and bring sustainable success together with our customers.



eMemory's innovation and integrity have been repeatedly recognized by the industry. In addition to winning the TSMC IP Partner Award for 14 consecutive years, eMemory received the "Excellent Manufacturer Innovative Product Award" from the Hsinchu Science Park for our chip security solution in 2023. At the same time, NeoFlash, which has been developed continuously for twenty years, also won the Best IP Product Award and R&D Innovation Award from the EE Times Award.



## Achievements until 2023

Over **55** million wafers shipped until 2023

Over **2,400** verified NVM IPs

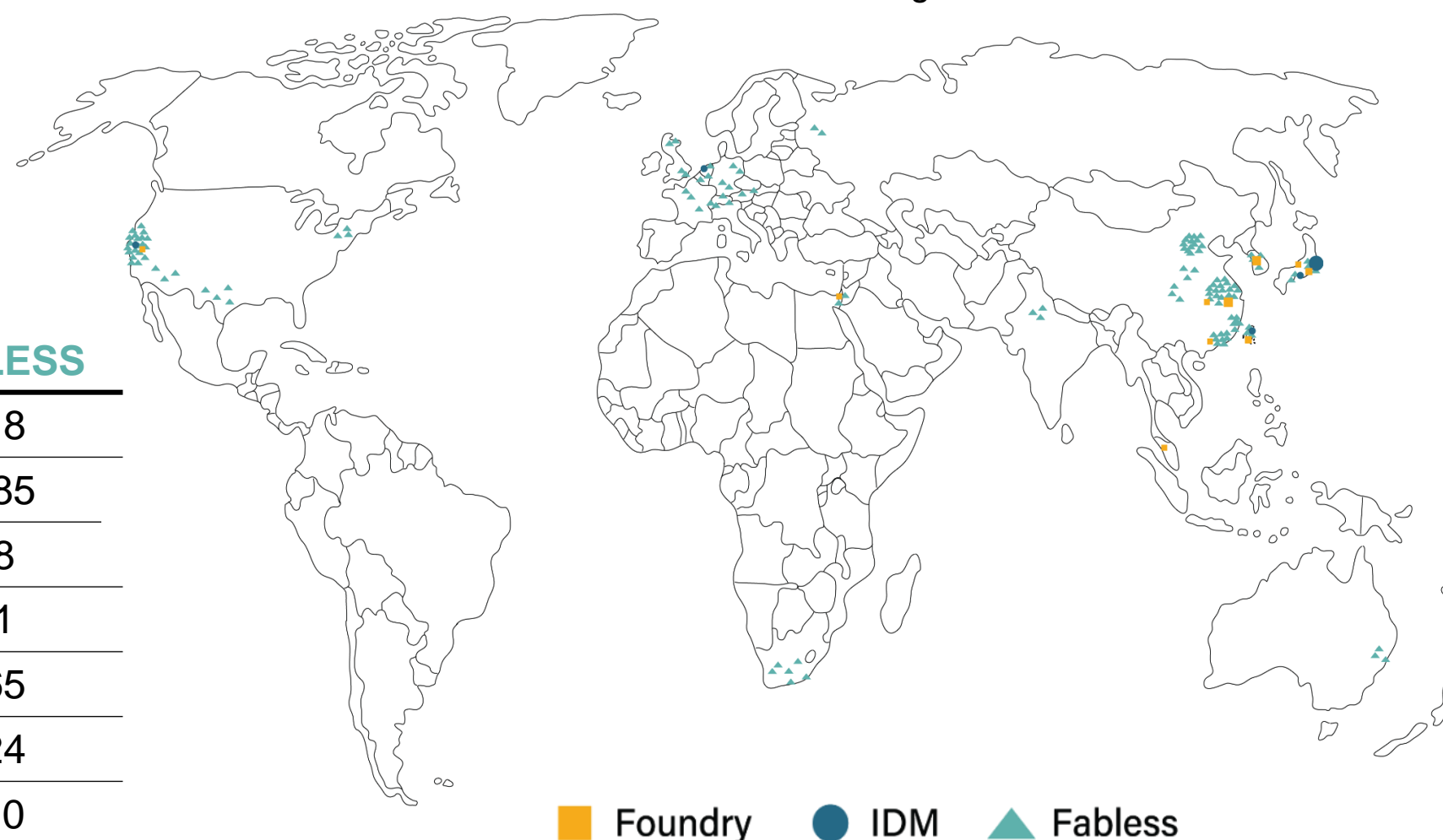
Over **6,900** cumulative design licenses

**2,400+** global customers

**25** foundry partners worldwide

**10** IDMs coverage world-wide

LOCATION	IDM	FOUNDRY	FABLESS
Taiwan	1	4	318
China	0	9	1185
Korea	0	4	98
Japan	7	4	81
N. America	1	1	365
Europe	1	2	224
Others	0	1	110





## 1.1.2 PUFsecurity Achievements

# PUFsecurity

With the rapid development of technology and the increasing applications of AI and IoT, the awareness and need of preventing security breaches and malicious attacks are soaring higher than ever. More and more companies start to strengthen the security of their products and services. To fulfill such security requirements, our subsidiary, PUFsecurity, provides PUF-based hardware security IP solutions to the customers for various application scenarios. Our robust security solutions can help customers sustain their development and operations by preventing costs and damages caused by security lapses or hacks.

Based on eMemory's NeoPUF technology, PUFsecurity developed the PUFrt, the world's first quantum-tunneling PUF-based root-of-trust IP, and the PUFcc, the high-security PUF-based crypto coprocessor. PUFrt combines essential security functions including unique ID (UID), true random-number generator (TRNG), and secure key storage in one macro to meet chip designers' need for a root-of-trust. On top of the functions mentioned, PUFcc also provides essential cryptographic engines, creating a general-purpose integrated security IP module.

From 2021 to 2022, PUFrt achieved the Riscure Common Criteria Certification; while PUFcc was certified through the Cryptographic Algorithm Validation Program (CAVP) by the National Institute of Standards and Technology (NIST) and PSA Certified Level 2 Ready certification. Customers and chip designers could easily develop products that meet security standards by adopting our certified security solutions that comply with international safety regulations. It helps minimize security risks and save time and resources during product development. The secure crypto coprocessor, PUFcc, won the COMPUTEX 2022 Best Choice Award. PUFsecurity has also won the Most Investable Start-up Team award at EE Awards Asia 2022.



In 2023, PUFsecurity's products were recognized by a wider customer base, and continued to share successful cases with leading partners in various fields through joint press releases. At the same time, PUFsecurity actively attended domestic and foreign forums to share technological progress and applications. In terms of certification, we continue to progress with ISO and PSA Certified to prove the robustness of our hardware security solutions.



### 1.1.3 Corporate Values

At eMemory, we are committed to fulfilling our shared values of Responsibility, Innovation, Sustainability, and Excellence in our work. In doing so, we RISE to the challenges and opportunities facing our business from a unified perspective. And we honor these values in our obligations to both our clients and ourselves.

## R<sub>esponsibility</sub>

Above all, we honor our responsibility for delivering efficiency, quality, and trusted expertise. We support our customers from design initiation to fabrication and take pride in maintaining long-term partnerships that share success. Being accountable for producing consistently reliable technology requires a customer relationship built on honesty, trust, and of course, integrity.

## I<sub>nnovation</sub>

The only constant in computing is its perpetual transformation. Therefore, our pursuit of innovation is the source of our continued success. We strive to remain restless in developing Logic Non-Volatile Memory and PUF-based security subsystem solutions. As a result, our IPs continue to play a pivotal role in advancing technological possibilities and safeguarding semiconductors

## S<sub>ustainability</sub>

We are committed to maintaining transparent communications with clients, stakeholders, and staff as we sustain the company's long-term profitability and growth. Considering our business's impact on our industry and community is an essential aspect of this. We will shoulder the responsibility of environmental protection and sustainable development through technological innovation and provide a more energy-efficient and safer future for the ever-more connected world.

## E<sub>xcellence</sub>

We strive to remain peerless in our accumulated knowledge and expertise across our industry. We remain unmatched in our investment in platform availability and product development. Our integral position within the semiconductor ecosystem comes from our deep understanding of our technology's design, development, and fabrication, allowing us to identify emerging trends, anticipate change, and seize new opportunities before competitors.



## 1.1.4 Brand Communication

By continually striving for excellence, we have established a great brand image domestically and internationally. For the past 20 years, we have been actively participating in exhibitions, forums, and symposiums domestically and internationally hosted by foundries or organizations in the industry. We have also hosted technical webinars to keep advocating our brand and innovations.

In 2023, we joined 16 forums hosted by foundries (TSMC, GlobalFoundries, Samsung, Tower, SMIC, IFS, etc.) virtually and physically. Moreover, we took part in international technical seminars, including Arm Technology Symposia, Cadence Live, DAC, OCP, ICCAD China, TAITA, etc., to promote our product and technology innovation. We hosted 3 technical webinars, sharing the progress and corresponding new applications of eMemory and PUFsecurity products in TSMC's advanced manufacturing processes, as well as the update on emerging technologies RRAM and MRAM. In 2023, we continued to solidify collaborations with foundries by hosting private workshops for in-depth technical discussions. And we also organized product promotion and technical exchange activities for partners.

### Events Participated in 2023

Foundry-hosted Forum	International Technical Seminar	Self-hosted Webinar
16	10	3

## 1.1.5 Membership of Associations

eMemory actively joins representative associations in the semiconductor industry. Through forums and member exchanges, it helps to grasp the forward-looking development trends of the industry. At the same time, eMemory also shares innovation and experience in business models and R&D technologies to facilitate cross-field cooperation for breakthroughs in challenges across global supply chains.

### Membership in 2023

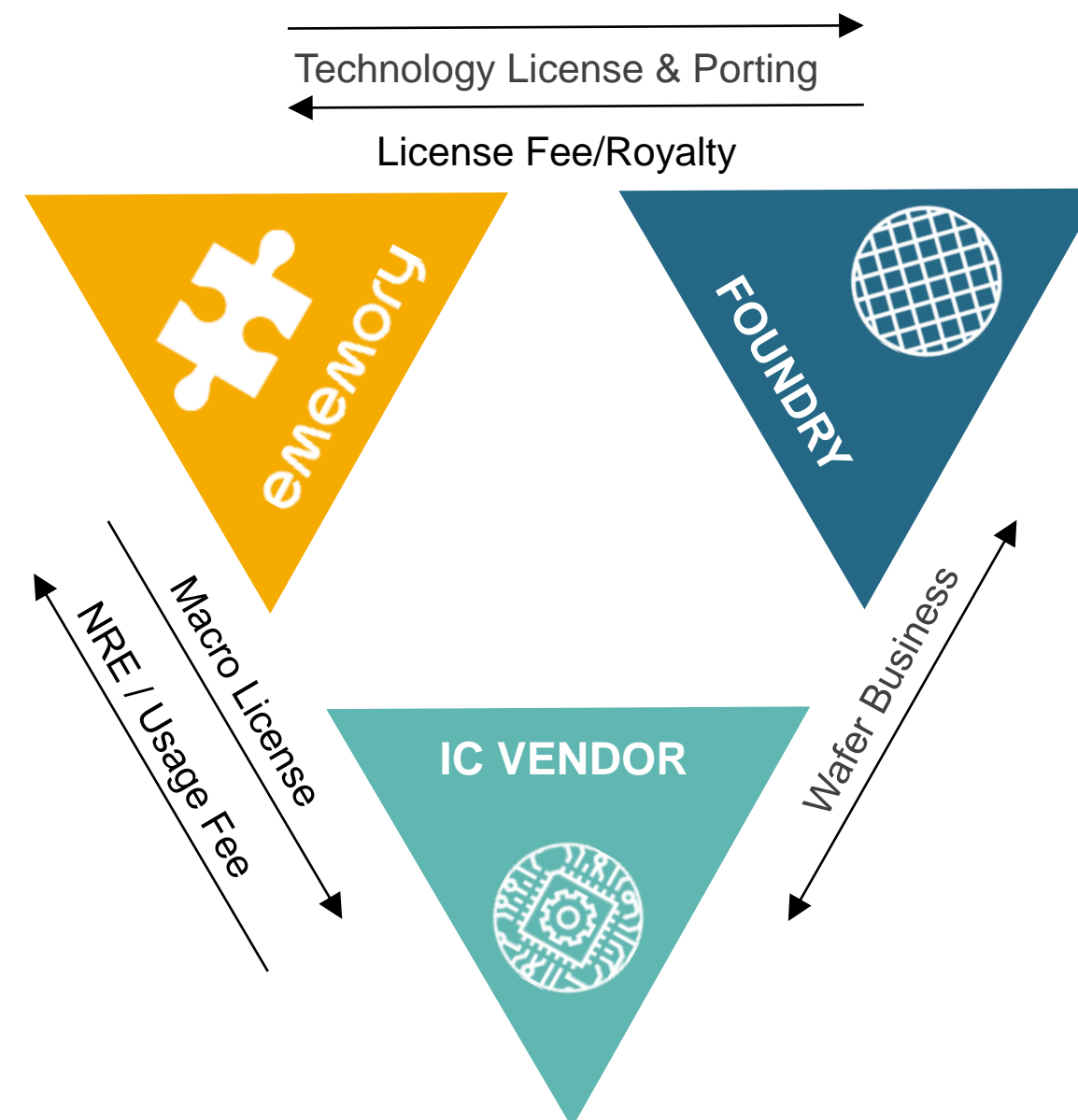
<b>Taiwan</b>	<ul style="list-style-type: none"> <li>AI on Chip Taiwan Alliance (AITA)</li> <li>RISC-V Taiwan Alliance (RVTA)</li> <li>Taiwan Advanced Automotive Technology Development Association (TADA)</li> <li>Taipei Computer Association (TCA)</li> <li>Taiwan IoT Technology and Industry Association (TwIoT)</li> <li>Taiwan Semiconductor Industry Association (TSIA)</li> </ul>	Member Member Supervisor: President Michael Ho Member Member Member
	<ul style="list-style-type: none"> <li>Asia Silicon Development Agency (ASVDA)</li> <li>Global Semiconductor Alliance (GSA)</li> <li>Fast IDentity Online Alliance (FIDO)</li> </ul>	Member Member Member: PUFsecurity



## 1.2 eMemory's Business Model

eMemory's business model is based on a triangular relationship between design houses, the foundries, and ourselves. When eMemory licenses its technology to a foundry, the foundry pays a license fee for the technical setup. For design houses, either a usage fee or Non-Recurring Engineering (NRE) fee is collected when a complete design is licensed. Technology license fees, usage fees, and NRE fees are all categorized as upfront fees. Later when a product is taped-out or mass-produced, eMemory receives running royalties from our foundry partners, based on the contractually agreed royalty rate. The royalty now accounts for more than 70% of our total revenue that makes the company more resilient and sustainable.

This business model creates a much closer and sustainable collaboration among all three parties and allows eMemory to take an active role in supporting product development to completion. On the foundry side, we are a memory technology provider; with the design houses, we license our macro block design, and for both, we offer technical support. With our technologies and macro designs, our partners can further design energy-efficient and cost-efficient chips to be utilized across a broad range of markets.



## 1.3 eMemory Milestones

In 2000, Dr. Charles Hsu and his students founded eMemory Technology in Hsinchu, the center of Taiwan's semiconductor industry. In 2002, the company launched its first IP product, NeoBit, and passed the reliability verification of the foundry platform, entering the mass production stage. As SoC design becomes increasingly complex, the market has higher requirements for logical NVM, requiring more reliable, secure and stable solutions. Such market changes bring different opportunities to IP companies focusing on technology development.

In 2011, eMemory was listed on the Taiwan Stock Exchange. Following the breakthrough success of NeoBit, eMemory continues to expand its IP portfolio to include multiple OTP, MTP (Multi-Time-Programmable Memory), PUF (Physically Unclonable Function) and emerging flash memory solutions. Today, we continue to work closely with design customers, IDMs, and foundries to embed eMemory's IP products, accelerate technological development with partners, and protect the increasingly connected world.

### PUFsecurity

PUF-based Security IP Design Service

PUFcc7

Secure OTP

PUFcc

PUFrt

### eMemory

NVM / PUF Technology Inventor & Provider

NeoPUF (PUF)

NeoEE (MTP)

NeoFuse (OTP)

NeoFlash (eFlash) Gen1

Gen2

NeoMTP (MTP)

NeoBit (OTP)

2005

2010

2015

2020



### 1.3.1 Corporate Milestones

2023

- **Dec.** eMemory security IP solution was awarded the Hsinchu Science Park's Excellent Manufacturer Innovative Product Award
- **Oct.** eMemory receives TSMC's IP Partner Award for 14 consecutive years
- **Apr.** eMemory was ranked TOP 20% in the 2022 Corporate Governance Evaluation of Public Companies conducted by R.O.C. Securities & Futures Institute
- **Apr.** eMemory Information Security Management System Get ISO 27001 Certificate

2022

- **Oct.** eMemory receives TSMC's IP Partner Award for 13 consecutive years
- **Apr.** eMemory was ranked TOP 5% in the 2021 Corporate Governance Evaluation of Public Companies conducted by R.O.C. Securities & Futures Institute

2021

- **Oct.** eMemory receives TSMC's IP Partner Award for 12 consecutive years.
- **Apr.** eMemory was ranked TOP 5% in the 2020 Corporate Governance Evaluation of Public Companies conducted by R.O.C. Securities & Futures Institute

2020

- **Oct.** eMemory receives TSMC's IP Partner Award for 11 consecutive years.
- **Oct.** Security technology NeoPUF wins the National Invention and Creation Gold Medal Award
- **Apr.** eMemory was ranked TOP 20% in the 2019 Corporate Governance Evaluation of Public Companies conducted by R.O.C. Securities & Futures Institute

2019

- **Sep.** eMemory receives TSMC's IP Partner Award for 10 consecutive years.
- **Apr.** eMemory was ranked TOP 5% in the 2018 Corporate Governance Evaluation of Public Companies conducted by R.O.C. Securities & Futures Institute.
- **Mar.** eMemory receives National Industrial Innovation Award
- **Feb.** eMemory Receives ISSCC Award for Breakthrough Security Technology

## 1.3.2 Technical Milestones

2023

- **Dec.** eMemory is certified ISO 26262 - Functional Safety of Road Vehicles
- **Apr.** eMemory's Security-enhanced OTP Qualifies on TSMC N5 Process and Continues to Tackle Automotive Solutions
- **Mar.** eMemory and UMC Expand Low-Power Memory Solutions for AIoT and Mobile Markets with 22nm RRAM Qualification

2022

- **Nov.** eMemory Collaborates with Renesas on the Development of its Pure 5V OTP IP Using 130nm BCD Plus Process for Automotive Applications
- **Jun.** UMC, eMemory, and PUFsecurity Announce Successful Silicon-Proven Secure Embedded Flash IP
- **Feb.** eMemory Partners with Intel Foundry Services to Boost Security in Leading-Edge Chips

2021

- **Nov.** eMemory's Resistive Random Access Memory (RRAM) IP Qualified on UMC's 40nm process
- **Sep.** eMemory's Security-Enhanced OTP IP Qualified on TSMC N6 Process
- **Mar.** Over 35 Million Wafers Embedded with eMemory's IP Shipped

2020

- **Aug.** NeoFuse Completes the Qualification for Automotive Grade IPs on Samsung's 28nm FD-SOI Process.
- **Aug.** NeoFuse Completes the Silicon Verification on TSMC's 5nm and 6nm Processes.
- **Aug.** Launched PUF-based Solutions (PUFrt and PUFiot) with NeoPUF as Core Technology
- **Mar.** NeoMTP Successfully Applied to TSMC's Third-Generation 0.18µm BCD Process
- **Jan.** NeoFuse Successfully Applied to UMC's 28nm HV Process Targeting the Fast-growing OLED Market

2019

- **Dec.** eMemory Joins Arm Ecosystem for Secure IoT Chips
- **Sep.** eMemory's NeoBit and NeoEE IP are ISO 26262 and IEC 61508 Certified
- **Jun.** eMemory's NeoFuse Qualified on Winbond 25nm DRAM Process



## 1.4 Our Approach to Materiality

eMemory conducts the materiality survey each year to identify the major material topics that our stakeholders value the most. We also evaluate related performance based on the identified material topics to enhance our act on sustainability. We continued to use the same 21 material topics established last year and categorized into environment, social, and corporate governance.

Our materiality analysis process includes material topic selection, materiality assessment survey, and material topic identification. We conducted an internal business impact analysis and a materiality assessment survey to determine the topics that both the company and our stakeholders value the most. The participants are experts in the industries and our stakeholders who provide precise and practical feedback. The materiality assessment questionnaire containing the 20 topics listed above was distributed to our stakeholders, including employees, investors, customers, suppliers, and government agencies. Stakeholders were asked to rank the topics from the most important to the least important by category. There were 123 questionnaires distributed and 97 effective responses received, which equated to a 78.9% response rate. For business impact analysis, we invited department-level managers and above to take part in the survey. The response rate was 88.6%. Based on the 20 topics of stakeholders, we finalized the materiality matrix and identified 7 prioritized material topics that are the most important to eMemory and our stakeholders. There are five topics in the corporate governance aspect and two in the social aspect, which were also determined as our prioritized material topics last year.

### Environment

- ✓ Water resources management
- ✓ GHG management
- ✓ Energy management
- ✓ Waste management
- ✓ Supplier evaluation - environment
- ✓ Sustainable operation

### Social

- ✓ Occupational health and safety
- ✓ Talent attraction and retention
- ✓ Training and development
- ✓ Labor right
- ✓ Social welfare involvement
- ✓ Supplier evaluation - social

### Environment

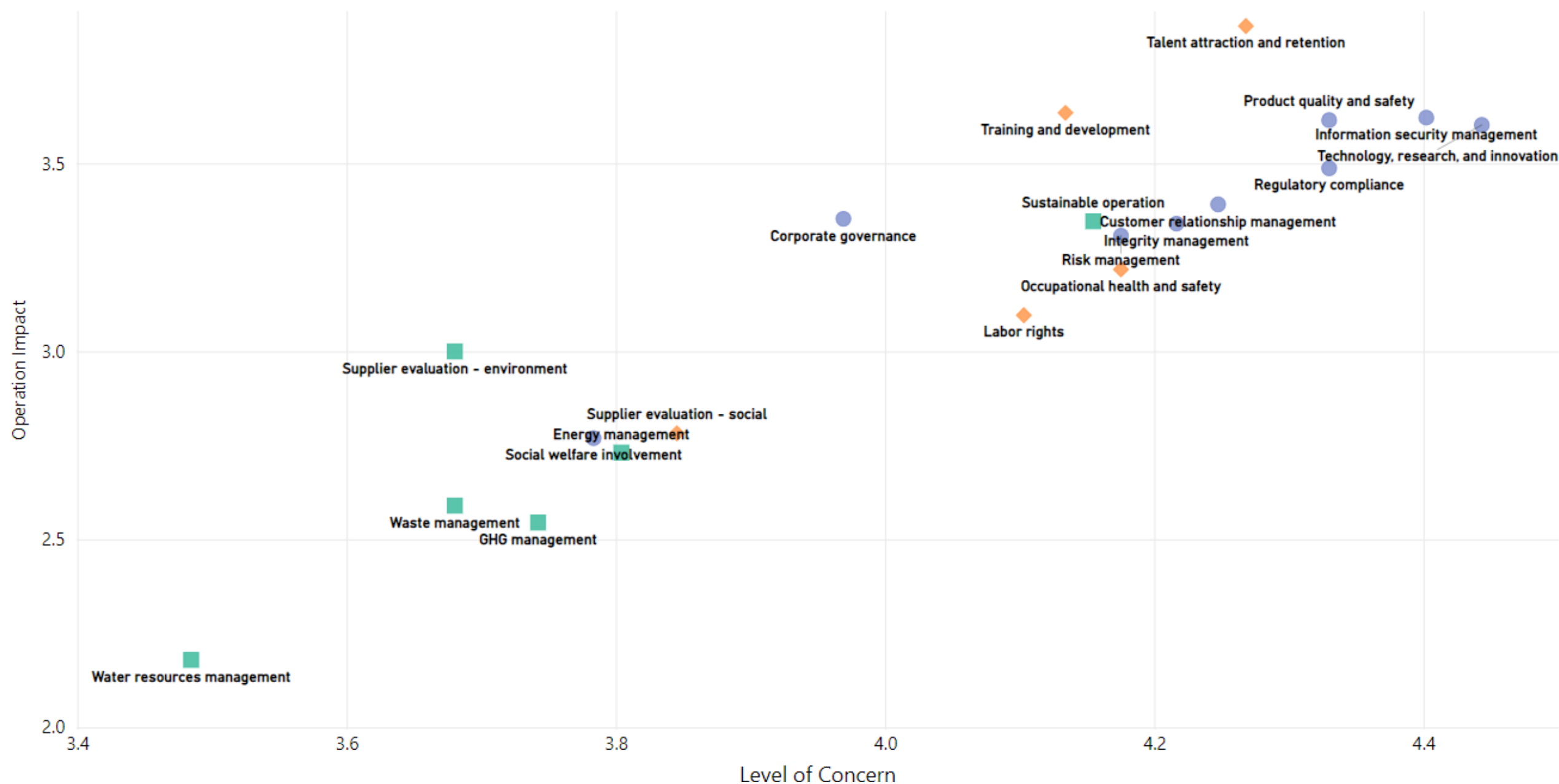
- ✓ Corporate governance
- ✓ Integrity management
- ✓ Customer relationship management
- ✓ Technology, research, and innovation
- ✓ Product quality and safety
- ✓ Risk management
- ✓ Regulatory compliance
- ✓ Information security management

Following these material topics that are crucial to us and our stakeholders, eMemory adopts sustainability approaches to daily operations. Since eMemory does not have physical products or factories, we can effectively manage and control hazardous substances, waste and energy. This enables us being able

to focus more on corporate governance, human resources and social welfare. By carefully managing and preventing the potential risks related to these material topics, we strive to satisfy our stakeholders and make positive impacts on sustainability for our value chain and society.

## Materiality Matrix

Material Topics ● Corporate Governance ■ Environment ◆ Social





## Material Topics and eMemory's Value Chain

Material Topics	GRI Material Topics	SASB Standards	ESG Aspect	Chapter	Scope of Impact on Value Chain				
					Customer	eMemory	Supplier	Shareholder	Employee
Product Quality and Safety	GRI 416: Customer Health and Safety	TC-SC-410a.1 TC-SC-410a.2	G	Ch. 3 Environmental Sustainability	●	●			●
Technology, Research, and Innovation	Non-GRI Material Topic	Non-SASB Topic	E 、 G	Ch. 1 About eMemory Ch. 3 Environmental Sustainability	●	●		●	
Customer Relationship Management	GRI 418: Customer Privacy	Non-SASB Topic	S	Ch. 2 Corporate Governance	●	●		●	
Information Security Management	GRI:418 Customer Privacy	Non-SASB Topic	G	Ch. 2 Corporate Governance	●	●	●	●	●
Talent Attraction and Retention	GRI 202: Market Presence GRI 401: Employment GRI 405: Diversity and Equal Opportunity	TC-SC-330a.1	G	Ch. 4 Friendly Workplace		●		●	●
Integrity Management	GRI 205: Anti-Corruption GRI 206: Anti-Competitive Behavior	Non-SASB Topic	G	Ch. 2 Corporate Governance Ch. 3 Environmental Sustainability		●		●	
Regulatory Compliance	GRI 2-27: Compliance with laws and regulations GRI 205: Anti-Corruption GRI 206: Anti-Competitive GRI 416: Customer Health and Safety GRI 417: Marketing and Labeling	TC-SC-520a.1	E 、 S 、 G	Ch. 2 Corporate Governance Ch. 3 Environmental Sustainability		●	●	●	

## Related Policy and Our Approach

### Product Quality and Safety

- To meet the requirements and objectives of ISO 9001, and maintain system integrity by practicing quality management
- To increase customer satisfaction and further improve product designs and quality

eMemory has passed ISO 9001:2015 Quality Management System certification and obtained the ISO26262 automotive process certificates. The NeoBit and NeoEE AS series products have passed the ISO 26262 (Road Vehicles-Functional Safety) and Industrial Specifications IEC 61508 (Functional safety of electrical/ electronic/ programmable electronic safety-related systems) certification.

We believe in "First-Class Quality, Best Service, and Customer Satisfaction" and focus on excelling product quality. Customer satisfaction is our primary goal, and we have received great customer feedback by providing safe, reliable, and high-quality products in conjunction with strong support and service consisting of transparent communication and effective complaint handling procedures.

### Technology, Research, and Innovation

- To develop the most competitive logic NVM solutions by closely cooperating with foundries, IDMs, and IC design houses
- Provide high quality products and services to establish customers' trust and create sustainable business and success

eMemory is committed to researching and developing green products with minimal power consumption while aiming for no additional manufacturing processes to ensure environmental-friendliness and sustainability.

Our core competence builds upon our capability in optimizing product designs and specifications while offering maximized customization to help shorten the development and production cycle for our customers. In addition, we always maintain agile to adjust project plans timely to best meet customer needs.

### Customer Relationship Management

- Establish multiple communication channels to increase customer satisfaction and further improve product designs and quality

To improve our service quality and satisfaction, we collect feedback from our customers with iService online system and satisfaction survey. eMemory is committed to providing the best experience to our customers, we regularly review and improve quality and service based on these responses and opinions. In addition, eMemory also establishes a thorough management system to solve any complaints from our customers in a timely manner and implement appropriate preventive measures accordingly to improve product stability and reliability. In 2023, the average customer satisfaction score reached 95.81 points.

eMemory's goal is to provide excellent services and create value for customers. Guided by this concept, we continue to work hard to ensure customer satisfaction and company development to achieve optimal status. Winning the TSMC "IP Partner Award" for 14 consecutive years is a recognition from customers of eMemory's excellent work.



## Information Security Management

- To protect confidential information and data of the customers by strictly implementing information security policy
- To further strengthen information security management following ISO 27001 guidelines

In 2023, eMemory has introduced information security management system and formed the "Information Security Committee" supervises the planning and implementation of security strategies. Integrated with Cyber Security Framework (CSF) proposed by the US National Institute of Standards and Technology (NIST) and the requirements of ISO 27001 management system, we comprehensively review and enhance our information security defense capabilities.

eMemory holds training courses for all employees every year to enhance personnel's information security awareness. We also pay close attention to the latest information security intelligence from the government and the industry.

## Talent Attraction and Retention

- Cultivate and establish a talent pipeline to achieve the milestone
- Achieve training plans for different periods for optimized talent utilization, and pass on the work knowledge and skills
- Effectively perform duties to improve the company's operational efficiency and achieve personal and organizational business goals

Talent is the core asset of the company's sustainable operation. eMemory has a comprehensive and competitive employee salary and welfare structure, a fair performance evaluation/promotion system, innovation and patent incentives, and a friendly and healthy workplace environment; in eMemory, we can truly practice work-life balance to effectively promote the long-term development of the organization, career development and tenure of colleagues.

eMemory formulates talent plans and strategies according to the business strategic direction every year and recruits outstanding talents through multiple recruitment channels. External channels include employment matching platforms, online platforms, research and development substitute services, and campus recruitment events. Internally, we encourage colleagues to actively refer outstanding talents while providing rotation opportunities. To reach the younger talents, we actively cooperate with universities to organize company briefings, on-campus intern programs, book and newspaper discussions, course sharing, etc. And we also continue to strengthen the employer branding through social media platforms.

The employee turnover rate in 2023 was 3.83%. We have comprehensive compensation and benefits, education and training, employee care, and various internal and external company activity planning and incentive measures to increase employee solidarity and talent retention.

## Regulatory Compliance

- To obey corporate compliances, norms, standards, obligations, permits, licenses, contractual obligations, industry standards, and corporate articles at domestic and global levels during business operation and governance

Based on the Export Administration Regulations (EAR) used by the U.S. government and the Regulations Governing Export and Import of Strategic High-tech Commodities followed by the Taiwan government, eMemory's legal department regularly emails the updated US entity lists and Taiwan entity lists to the Sales department and Procurement department to take extra attention when collaborating with entities on the lists.

## Integrity Management

- To operate business based on the principle of fairness, honesty, trustworthiness, and transparency
- To require all employees to follow the "Ethical Corporate Management Practice Principles" and other local regulations

eMemory engages in commercial activities based on the principle of fairness, honesty, trustworthiness, and transparency. "Ethical Corporate Management Practice Principles" is established and approved by the Board of Directors to make ethical management practicable and prevent form unethical conduct. Sustainable Management Committee is appointed as a dedicated unit responsible for establishing ethical corporate management policies and prevention programs and supervising the implementation and reporting to the Board of Directors on an annual basis, as well as publicly disclosing "Ethical Corporate Management Practice Principles" on corporate website and Market Observation Post System; furthermore, the implementation of the ethical corporate management for each year is published on the corporate website.

The whistle-blowing system and related processing procedures had been established in the "Stakeholders Engagement" area on the corporate website. Employees can also use the Employee Mailbox available on the internal platform, My eMemory, to express their opinions.

If any complaints are received, eMemory would appoint a person to investigate the case. The appointed person shall report to the company and the whistleblower about handling methods, progress, and result. The whistleblower and the appointed person shall keep the investigation and related information confidential, that it shall not be disclosed, and the company shall protect the whistleblower from revenge or other improper treatment.



# Corporate Governance

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Board Governance and Management

Internal Audit

Integrity and Ethics

Cyber Security Management

Risk Management

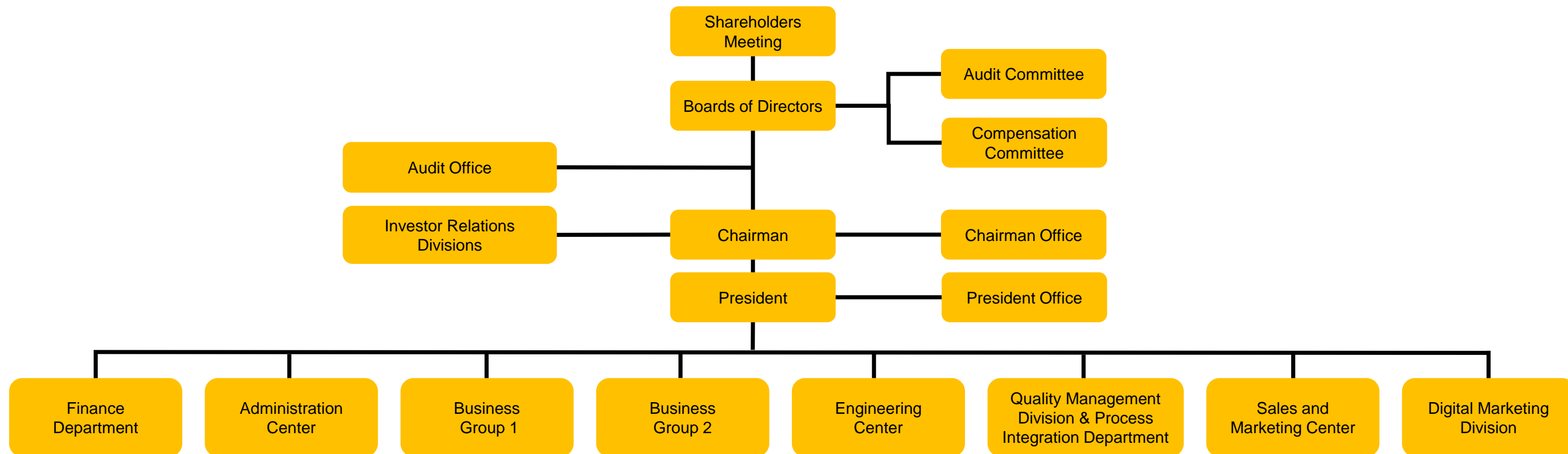
Stakeholder Management

## 2.1 Board Governance and Management

### 2.1.1 Organizational Structure

Our highest governing body is the Board of Directors. The corporate governance officer was appointed by the Board of Directors on October 26, 2022, to be in charge of corporate governance affairs. The main responsibilities of the corporate governance officer are to handle matters relating to board meetings and shareholders meetings according to laws, produce the minutes of board meetings and shareholders meetings, assist in onboarding and continuous development of directors, provide information required for business execution by directors, and assist directors with legal compliance.

We have also established the Audit Committee and the Remuneration Committee. The main purpose of the Audit Committee is to assist the Board in performing the supervision of the quality and faith of execution regarding accounting, auditing, financial reporting, and the overall financial control of eMemory. The Remuneration Committee of eMemory takes charge of assisting the Board in executing and assessing the remuneration and welfare policies of the company, and the remuneration of Directors and managers.

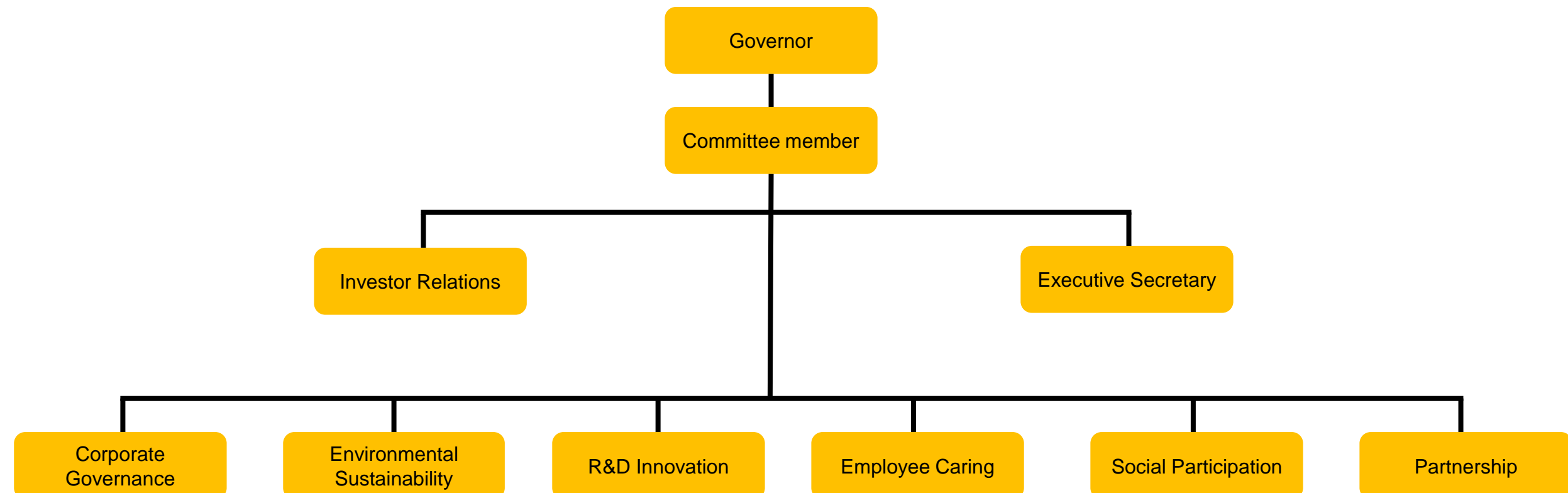




We have also formed the Sustainable Management Committee to further promote sustainable practices in our daily operation and decision-making process. With the President being the convener, the Center Managers are appointed as the committee members. The Executive Secretary assists the committee members in promoting sustainable development planning and implementation. The committee has six working groups, including Corporate Governance, Environmental Sustainability, R&D Innovation, Employee Caring, Social Participation, and Partnership, to assist in the execution of goal setting and implementation. To ensure the thorough implementation of sustainable strategy, the President convenes the Sustainable Management Committee Meeting quarterly and reviews the issues related to the environment, society, and corporate governance which are concerned by stakeholders.

In consideration of the materiality principle, eMemory establishes risk assessments which examine risks related to business operations and further proposes corresponding solutions and practices.

The "Sustainable Management Procedure" was approved by the Committee and used "Sustainable Development Practice Principles" as the basis for planning, implementation, and reporting. The President reports the progress and results to the Board of Directors periodically and completes this report to implement of sustainable strategy.

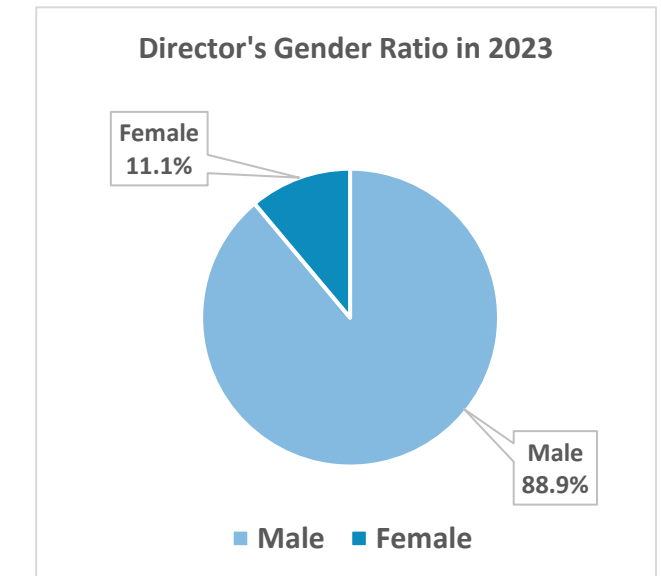
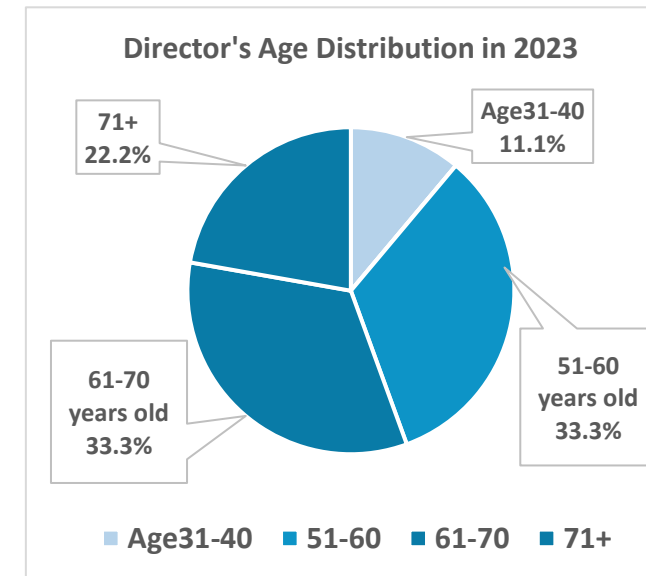


## 2.1.2 Board of Directors

The composition of Directors is stipulated in the "[Corporate Governance Practice Principles](#)" of the Company, in consideration of diversification and the operation, type of business activities, and demands of development, the properly diversified policies are provided for the major two phases including but not limited to essential conditions and value (in gender, age, nationality, culture, etc.) and professional knowledge and skills (e.g. law, accounting, industry, finance, marketing, technology, etc.), and they generally possess the knowledge, skills and competence necessary for practicing their jobs.

Following the "Rules for Election of Directors", the Directors are elected after nomination. Currently, the members of board of this term have professional backgrounds in industries, academia, medical and pharmaceutical science, and professional specialties in the scopes of management, leadership and policy decision, industrial knowledges, academy and financial. The relevant information also disclosed on the [Company's website](#) and [eMemory 2023 Annual Report](#).

By December 31st, 2023, eMemory convened 5 Board Meetings with a 95.6% attendance rate among all the Directors. We had 9 directors on the Board. The proportion of Directors with employee status is 33.3%. There are 3 Independent Directors with 8, 9, and 15 years of service respectively on the Board, accounting for 33.3% of the Board.



In addition, there are one female Directors, accounting for 11.1% of the Board, which exceeds the goal of having at least one female Director. The Directors continually participate in the corporate governance and professional knowledge training courses and obtain the certified documents every fiscal year, according to the "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies". The Directors profession enhancement status were disclosed on the [Market Observation Post System](#).



The Board of Directors of the Company has approved formulation of "[Measures for Performance Evaluation of the Board of Directors](#)" and taken the performance appraisal on an annual basis then making the appraisal result reported to the Board of Directors, which will be used as a reference for the remuneration and nomination for the renewal of respective Director. The appraisal measures include self-evaluation from the Board of Directors, self-evaluation from individual members of the Board of Directors, self-evaluation from the Functional Committee, and others. The evaluation results are revealed before the Board Meeting of the first quarter each year. For the results, please refer to [eMemory 2023 Annual Report](#) for more details.

The recusal for Directors' interest conflict is defined in the "[Rules of Procedure for Board of Directors Meetings](#)", that the Director him/herself or the corporate he/she represents for has a stake in the matter under discussion at the meeting where there is a likelihood that the interests of the Company would be prejudiced, may state opinions or answer the inquiry but not participate in the discussion or vote on that proposal, shall recuse himself or herself from any discussion and voting, and may not exercise voting rights as proxy on behalf of another director. The Board Meeting should be convened quarterly. Temporary Board Meetings could be convened when needed. Related departments are requested to prepare meeting agenda and documents/information and deliver related information when informing the attendees. Please refer to [eMemory website](#) for more details.

## 2.1.3 Audit Committee

The main purpose of the Audit Committee is to assist the Board in performing the supervision of the quality and faith of execution regarding accounting, auditing, financial reporting, and the overall financial control of eMemory. The Audit Committee consists of 3 Independent Directors, with one as the convener. A total of 5 Audit Committee meetings were held in 2023 with a 100% attendance rate of the committee members.

## 2.1.4 Remuneration Committee

The Remuneration Committee of eMemory takes charge of assisting the Board in executing and assessing the remuneration and welfare policies of the company, and the remuneration of Directors and managers. The committee members are appointed by the Board, composed of at least one Independent Director. The Remuneration Committee consists of 3 Independent Directors, with one as the convener. A total of 2 Remuneration Committee meetings were held in 2023 with a 100% attendance rate of the committee members.

### 2.1.4.1 Director Remuneration Policy

It is stipulated in Article 25 of Articles of Incorporation that no more than 2% of the annual profit shall be distributed to Directors as compensation for the year. The remuneration of Directors is determined based on the company's operational performance and the individual directors' level of involvement in the company's day-to-day operations. In 2023, our company has achieved solid annual operation performance. Both independent directors and general directors received the remuneration allocation. Independent directors receive additional "fixed compensation" monthly along with the "functional committee compensation" based on their specific responsibilities and duties.

For further information regarding meetings of the Board of Directors, the Audit Committee, the Remuneration Committee and the attendance rate of each member, remuneration for general and independent company directors, please refer to the [Company's 2023 Annual Report](#).



## 2.1.5 Management Performance

Over the years, eMemory has focused on making our IP portfolio widely available in various technology platforms and being effectively utilized by our customers. Royalty, as one of the main indicators, has become a stable and major source of revenue for us in recent years. In 2023, the royalties declined slightly but maintained a steady level which accounted for nearly 70% of our revenue as inflation and other economic uncertainties spread globally. At the same time, we continued to actively promote various technological applications and expand to different technology platforms. The revenue of Licensing grew by 24.8% annually and reached a three-year high. The 2023 consolidated revenue was NT\$3,050,325 thousand.

Amid global geopolitical turmoil, eMemory upholds the spirit of sustainable management and provides reasonable compensation to managements considering the company's overall operating performance and business conditions. Please refer to "[4.3.1 Salary and Compensation](#)" for more details.

Unit : NT\$ thousands

3,500,000

3,000,000

2,500,000

2,000,000

1,500,000

1,000,000

500,000

-

2021

2022

2023

Licensing Royalty EPS

Unit : NT\$

25

20

15

10

5

0

	Annual	2021	2022	2023
<b>Generated Direct Economic Value</b>	<b>Revenue</b>	2,363,824	3,216,711	3,050,325
<b>Allocated Economic Value</b>	<b>Employees' compensation</b>	231,808	344,259	302,977
	<b>Remuneration of directors</b>	23,181	34,426	30,298
	<b>Business income tax</b>	189,444	304,783	288,335
	<b>Shareholder dividends-earnings(cash)</b>	931,990	1,417,769	1,306,409
	<b>Shareholder dividends-capital surplus(cash)</b>	111,839	111,929	0
<b>Retained Economic Value*</b>		49,825	74,443	156,248

\*Note: Retained Economic Value=Generated Direct Economic Value-Allocated Economic Value

Unit : NT\$ thousands

## 2.2 Internal Audit

The purposes of internal audit are to assist the Board of Directors and managers in reviewing the effectiveness of the Company's internal controls, operational effectiveness and efficiency, and then to provide recommendations. This guarantees the continuous functioning of the internal control system and generates recommendations as to how to improve said system.

The internal auditor reviews the company's internal tasks and monitors its subsidiaries in accordance with annual plans, which need to be approved by the Board of Directors. Besides informing the Board of Directors during its ordinary meetings, it briefs the Board Audit Committee on a quarterly.

Internal auditing includes investigation and evaluation of internal control standards, as well as assessment of existing policies and procedures, and their effects on operational activities.

Internal auditor is an independent and under the board of directors. Any appointment or discharge of the chief internal audit shall be approved by the Board of Directors after being reviewed by the audit committee. When there is a change in the chief internal auditor, the company shall report the change and the reasons for it within 2 days from the date of occurrence via the Internet-based information system to the FSC for recordation.



## 2.3 Integrity and Ethics

### 2.3.1 Integrity Ethics Goals and Strategies

eMemory engages in business activities based on the principles of fairness, honesty, trustworthiness, and transparency. In order to implement honest operations, we actively prevent dishonest behaviors such as bribery, corruption, fraud, intellectual property infringement, insider trading, providing and accepting improper benefits, and engaging in illegal activities. or directors, managers, and employees who breach their fiduciary duties. We have established a Sustainable Management Committee, chaired by the President, to align with global ESG trends. As resolved in the board meeting on Oct. 24th, 2023, our dedicated team will follow the guidelines in the "[Ethical Corporate Management Practice Principles](#)". The responsibility was transferred from the President's Office to the Sustainable Management Committee.

In addition, eMemory has always attached great importance to the implementation of integrity principles and information security by all employees and company-related business personnel in its daily business. The company's "Ethical Corporate Management Practice Principles", "Sustainable Operation Management Procedures", "Quality Policy, Goals" Develop operating procedures" to provide all personnel with guidelines to follow, such as "Information Security Management Operating Procedures", "Information Security Policy Management Operating Procedures and other related information security procedures, and also strengthen the company's information security management system implementation effectiveness and accuracy.

### 2.3.2 Integrity and Ethics Policy

In addition to continuously promoting and overseeing the company's integrity and ethical practices, the Sustainable Management Committee convenes periodic meetings to review the ongoing status and make timely adjustments if needed. The committee issues an annual integrity implementation report, which is publicly available on the [company's website](#). The Chairman of the Sustainable Management Committee also provides the annual report on the execution of integrity management and ethical practices to the Board of Directors. eMemory has established "Work Rules" that require all employees to be honest and upright in words and deeds, and not to accept bribes to prevent employees from damaging the company's rights and interests due to personal interests.

At the same time, starting from 2023 at eMemory, in addition to all full-time employees, part-time and contract employees are also required to take the "Integrity and Anti-Corruption" course to strengthen employees' awareness of professional ethics, implement honest management policies, and actively prevent dishonesty behavior. We also establish relevant courses mentioned above in the internal online course learning system to provide all employees with references at any time.



## 2.3.3 Regulatory Compliance

eMemory is committed to compliance with local and global regulations. The legal department is constantly concerned with relevant information and regularly emails updates of the U.S. and Taiwan Entity Control Lists as well as reminding the users through the internal management system. During the reporting period, the company was not involved in any litigation related to anti-competitive behavior, antitrust or monopoly laws.

## 2.3.4 Integrity / Ethics Management Results

### 2.3.4.1 Corruption Risk Assessment

To prevent corruption, eMemory conducts corruption risk assessments regularly. Since procurements are centralized, the scope of the assessment is the Jhubei Office in Taiwan. By identifying and evaluating the possibility and impact of bribery in business operations, preventive measures are designed for medium- and high- risk items. Senior management executives participated in the corruption risk assessment and took the risk identification survey. A total of 8 risk situations and 16 hazard items were identified. Among the 16 items, there are 14 low-risk items and 2 medium-risk items. For low-risk items, it is managed by existing prevention procedures. For medium-risk items, eMemory has adopted ISO 27001 Information Security Management System in 2022 for proper protection and management. Furthermore, information security related courses and discussions are regularly delivered to our employees to strengthen the concept of information security and prevent incidents from happening.

### 2.3.4.2 Education and Training

eMemory provides a series of training courses to ensure all employees are aware of the importance of integrity and ethical management and will practice them fully during daily business. The "Information Environment and Information Safety" course emphasizes the confidentiality of both tangible and intangible information assets possessed by eMemory. The "Personal Information Protection" training course focuses on the execution of a non-disclosure agreement by the individual who handles any personal information, confirming their confidentiality obligations and the parameters of the permissible legal use of personal information. The "Insider Trading" course propagates the inhibition of making use of undisclosed information to conduct insider trading and disclosure to others. In 2023, 21 new employees at eMemory participated in the courses mentioned, totaling 31.5 hours. In the same year, a new "Company-wide Information Security Policy Fundraising Security Awareness Education and Training Course" was established. All colleagues in the company completed the course, with a total number of 308 people and a total of 616 hours.

### 2.3.4.3 Internal Audit

eMemory Audit Office assesses risks related to various internal control operations based on "[Ethical Corporate Management Practice Principles](#)", formulating an annual audit plan and conduct auditing according to the audit plan. Through internal audits, the Audit Office verifies that the company engaged in all types of business activities with integrity. The audit results are regularly reported to the company's Board of Directors.

Under the "[Ethical Corporate Management Practice Principles](#)" which clearly regulates various business activities, eMemory was not found to directly or indirectly provide, accept, promise or request any improper benefits in 2023, or engage in other violations of integrity or illegal activities. or breach of fiduciary duties and is not involved in any lawsuit related to anticompetitive, anti-trust, and monopolistic behavior. The "[Ethical Corporate Management Implementation Status](#)" has been publicly disclosed on the company's website and through internal education, training and publicity, internal and external personnel are clearly aware of the relevant policies of eMemory's integrity management.

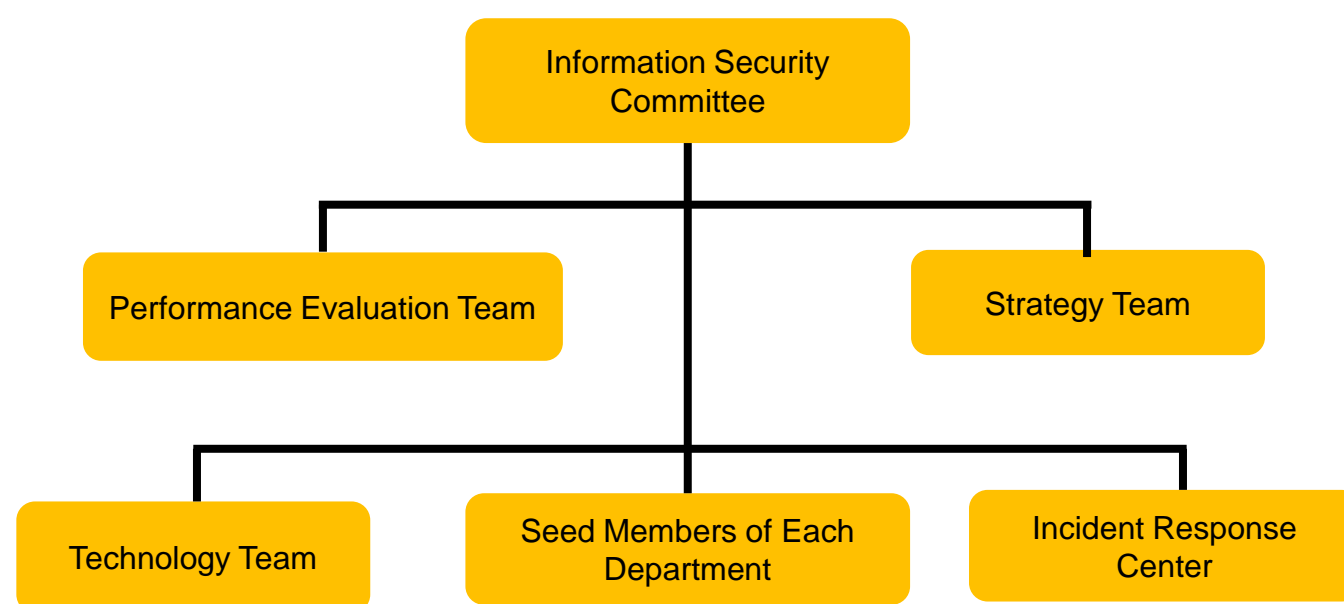
## 2.4 Cyber Security Management

### 2.4.1 Cyber Security Goals and Strategies

eMemory spares no efforts to ensure the effectiveness and continuity of our information business operations and protect the confidentiality, integrity, and availability of its information assets.

The Information Security Committee was established in 2013 to improve information security management. The President serves as the chairman of the committee while the top-level executives are the committee members. Under the governance of the Information Security Committee, there are the InfoSec Strategy Team, InfoSec Performance Evaluation Team, InfoSec Technology Team, and InfoSec Incident Response Center which are responsible for planning and executing information security operations.

#### Information Security Committee Structure



### 2.4.2 Information Security Policy

eMemory introduced the ISO 27001 information security management system in 2022 and established an information security management structure that complies with international standards. Based on the PDCA (Plan-Do-Check-Action) cyclic management process, we adopt the principle of step-by-step and continuous improvement to maintain the confidentiality, integrity, and availability of information assets, to ensure the effectiveness and continuity of the company's information and communication operations, and better protect the privacy and data security of stakeholders, building eMemory into a more sustainable enterprise with information security resilience.

In order to implement the information security management system and information security culture, company has formulated specific implementations for the four major information security management systems of "Employees", "Devices", "Authorities" and "Data and assets", meanwhile, the company has adopted specific actions based on customer audits, third-party audits and stakeholders.

As for the employees, the company has internally planned a series of information security-related courses, such as "Introduction to ISO 27001 Information Security Management System\_Information Security Management System Framework", "Introduction to ISO 27001 Information Security Management System\_Detailed Provisions and Control Measures", "Information Asset Classification and "Risk Assessment Education and Training", "Operation Continuous Management Education and Training", "Security Software Development Process and Information Security Issues Education and Training", strengthening employees' information security awareness .



## 2.4.3 Management and Implementation Result

The Information Security Committee reports to the Chairman every year on the plans and results of the annual information security promotion work. The Audit Office also conducts an annual review of the information security management operations and reports the review results to the Board of Directors. Please refer to the table below for the results of management system in 2023.

In 2023, eMemory found no major abnormal incidents such as information security violations or customer information leakage have occurred, and no major deficiencies in the results of information security-related audits, indicating the effectiveness and reliability of this management mechanism.

Information security management system			
Type	Items	Purpose	2023 Implementation Results
<b>Employees</b>	<ul style="list-style-type: none"> <li>Information security training</li> <li>Information security drills</li> </ul>	To strengthen employees' information security awareness	<ul style="list-style-type: none"> <li>Security education and training for new employees</li> <li>Complete the "Information Security Policy Promotion and Information Security Awareness Course" educational training for all colleagues</li> <li>Phishing test drills twice a year, and education and training for colleagues who fail the test</li> </ul>
<b>Devices</b>	<ul style="list-style-type: none"> <li>Endpoint device protection</li> <li>Vulnerability management</li> <li>Untrusted device blocking</li> </ul>	To improve network security, prevents malware and phishing emails, and prevents data leakage	<ul style="list-style-type: none"> <li>Computers are equipped with endpoint control and anti-virus software protection</li> <li>The server has managed detection and response (MDR) services, anti-virus software and other protection capabilities</li> <li>Proactively and regularly scan for vulnerabilities, and continuously repair and track them</li> <li>Enable network access control mechanism to only allow compliant devices to access the network</li> </ul>
<b>Authorities</b>	<ul style="list-style-type: none"> <li>Account life cycle management</li> <li>Administrator behavior monitor</li> </ul>	To prevent credential theft and avoid permission inconsistencies	<ul style="list-style-type: none"> <li>Introduction of two-factor authentication mechanism</li> <li>Regular review of privileged accounts, user accounts and permissions</li> <li>Analyze administrator behavior logs to proactively discover abnormal behaviors</li> </ul>
<b>Data and assets</b>	<ul style="list-style-type: none"> <li>Data protection</li> <li>Remote backup</li> </ul>	To avoid data loss and leakage	<ul style="list-style-type: none"> <li>Encryption protection mechanism for important documents</li> <li>Build an encrypted external data transmission channel</li> <li>Core system cloud backup mechanism</li> </ul>

## 2.5 Risk Management

To ensure the implementation of the sustainability strategy, the President convenes the Sustainable Management Committee Meeting quarterly and reviews the issues related to the environment, society, and corporate governance that concern the stakeholders. According to the principle of materiality, the relevant strategies and measures are identified and reviewed in consideration of the risks related to the company's operations.

For the organizational structure of the company's risk management and related information, please refer to the company's [2023 annual report](#). The tables below details the risk management strategies and measures.

Material Topics	Related Risks	Our Approach
<b>Product Quality and Safety</b>	Product quality does not meet the requirements	<ul style="list-style-type: none"> <li>Control the IP design process in accordance with ISO 9001, and continuously improve the process to enhance product quality and ensure that the products meet customer and industry standards.</li> </ul>
<b>Technology, Research, and Innovation</b>	Research and development do not fit customer needs	<ul style="list-style-type: none"> <li>Research and develop products and applications that meet the technology, market needs, and applications through market research, plan deployment to the advanced manufacturing processes of major foundries.</li> </ul>
<b>Customer Relationship Management</b>	Loss of customers, affecting business operations	<ul style="list-style-type: none"> <li>Through an in-depth understanding of our clients' operation model and requirements, we can build up a good relationship and enhance service quality and cooperation satisfaction.</li> <li>Monitor customers' business dynamics and regularly review sales forecasts and the management of NRE quantity to provide more accurate and effective support.</li> </ul>
<b>Information Security Management</b>	Data breaches to cause damages to the company and customers	<ul style="list-style-type: none"> <li>Secure the information assets of the customers and the company by following the framework of ISO 27001.</li> </ul>

Material Issues	Related Risks	Our Approach
<b>Talent Attraction and Retention</b>	Unable to attract or retain enough talents	<ul style="list-style-type: none"> <li>Provide compensation package better than the industries and are committed to creating a friendly workplace environment and a pleasant corporate culture.</li> </ul>
<b>Regulatory Compliance</b>	Company does not operate in compliant with legal regulations	<ul style="list-style-type: none"> <li>Comply with government regulations and establish related policies and measures to prevent impacts on operation and financial performance</li> </ul>
<b>Integrity Management</b>	Management or employees violate company's integrity and have unethical behavior	<ul style="list-style-type: none"> <li>The handling procedures and penalty system for inhibiting the Director, manager, employee, etc. providing or accepting improper benefits are clearly defined in the "Ethical Corporate Management Practice Principles". Unethical behaviors are also strictly prohibited. The principles are applied to all including the subsidiaries</li> <li>The "Work Rules" states that all employees are required to be honest and not accept bribes of any kind. Other than fulfilling requests from customers on aspects of integrity and social responsibilities, we also ask our major suppliers to sign the "eMemory Supplier Social Responsibility Commitment" and to comply with local laws and regulations implemented in the places their businesses are operated. It is also defined in the "eMemory Supplier Code of Conduct" that there is zero tolerance for any type of bribery, corruption, or other improper transaction, and suppliers should follow fair-trade practices</li> </ul>



## eMemory Climate Change Management Structure

To counter the potential impacts of climate change, eMemory continues to identify climate-related risks and opportunities in the value chain and plans response measures in accordance with the framework of the Task Force on Climate-related Financial Disclosures (TCFD).

Area	Our Approach
<b>Governance</b>	<p>eMemory has established the "Sustainable Development Practice Principles" and appointed the Sustainable Management Committee as the dedicated unit for leading sustainable business development. The President reports on the Company's sustainable development implementation and progress to the Board of Directors annually and on GHG inventory progress quarterly.</p> <p>To ensure thorough implementation of sustainable strategy, the President convenes the Sustainable Management Committee Meeting quarterly and reviews the issues related to the environment, society, and corporate governance which are concerned by stakeholders. In consideration of the materiality principle, we also establish risk assessments related to the business operation and propose related policies and measures.</p>
<b>Strategy</b>	<p>To face climate-related risks and opportunities, eMemory establishes the "Sustainable Operation Procedure" to internalize corporate social responsibility in our operating strategy and management. It demonstrates our determination on implementing sustainable development in the long run. There are 6 measures as follows:</p> <ul style="list-style-type: none"> <li>• Increase efficiency in energy consumption and plan to adopt renewable energy to decrease GHG emission during operation</li> <li>• Achieve Net Zero emission in 2050</li> <li>• Strengthen strategies to respond to climate-change-related risks and create corresponding competitive advantages</li> <li>• By using our technology and IPs, customers can decrease production costs and shorten development time, which allows them to decrease carbon emissions and achieve sustainability</li> <li>• Develop green products for environmental protection and resource reuse</li> <li>• Comply with environmental protection regulations and laws</li> </ul>
<b>Risk Management</b>	<p>By conducting risk assessment regarding market, policies and legal, technology, reputation, acute and chronic effects, eMemory evaluates risks and opportunities related to climate change and develops corresponding methods to minimize potential impacts.</p>
<b>Metrics and Targets</b>	<p>eMemory operated GHG inventory in 2022 and obtained ISO 14064-1:2018 verification in 2023. We will continue to evaluate and reduce the emissions and establish the Science-Based Targets initiative (SBTi). Our goal is to reduce emissions by 25% in 2030 and achieve Net Zero emission in 2050.</p>

## Climate Change Risks/ Opportunities and Our Approach

Risk Category	Climate change risks	Aspect	Potential impact on operations and finances	Time Frame	Climate Change Opportunities	Aspect	Potential impact on operations and finances	Identification Level	Management Measures
<b>Transition risks</b>	<ul style="list-style-type: none"> <li>Changes in market preferences</li> <li>The rising demand for low-carbon emission products</li> </ul>	Market, Technology risk	Customers require products with low energy consumption and low carbon emissions. Companies that cannot adapt will incur transition risks	Short term	Develop low-carbon products and services	Markets, Products, and Services	Meet customers' product needs and drive revenue growth	Mid	<p>In response to trends such as energy conservation, carbon reduction, and green energy development, we seek new business opportunities:</p> <ul style="list-style-type: none"> <li>Develop IP specifications for reduced power consumption operations</li> <li>Priority support is given to IPs needed by IC industries related to green energy development, such as solar energy, energy removal power equipment, wind power &amp; waterpower, etc.</li> <li>Continue to expand BCD process IP requirements, make power control applications more popular and comprehensively reduce power waste</li> <li>Meet the needs of customers and the energy-saving market through IP process scaling design and industrial operation characteristics</li> </ul>

Risk Category	Climate change risks	Aspect	Potential impact on operations and finances	Time Frame	Climate Change Opportunities	Aspect	Potential impact on operations and finances	Identification Level	Management Measures
<b>Transition risks</b>	Customers demand low-carbon strategies to align with trends	Market risk	<ul style="list-style-type: none"> <li>Foundries have been asked to increase green power procurement</li> <li>Customers and foundries are gradually required to implement low-carbon strategies. If the company fails to implement them, it may lead to a bad impression</li> </ul>	Short, Medium term	Greenhouse gas emission reduction, supply chain management plan	Markets	Establish environmentally friendly partnerships with customers to enhance brand value	Low	<ul style="list-style-type: none"> <li>Continue to utilize the characteristics of the IP industry to reduce the proportion of corporate energy use and monitor project execution results through daily operation management indicators</li> <li>Actively responding to customers' low-carbon strategies, eMemory Electronics passed the ISO14064-1 greenhouse gas inventory verification in 2023 and set carbon emission reduction goals and policies</li> <li>Plan a renewable energy power purchase agreement to obtain renewable energy and green power purchase certificates</li> <li>Continue to promote supplier management: issue and evaluate annual supplier ESG self-assessment forms, perform written audits, and conduct on-site visits to key suppliers.</li> </ul>



Risk Category	Climate change risks	Aspect	Potential impact on operations and finances	Time Frame	Climate Change Opportunities	Aspect	Potential impact on operations and finances	Identification Level	Management Measures
Transition risks	Impact on corporate reputation	Reputation risk	<ul style="list-style-type: none"> <li>Failure to comply with policies, regulations or the goals of international climate change action initiatives, resulting in negative news for the company</li> <li>When stakeholders raise ESG-related proposals, the company can only respond passively or be unable to respond</li> </ul>	Medium term	Improve corporate reputation	Reputation	Actively respond to climate change issues and improve the company's various sustainability or ESG indicators, thereby strengthening the company's sustainable brand value, responding to the expectations and trust of stakeholders, and helping to enhance the company's long-term operations.	Low	Explain or clarify reports and take specific actions to comply with policies, regulations or international goals related to climate change

Risk Category	Climate change risks	Aspect	Potential impact on operations and finances	Time Frame	Climate Change Opportunities	Aspect	Potential impact on operations and finances	Identification Level	Management Measures
Transition risks	• Green energy policy	Policy and Legal risk	• Taiwan regulations require the expansion of renewable energy sources or the payment of fees, resulting in an increase in electricity prices	Medium, Long term	The rise of the renewable energy market	Energy Source	Using renewable energy can not only reduce dependence on fossil fuels and reduce sensitivity to carbon prices	Mid	<ul style="list-style-type: none"> <li>Promote power saving plans</li> <li>Purchase renewable energy certificates</li> <li>- Complete the ten-year green power procurement and achieve the green power target of more than 15% in 2024</li> <li>- Use effective actions, education, and training to target energy conservation and carbon reduction</li> <li>• Continue to data cloud storage and reduce equipment energy consumption and maintenance costs.</li> </ul>
	• Greenhouse gas emission control and carbon tax		• Insufficient green energy results in the inability to purchase sufficient green power, which affects customers' perception of the company and their cooperative relationship						
			• The imposition of carbon fees and carbon taxes leads to an increase in operating costs	Medium, Long term	Greenhouse Gas Emissions Reduction Plan			Low	

Risk Category	Climate change risks	Aspect	Potential impact on operations and finances	Time Frame	Climate Change Opportunities	Aspect	Potential impact on operations and finances	Identification Level	Management Measures
Physical risks	<ul style="list-style-type: none"> <li>Extreme climate</li> <li>Strong typhoon/extreme rainfall</li> <li>Drought</li> </ul>	Chronic risk	<ul style="list-style-type: none"> <li>The intensity and frequency of natural disasters such as typhoons and rains have increased, causing employees to be unable to go to work</li> </ul>	Short term	Strengthen climate resilience to achieve sustainable operations	Resilience	Integrate climate scenarios into the risk management of the company's business model to cope with the impact of climate change on the company and improve corporate resilience	Low	<ul style="list-style-type: none"> <li>Establish a water contingency plan</li> <li>Continue to pay attention to and supervise the government's ability to strengthen cross-regional water resource dispatching</li> <li>Monitor whether the water shortage trend in the foundry affects production.</li> <li>Establish an instant remote office system</li> </ul>
			<ul style="list-style-type: none"> <li>When water conditions turn to orange light (water restriction 15%) or above, tap water supply is reduced daily. Water restriction causes suppliers to be unable to produce and deliver goods</li> </ul>	Short term				Low	
Physical risks	<ul style="list-style-type: none"> <li>Warming increases electricity consumption</li> </ul>	Acute risk	<ul style="list-style-type: none"> <li>Rising temperatures will increase air conditioning load and increase operating costs</li> </ul>	Short term	Greenhouse Gas Emissions Reduction Plan	Energy source and Resource Efficiency	Save electricity and save operating costs	Low	<ul style="list-style-type: none"> <li>Prioritize green building design for newly purchased offices</li> <li>Continue to replace old air-conditioning equipment with new ones and promote air-conditioning energy-saving measures</li> <li>Set up planting to increase the amount of greening and reduce the urban heat island effect</li> <li>Reduce the use of paper and other materials and reduce the energy consumption of equipment through digitalization, such as distributing online questionnaires.</li> </ul>



## 2.6 Stakeholder Management

The Sustainability Committee of eMemory has established a major issue identification process for the company's sustainable development in accordance with the GRI Guidelines (Global Reporting Initiative Standards), and defined five categories of major stakeholders including employees, shareholders/investors, customers, suppliers, and the government. In order to establish a solid and mutually trusting relationship with stakeholders and achieve effective communication, the company fully understands and analyzes issues of concern to stakeholders through multiple communication channels, and actively provides feedback and suggestions.

eMemory has set up a "[Stakeholder Engagement](#)" page on the official website and a "Feedback Mailbox" on the internal website, and announced an independent reporting email address, dedicated hotlines and whistleblower reporting procedures for internal and external stakeholders to communicate, report and disclose illegal activities.

Stakeholder Identification and Communication Channels					
Stakeholders	Importance	Communication Channel	Frequency	Issues	Results
<b>Employees</b>	Employees are the most important asset of eMemory. With continuous innovation and efforts in IP design, eMemory has become a global technology leader.	• Performance assessment	Semi-annually	<ul style="list-style-type: none"> <li>Ethics and regulatory compliance</li> <li>Talent attraction and retention</li> <li>Talent cultivation and development</li> </ul>	<ul style="list-style-type: none"> <li>2 performance assessment</li> <li>6,696 hours of employee training</li> </ul>
		<ul style="list-style-type: none"> <li>President's mailbox</li> <li>Employee Feedback mailbox</li> </ul>	24/7		<ul style="list-style-type: none"> <li>0 complaint case</li> <li>2 pieces of employee feedback</li> </ul>
		• Quarterly Employee Meetings	Quarterly		• 4 quarterly meeting
		• Labor-management Meetings	Quarterly		• 4 labor-management meetings
		• Employee Satisfaction Survey	Semi-annually		<ul style="list-style-type: none"> <li>Annual health checkup satisfaction survey</li> <li>Annual benefits satisfaction survey</li> </ul>

### Stakeholder Identification and Communication Channels

Stakeholders	Importance	Communication Channel	Frequency	Issues	Results
<b>Shareholders and Investors</b>	Shareholders and investors are the driving force behind eMemory. Through capital investment and participation in corporate governance, our shareholders and investors help us go further on the road to sustainable development.	Annual general shareholder's meeting	Annually	<ul style="list-style-type: none"> <li>Corporate governance</li> <li>Ethics and regulatory compliance</li> <li>Customers and services</li> <li>Technology development</li> <li>Financial performance</li> <li>Stock price</li> <li>ESG execution</li> </ul>	<ul style="list-style-type: none"> <li>Annual general shareholder's meeting</li> <li>Quarterly investor conferences</li> <li>Attended 33 external investor conferences</li> <li>91 investor meetings (Individual)</li> <li>Selected as "MSCI Taiwan Index" constituents</li> </ul>
		Quarterly investor conferences	Quarterly		
		Investor meetings	According to demands		
		Investor relations contact	Any time		
<b>Customers</b>	Customers are our best strategic partners. Adhering the customer-oriented spirit, eMemory develops various IPs and provides professional services to assist our customers in successful product development.	Designated customer service team	Daily	<ul style="list-style-type: none"> <li>Technology innovation</li> <li>Customer service</li> <li>Brand value</li> <li>Information confidentiality</li> </ul>	<ul style="list-style-type: none"> <li>The average customer satisfaction score was 95.81 out of 100 in 2023</li> <li>Received TSMC's IP Partner Award for 14 consecutive years</li> </ul>
		Customer complaint channels	Daily		
		Customer satisfaction survey	Annually		

Stakeholder Identification and Communication Channels					
Stakeholders	Importance	Communication Channel	Frequency	Issues	Results
Suppliers	Suppliers are eMemory's crucial partners, providing us with excellent products and support. Because of the close collaboration with our suppliers, our IPs can be evaluated and pass various verification tests on schedule.	Supplier Audit	Annually	Supply chain sustainability management	Distributed 33 "Supplier Checking List" with 100% response rate
		Reporting Mailbox	Daily		
Government	The government is the bridge for eMemory to enter the stock exchange market. Investors around the world can learn about us through the platforms built by the government.	MOPS	Any time	<ul style="list-style-type: none"> <li>Regulatory compliance</li> <li>Corporate governance</li> <li>Corporate social responsibility</li> <li>Ethics and business integrity</li> </ul>	<ul style="list-style-type: none"> <li>Ranked as top 20% in the corporate governance evaluation system</li> <li>Selected as "TPEX Corporate Governance Index", "TPEX 50 Index", "TPEX 200 Index", "TPEX Compensation Index", "TPEX RGA Quality 50 Index", "TPEX Semiconductor Leaders Total Return Index", "TIP TPEX ESG Index", "TIP TPEX ESG Growth Total Return Index", "TIP TPEX ESG ITE Total Return Index", "TPEX FactSet Climate Resilience Index", "TPEX FactSet Semiconductor Climate Resilience Index", "TPEX FactSet Semiconductor Climate Net Zero Elite Total Return Index" constituents</li> </ul>
		Conferences	Non-periodic		



# Environment Sustainable

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Environmental Management

Innovation Management

Patent Management

Supply Chain Management

## 3.1 Environmental Management

Environmental protection is one of the most important parts of corporate sustainability. As a professional silicon IP provider, eMemory does not manufacture tangible products. There is no raw material consumption, hence, no controversial procurement and related waste issues would arise. The company is a non-polluting enterprise and do not operate in environmental protection areas nor areas with high biodiversity value. The risk of significant impact, both directly and indirectly, on biodiversity is relatively low.

We promise not to conduct operations, sales and other operational activities at or near nationally identified important biodiversity sites, and we will try our best to integrate environmental protection into policy formulation and daily for the sustainable development of the enterprise.

### 3.1.1 Environmental Management Strategies / Goals

Echoing the trend of energy saving, carbon reduction and waste reduction, eMemory has actively implemented energy saving and waste reduction measures. Based on the carbon reduction target and following the international standard ISO 14064-1:2018, we completed the greenhouse gas inventory check. Taking 2023 as the base year, we disclose the greenhouse gas inventory results regularly. The carbon reduction progress and renewable energy plan and execution are reviewed annually.

Taking eMemory's non-polluting nature, general environmental management system certification is not applicable. We abide by relevant environmental protection laws and regulations, reduce resource waste, and implement resource recycling and reuse.





### 3.1.2 Environmental Management Policies

eMemory obtained the ISO 14064-1:2018 certificate in 2023 and continues to monitor the GHG and carbon emission reduction. The progress is reported to the Sustainable Management Committee every quarter.

In addition, in response to the global trend of energy conservation, carbon reduction, and waste reduction, we have formulated three major strategies on reducing energy and water consumption and the general waste to achieve the goal of net zero emissions in 2050. In terms of reducing energy consumption, we have changed to LED lighting, purchased new energy-saving air-conditioning equipment, and continued to review potential opportunities regularly. In terms of water conservation, eMemory has been promoting the appropriate water usage, changing water-saving faucets and posting water conservation slogans to develop water-saving habits. In terms of general waste reduction, eMemory continues to conduct waste reduction activities, such as implementing electronic process flow to replace paperwork, promoting the use of double-sided printing and anchoring the concept of energy conservation and carbon reduction in everyone's mind.

To implement environmental management policies, eMemory encourages colleagues to participate in sustainable development and proposes improvement plans to the Sustainable Management Committee, which will be implemented after resolution by the convener and committee members.

In 2023, we aimed to reduce carbon with the slogan "Carbon Reduction Sustainability - Every Cleaning Starts". With the spirit of green purchasing and local purchasing, we provide hand soap and dishwashing detergent made from recycled waste wood to realize environmental sustainability.





## 3.1.3 Environmental Management and Implementation

### 3.1.3.1 GHG Management

In 2023, eMemory emitted a total of 1,782.716 tons of CO<sub>2</sub>e, including 102.7494 tons of CO<sub>2</sub>e for category 1, 1,623.4599 tons of CO<sub>2</sub>e for category 2, 43.9338 tons of CO<sub>2</sub>e for category 3, 1.2261 tons of CO<sub>2</sub>e for category 4, and 11.3471 tons of CO<sub>2</sub>e for category 5. We passed GHG inventory in June. We selected turnover as an organization-specific metric and calculated the energy intensity ratio as 0.5845 (tons of CO<sub>2</sub>e/million turnover).

The energy consumption inside and outside the organization totals 3,286,356.1152 kWh (11,830,882 million joules) and 13,012.0383 kWh (46,843 million joules) in 2023. To decrease the energy risks, we have set short- and long-term goals. We target to reduce the organization's energy intensity by 1% in 2025 as our short-term goal. And we plan to linearly reduce gray energy consumption by at least 4.2% per year, setting a reduction target based on the scenario of "1.5°C temperature rise". The Sustainable Management Committee proposed "eMemory Reusable Energy Roadmap" and would be implemented in 2024 to meet our sustainable management goals.

Greenhouse Gas Inventory			Unit: ton co <sub>2</sub> e/year
Year		2022	2023
Category	Category 1	15.6618	102.7494*
	Category 2	1,653.5073	1,623.4599
	Category 3	19.8197	43.9338
	Category 4	1.5041	1.2261
	Category 5	6.1194	11.3471
Total		1,696.612	1,782.716
Intensity (tonCO <sub>2</sub> e/million turnover)		0.5274	0.5845

*Note: In 2023, the organization included direct fugitive emissions caused by the release of greenhouse gases in man-made systems into the scope of inventory (Category 1)*

### 3.1.3.2 Water Management

Our water consumption is for daily operations such as food services and sanitation, so the risk of operations being affected by water resources is relatively low. Our water is mainly from the Touqian River and Baoshan Reservoir in Hsinchu. eMemory's total water consumption in 2023 was 6,106 m<sup>3</sup>, and the water intensity was 2.0018 m<sup>3</sup>/million-NT\$.

We target to reduce water intensity by 1% in the next three years. Through daily management and inspections, we explore feasible water-saving measures, continue to promote various water-saving plans, implement water-saving measures, and stipulate the "correct water use concepts, posting water-saving slogans near water-using equipment, and developing water-saving habits". We also added new water-saving facilities in 2023. The Taiyuan Science and Technology Park where eMemory is located, has a sewage recycling device, and the recovered sewage is mainly used to irrigate the gardens around the science and technology park. The domestic wastewater is discharged to domestic sewage treatment facilities in Taiyuan Park and then released into the water without significant impact on the water quality.

Water Resource Management		
Year	2022	2023
Total	5,780.3610	6,105.9907
Intensity (degrees/million turnover)	1.7970	2.0018

### 3.1.3.3 Waste Management

Because eMemory is not engaged in physical production and manufacturing, we do not emit toxic substances such as hazardous chemicals, packaging materials and electronic waste. The company's waste sources mainly comes from domestic waste; no harmful waste is produced. The waste is divided into general garbage and recycling. The waste is collected by employees in the temporary waste storage area and transported to a qualified waste management plant. In 2023, the total weight of domestic waste for eMemory's Zhubei Office was 14.614 metric tons; the total amount of non-hazardous waste(General Waste) treated was 4.565 metric tons; the total amount of off-site transfer and disposal(Recyclable Waste) was 10.049 metric tons.

By setting the management strategy and goals of "paperless internal company forms, double-sided printing for publicity, and waste reduction actions", effective and reliable source reduction is achieved.

Waste Management			
Year		2022	2023
Category	General Waste	4.176	4.565
	Recyclable Waste	7.112	10.049
Total (tons/year)		11.288	14.614

## 3.2 Innovation Management

eMemory adheres to the core corporate values of "responsibility", "innovation", "sustainability" and "excellence". We boast the silicon IP industry's characteristics of clean technology, without physical production and manufacturing. Hence, no hazardous chemicals and waste are emitted. Such characteristics enable eMemory to minimize impacts on the environment and have a low impact on customers' health and safety. In 2023, there were no violations of health and safety regulations on products and services.

With the advancement of the semiconductor manufacturing process and the increase of IC design complexity, silicon IPs further improve the efficiency of IC design process and shorten the development time. eMemory continues to develop new technologies toward advanced process nodes for repeated use with minimize area and power consumption.

Due to the complexity of chip design and the rapid development of various integration methods, the importance of design productivity has been highlighted. The silicon IPs developed by eMemory emphasize on repeated usage, greatly reducing product development time and hastening product launches to create a win-win and sustainable operating model with customers. In terms of the development results of the advanced process, as of 2023, we have developed and qualified silicon IPs down to the 4nm process with over 580 platforms. The total number of qualified IPs has exceeded 2,400. Chips embedded with our silicon intellectual property have lower average power consumption per million chips.

eMemory is committed to environmental protection and sustainable development while pursuing open innovation. We vow to provide the most innovative, energy-saving, and environmentally friendly product to support all applications for every customer.

### 3.2.1 Green Design

eMemory is committed to the development of embedded non-volatile memory IP design, focusing on the application of NeoBit, NeoFuse, NeoEE, NeoMTP and NeoFlash technologies. Once our IP is qualified, it can be used by various designs and applications so that each user enjoys the guaranteed manufacturability and functionalities without going through the stringent development process. This becomes extremely valuable when migrating the technology platform as our products are widely available across foundries and all the technology nodes. This saves time, resources and cost for the customers and the environment.

Our products intrinsically align with ESG in multiple ways. For example, IC designs with our products embedded could be configured post-production to reduce overstocking and potential waste. Customers could also adjust the parameters setting once in-field, which helps yield recovery and prolong the IC's lifespan against aging.

We have established a quality management system that meets international standards to ensure quality. Our technology has been successfully adopted by major foundries in process technologies from 0.5 um to 4 nm for mass production of customer products. Through the innovation of core technologies, we continue to research and develop technology to support 3 nm advanced processes to further meet the needs of customers for diverse applications.

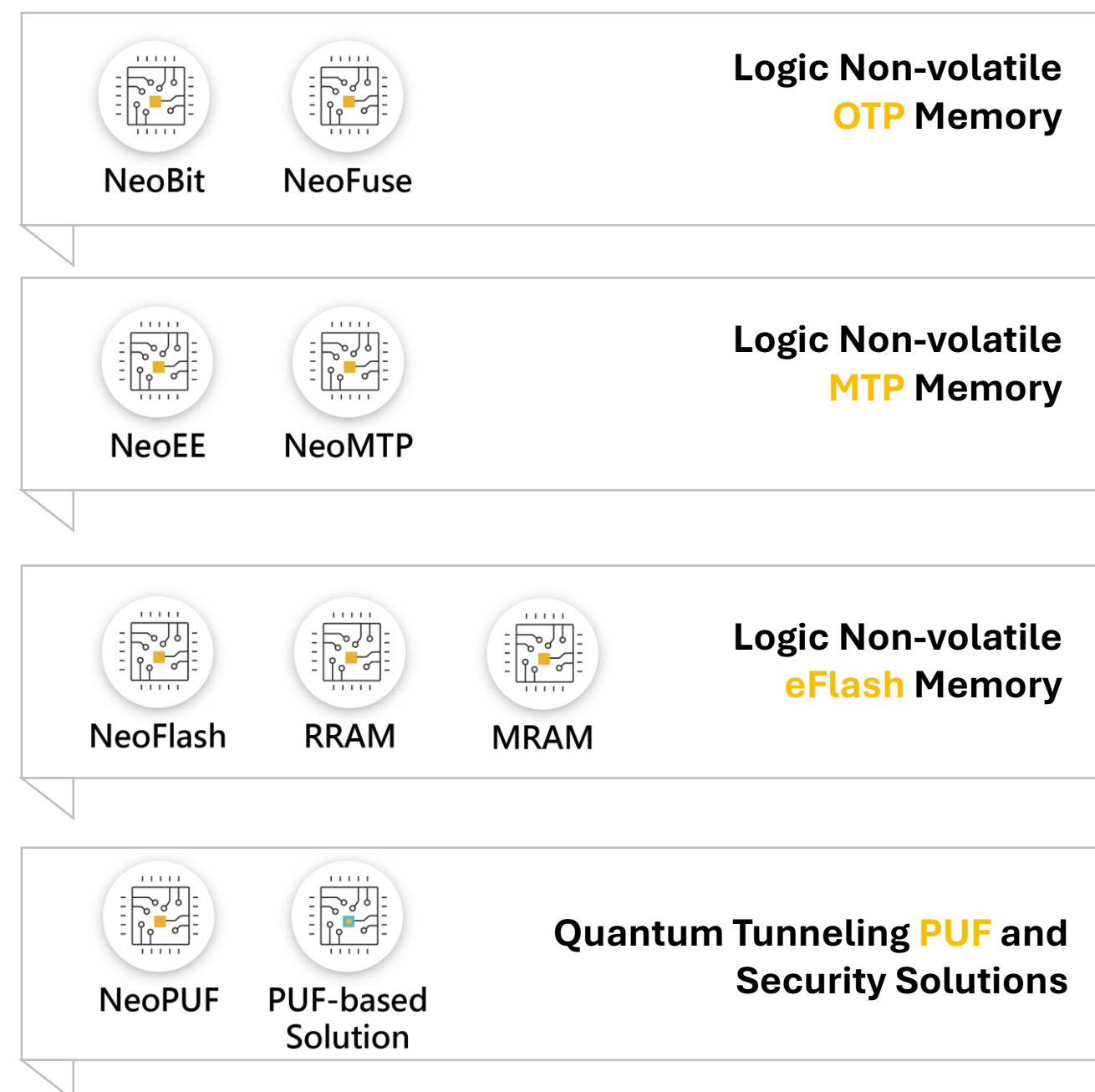


### 3.2.2 Product Market Development

We have introduced NeoEE, NeoFuse, NeoMTP, and NeoPUF technologies in recent years, and actively been developing NeoFlash to diversify our offering and service.

As mentioned previously, embedding eMemory's IP can improve chip stability and yield, thereby reducing customers' resource consumption during chip manufacturing. The trimming function provided by eMemory IPs enable the chips to meet the specifications easier, thereby reducing the cost incurred in remanufacturing. Based on amount of wafer with eMemory's IP embedded in 2023, it was approximately equivalent to saving nearly NT\$1.95 billion in manufacturing costs and reducing electricity consumption of 270 million kWh, which equaled to 0.98 trillion KJ and 1.3 million m<sup>3</sup> of water.

Display driver ICs and power management ICs are currently the primary products of eMemory. In parallel, eMemory continues to develop IPs on advanced logic process technology platforms to support customers in product development planning and verification on multiple platforms. We have also deployed in emerging applications such as wearable devices, smart IoT applications, and smart automotive electronics, such as biometrics identification chips (fingerprint recognition chips), mobile DRAM, image sensor chips (CMOS Image Sensor), image signal processing chips (ISP) and integrated touch display driver chips (TDDI) to further enhance the business competitiveness of customer products. In battery-powered electronics applications, customers utilize our products to store different operating settings to reduce the power consumption of their chips and extend product lifetime.



### 3.2.3 Clean Technology Development Strategy

eMemory products replace traditional non-volatile memory with a more advanced component design. It is regarded as a clean technology that no additional masks and processes would be needed. To cope with the energy-saving trend in electronics, eMemory continues to develop products on the low-power (LP) green energy processes in the foundry. At the same time, eMemory extensively deploys our IPs in multiple semiconductor foundries, turning Green from responsibilities into opportunities and contributing to the environment.

eMemory continues to push our core technologies forward in advanced processes and expand into new-generation logic process technologies from 12nm to 3nm. Echoing with TSMC's "More-than-Moore" strategy, we expand into specialized process technologies with high value-add on mature nodes. We are actively developing IPs for high voltage (HV), MEMS, BCD, image sensors, analog, SOI, and other processes for specific applications. This meets the diverse customer demands and broadens the adoption of embedded non-volatile memory, providing a one-stop shopping solution for related silicon IPs.

Additionally, in emerging memory technologies, we are actively investing in R&D resources for platforms below 40nm to expand our next-generation memory silicon IP. The specific plans are as follows:

- Increase platform penetration: We actively introduce new applications in emerging fields such as autonomous driving, smart IoT, and AI.
- Expand the applications: Building on the existing OTP customer base, we explore opportunities for NeoEE and NeoMTP for more advanced products.
- Accelerate the development on advanced nodes: We actively promote NeoFuse and NeoPUF to new platforms, in cooperation with the subsidiary of PUFsecurity, for security applications.
- Continue NeoFlash development to expand to more technology platforms, and to meet the specifications for Automotive
- RRAM and MRAM: Following the completion of 22nm qualification in 2023, we actively progress with our partners for future development.

### 3.2.4 Clean Technology Achievements

#### Process Innovation

eMemory continues to develop logic-compatible embedded non-volatile memory in green processes with foundries. These processes could use 11 less mask layers, saving approximately 38% in costs compared to the previous technology. Until 2023, we have developed IPs in green processes ranging from 0.18um to 80nm with more than 200 IPs in 13 foundries worldwide.

#### Energy Saving Products

eMemory's NeoFlash requires only two additional mask layers to produce embedded flash memory functions in logic-compatible processes. Our NeoFlash offers a cost advantage compared to other embedded flash memory solutions in the market, which typically requires an additional 11-15 masks in the process. NeoFlash saves approximately 30-50% in cost. This significantly reduces energy consumption, contributing to global conservation and carbon reduction efforts. Furthermore, we have invested in and developed NeoFlash IPs in processes ranging from 0.35um to 40nm at various nodes. Approximately 300,000 8-inch equivalent wafers with NeoFlash IPs had been produced across six semiconductor foundries globally.

### 3.2.5 Product Life Cycle Assessment

With the manufacturing and use of various electronic products, a large amount of electronic waste (e-waste) has become an emerging issue of environmental protection. Improper handling or disposal of electronic waste will cause environmental and health hazards. All eMemory IP products have been verified by JESD standards, and the lifespan is far greater than the end-of-life requirements, without generating additional waste.

### 3.2.6 Open Innovation Achievement

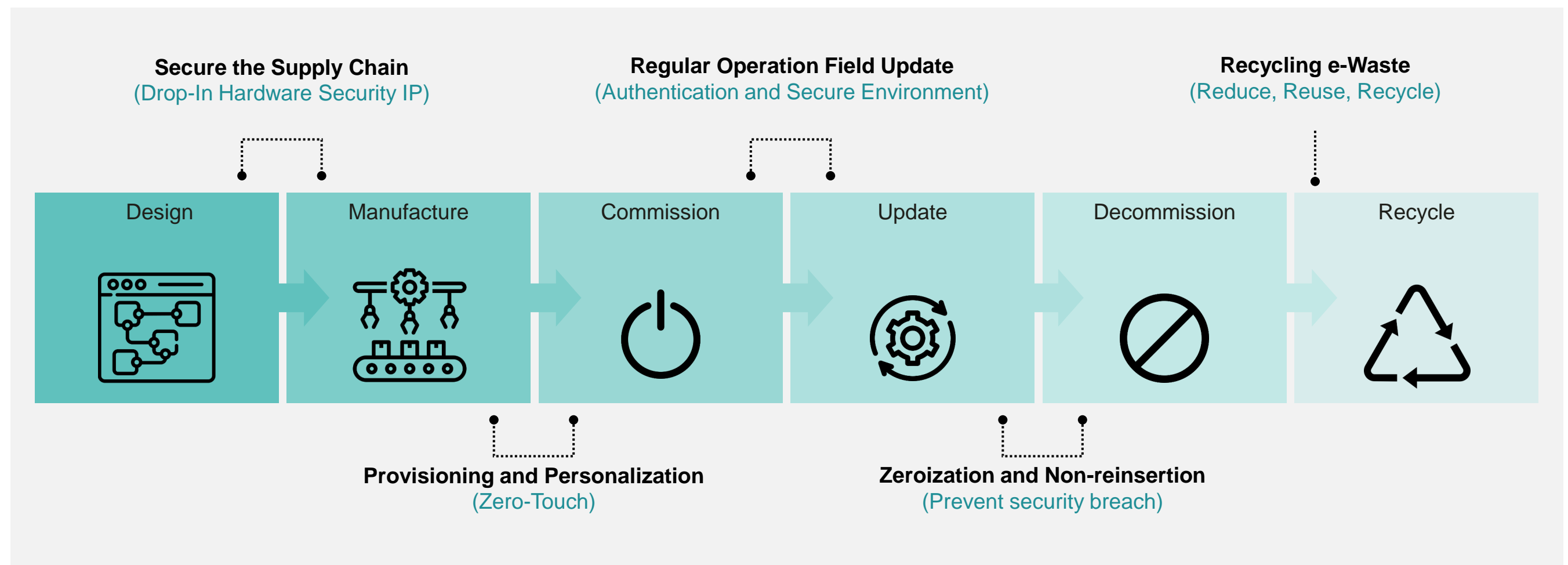
To maintain high-quality R&D capacity and continuous improvement, eMemory implements open innovation and achieves outstanding achievements. With the close cooperation between the R&D team and global business partners, we once again won the TSMC Open Innovation Platform (OIP) Partner of the Year in 2023 Award, marking the 14th consecutive year of winning the award. In addition to cooperating with business partners, eMemory is deeply involved in industry-university cooperation and provides a series of professional courses to cultivate outstanding talents in the semiconductor industry in the future to give back to society. In December 2023, our security IP solution was awarded the Hsinchu Science Park's "Excellent Manufacturer Innovative Product Award". At the same time, NeoFlash also won the Best IP Product Award and R&D Innovation Award from the EE Times Award.

### 3.2.7 Product Innovation and Application

In terms of product innovation, eMemory has also been committed to the application of PUF technology. Through cooperation with the subsidiary, PUFsecurity, eMemory has developed a series of integrated products based on our quantum tunneling PUF (chip fingerprint) technology. Our high-performance security solutions are highly secure, easy-to-use and low-cost solutions that provide a unique chip fingerprint and root of trust for each chip or product. (Root of Trust). Our goal is to promote the stable and exceptional NeoPUF technology to new applications with security needs.

Our IP products have strong and comprehensive security protection, beginning from the design and manufacturing stages until the end of the product cycle, thereby preventing products from becoming obsolete (electronic waste) due to the lack of security protection. In addition, at the end of the electronic product cycle, the electronic products could be tracked with usage status through chip fingerprints, which ensures that the product can be recycled correctly and achieves the goal of "innovation" and "sustainability".

PUFsecurity also continued to participate in the A+ industrial innovation R&D program sponsored by the Ministry of Economic Affairs. Please refer to [the company's financial report](#) for details.





## 3.3 Patent Management

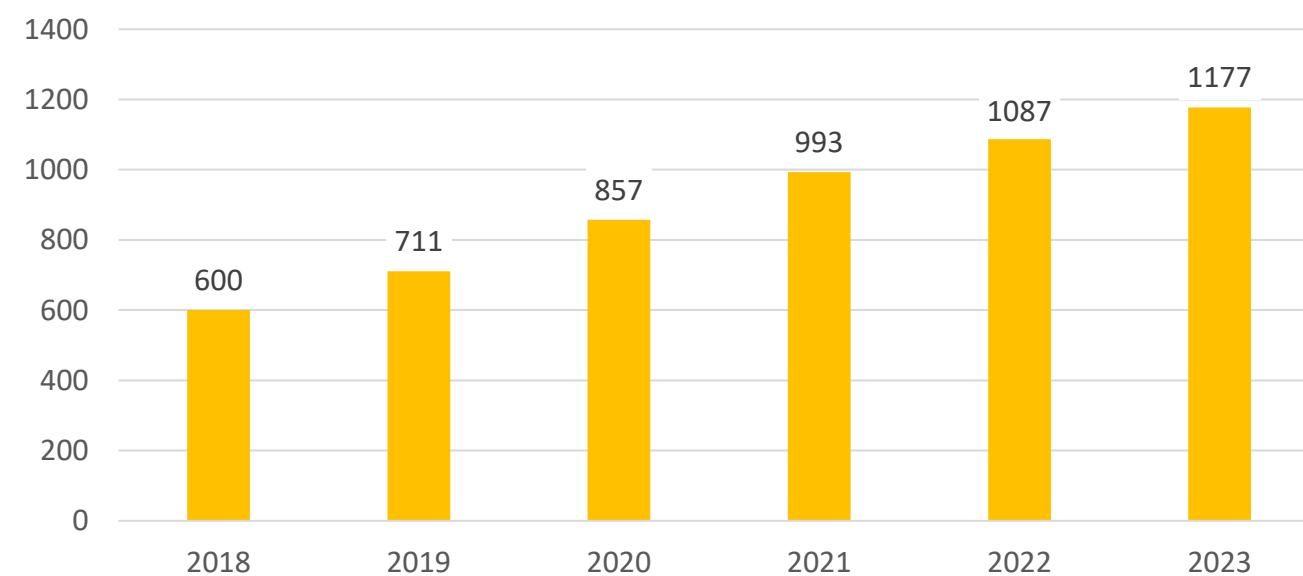
eMemory values the importance of innovative research and IP protection. To formulate patent strategies and plans of the patent portfolio based on the company's business objective, eMemory has a "Patent Strategy Committee" and a "Patent Examination Board". The company continues to enhance both the quantity and quality of IPs, to create economic value and strengthen competitive advantage. In the meantime, the Patent Strategy Committee keeps emphasizing the need for power consumption reduction for new technology development and circuitry design techniques. With that, we will be able to provide power-efficient IPs facilitating low power consumption in customer products.

eMemory and PUFsecurity's patent portfolio covers Taiwan, the United States, China, Japan, and Europe. As of 2023, the total worldwide patent applications has reached above 1,300, and the average number of patent applications per employee is over 3. The number of patents issued has also significantly increased, with a growth rate of 96.2% between 2018 and 2023.

To encourage employees' innovation, eMemory sets up the 'Patent Award' and the 'Golden Brain Award' to reward inventors with the most issued patents and patent applications respectively. Moreover, eMemory sets up the 'New Brain Award' to motivate junior employees to apply for patents. Other than the annual awards, events such as the "Innovation Competition" and patent training courses would be held from time to time to enrich employees' patent knowledge and to promote the idea of "every idea matters!".

In addition, eMemory has been ranked as "The Top 50 TWSE/GTSM Listed Companies with Most Valuable U.S. Patents" according to the cooperatives evaluation result by Institute for Information Industry and Ocean Tomo in 2013, and has received the "National Industrial Innovation Award" in 2019. With a higher honor, eMemory has won the Gold Medal Award of the "National Invention and Creation" twice in 2005 and 2020, and the Contribution Award once for the same in 2008.

Cumulative Issued Patents from 2018-2023



## 3.4 Supply Chain Management

### 3.4.1 Management Goals and Strategies

eMemory actively cooperates with our supplier partners to invest in the sustainable development of the supply chain. This ensures the suppliers' working environment is safe, and employees are respected and treated with dignity. And to ensure their business operations promote environmental protection and comply with ethical conduct.

We use the "Responsible Business Alliance (RBA)" as the blueprint, and the "UN Guiding Principles on Business and Human Rights", including the "ILO Declaration on Fundamental Principles and Rights at Work and the UN Universal Declaration of Human Rights in the formulation of the code. In 2016, the "[eMemory Supplier Code of Conduct](#)" was formulated to require supply chain manufacturers to abide by the code while complying with the laws and regulations of the countries and regions where it operates.

### 3.4.2 Supply Chain Sustainability Policy

To continuously reduce environmental impact and reduce environmental changes and resource depletion, eMemory executes two strategies: "local procurement" and "banning conflict minerals" to improve the sustainability of the supply chain and provide continuous and stable services.

We adhere to the principle of local procurement to reduce the environmental impact caused by carbon emissions from transportation and to increase local supply and economic development opportunities. Taiwan, where the majority of employees reside, is our main site. The local procurement in 2023 reached 63.36%, and the number of local suppliers was 29.

In addition, we understand and take action to support the RBA Responsible Business Alliance's statement on the ban on conflict minerals. We announced the policy on banning conflict minerals on the [company's website](#). The company and related supply chains should abide by this policy statement. Since eMemory is a professional silicon intellectual property company without manufacturing, no raw minerals purchased, nor smelter/refinery suppliers would be needed. Policies related to conflicting minerals is not applicable.

### 3.4.3 Supply Chain Management Mechanism

#### 3.4.3.1 Risk Management

eMemory requires new suppliers to provide related certificates and documentations for our procurement team to review. If no certificate is provided, a written evaluation will be conducted on the supplier's performance in the three major aspects of economy, society, and environment to ensure that its operations comply with sustainable management.

In addition, eMemory requires major and approved suppliers to abide by the "[eMemory Supplier Code of Conduct](#)" and sign the "eMemory Supplier Social Responsibility Commitment". As our suppliers, offering or accepting bribes or illegitimate interests in any format are prohibited. Suppliers must adhere to fair trade and competition standards. eMemory also promotes continuous improvement through close cooperation, communication, auditing, and follow-up evaluation between both parties.

#### 3.4.3.2 Internal Assessment

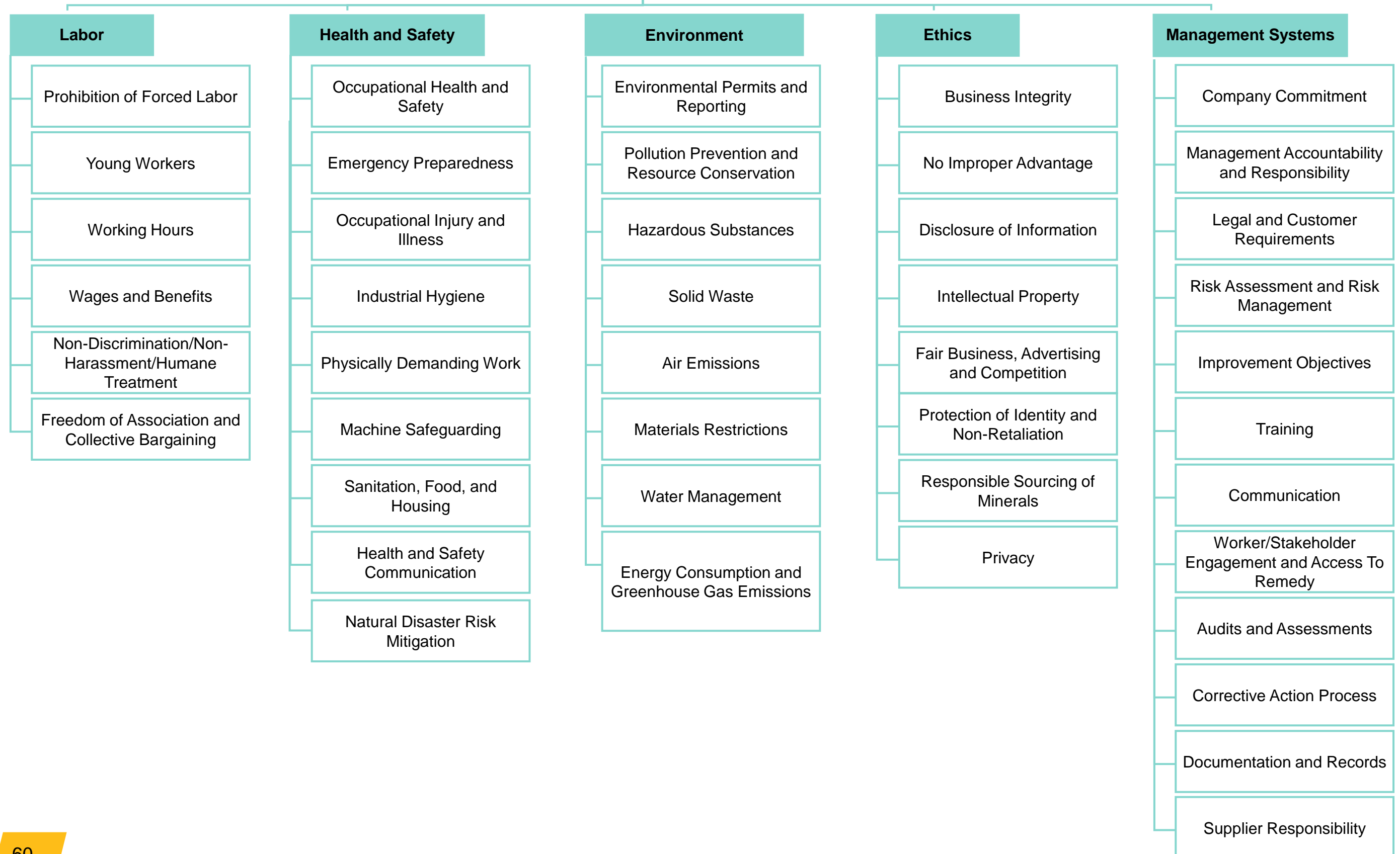
To ensure that supplier quality meets the requirements of eMemory's operations and customers, we conduct an annual comprehensive evaluation based on quality policies, supply chain management and professional performance. Each supplier is graded based on the delivery quality, abnormal events, delivery dates, technical capabilities, product prices, and communications. In 2023, 32 suppliers were evaluated, with a passing rate of 100%, and suppliers that outperformed the audit standards account for 80%.

#### 3.4.3.3 Supplier Self-Inspection

eMemory requires suppliers to self-inspect according to our Supplier Code of Conduct Checklist, which includes five aspects: labor, health and safety, environmental protection, business ethics, and management system. A total of 44 items, covering human rights, environmental protection, safety and hygiene, sustainable supply chain management, and responsible sourcing of minerals, must be checked off. The checklist is used for the sustainable management of suppliers, and on-site audits are carried out when necessary to ensure that the supply chain complies with corporate social responsibility and sustainable operations. If any potential risks are identified, suppliers must provide mitigation accordingly. When we make purchasing decisions, suppliers' compliance with this Code is included in has been taken into account.

In 2023, 33 Supplier Code of Conduct Checklists were completed and returned to us. The return rate was 100%, same as in previous years. Among them, two suppliers are RBA members that completely comply with checklist items. After confirming the checklist, we did not identify any immediate and potential adverse environmental and social impacts in the supply chain.

**eMemory Supplier Code of Conduct**





### 3.4.3.4 Key Supplier Monitoring and Auditing

eMemory examines the integrity of the ESG management system of key suppliers through three major aspects: economic, environmental and social aspects. We evaluated the ESG management systems of our key suppliers in 2023, and the results were all in compliance with the standards. No potential risks in economic, environmental, social aspects, etc. were identified. In the future, the status will be continuously tracked to ensure ESG management standards are met.

In addition, eMemory conducted an on-site audit with a key supplier that potentially possessed a greater impact on the company's business. The focus was mainly on ESG management and conflict mineral due diligence, and the result was in line with the standards of sustainable operations.

**NOTE** *Definition of key suppliers: Suppliers that significantly impact the company's products and delivery schedules or whose purchase amounts reach a certain amount or proportion are listed as important suppliers that must be included in management and evaluated.*



As a leading IP technology developer and provider, employees are eMemory's most valued asset. We value the work-life balance of each employee. In addition to complying with the latest government laws and policies, we also clearly stipulate the employee's and company's rights and obligations in the "Work Rules", which cover recruitment, employment, training and retention of talents. In terms of promotion and welfare systems, eMemory has established and continued to improve the organizational and management systems to strengthen the relationship with our employees. We are committed to creating a win-win environment where our talents and the company can share and prosper. At the same time, eMemory continues to recruit outstanding professionals in various fields around the world, regardless of their nationality, gender, sexual orientation, race, culture, class, age, marriage, language, belief, religion, political stance, place of origin, place of birth, appearance, physical and mental disabilities, etc., we focus on creating and continuing an equal, diversified and inclusive workplace.

# Friendly Workplace

Human Resources Structure  
Training and Development  
Benefits and Welfare  
Occupational Safety  
Human Rights

## 4.1 Human Resources Structure

eMemory has always attached great importance to R&D, innovation and international operations. The human resource strategies surround the principles of equality, diversified employment, and cultivating and developing talents. Regardless of employees' backgrounds or identities, all are treated equally in the performance and promotion system. Child labor is strictly prohibited. We provide equal employment opportunities globally to enhance cooperation and talent exchanges in R&D and other functions.

eMemory and its subsidiary, PUFsecurity, have established 3 operating sites in Taiwan, Japan, and the United States respectively. The Taiwan site has the majority of employees, hence, it is the major operating base. The proportion of local talents employed as Directors and above is 100%. The personnel distribution in 2023 was as follows:

eMemory	Employment	Type	eMemory Taiwan					eMemory Japan				
			Male		Female		Total	Male		Female		Total
			Local	Non-local	Local	Non-local		Local	Non-local	Local	Non-local	
	Payment employee	Full-time	201	2	92	0	295	5	1	2	-	8
		Part-time	-	-	-	-	-	-	-	-	-	-
	Contract employee	Full-time	1	-	2	-	3	-	-	-	-	-
		Part-time	-	-	-	-	-	-	-	-	-	-
PUFsecurity	Employment	Type	PUFsecurity Taiwan					PUFsecurity USA				
			Male		Female		Total	Male		Female		Total
			Local	Non-local	Local	Non-local		Local	Non-local	Local	Non-local	
	Payment employee	Full-time	34	1	12	-	47	1	-	-	-	1
		Part-time	-	-	-	-	-	-	-	-	-	-
	Contract employee	Full-time	-	-	-	-	-	-	-	-	-	-
		Part-time	-	-	1	-	1	-	-	-	-	-

Note: This table does not include employees who are on leave without pay.

In 2023, the total number of employees of eMemory and PUFsecurity combined was 351, including 11 non-Taiwanese colleagues (excluding 1 non-Taiwanese who was on leave). Female executives accounted for 14% and 18% respectively. The gender ratio of employees has remained stable over the past few years given the Taiwanese semiconductor workforce characteristics. Male employees accounted for 69.8%; female employees accounted for 30.2%, approximately one-third of the total. The average age of employees in 2023 was 40 years old, with 38.7% were between 41 to 50 years old.

In terms of job type, 67.5% of the total number of employees were R&D. For the distribution of education, the proportion of employees with master's degrees was the highest, accounting for 65.8% of the total employees. Regarding the risks that may arise between foreign (non-Taiwanese) and expatriate employees, such as human rights risks arising from conflicts due to cultural differences, the organization ensures that the labor policy complies with domestic and foreign human rights conventions and local government regulations and requirements.

Education	eMemory Taiwan	eMemory Japan	PUFsecurity Taiwan	PUFsecurity USA	Total	%
PhD	6	-	7	-	13	3.7%
Master	195	4	31	1	231	65.8%
Bachelor	93	4	9	-	106	30.2%
High School	1	-	-	-	1	0.3%
Total	295	8	47	1	351	100.0%
Job Type	eMemory Taiwan	eMemory Japan	PUFsecurity Taiwan	PUFsecurity USA	Total	%
R&D	206	5	26	-	237	67.5%
Administration/Management	48	2	4	-	54	15.4%
Marketing/Sales	41	1	17	1	60	17.1%
Total	295	8	47	1	351	100.0%
Age	eMemory Taiwan	eMemory Japan	PUFsecurity Taiwan	PUFsecurity USA	Total	%
61 -70 years old	2	3	1	-	6	1.7%
51 -60 years old	28	5	1	1	35	10.0%
41 -50 years old	120	-	16	-	136	38.7%
31 -40 years old	108	-	20	-	128	36.5%
21 -30 years old	37	-	9	-	46	13.1%
Total	295	8	47	1	351	100.0%



## 4.1.1 Talent Attraction and Retention

eMemory has maintained a stable human resource and a low turnover rate over the years. The turnover rate of eMemory and PUFsecurity combined in 2023 was 3.83%, and the turnover rate of new employees was 0%. These numbers were much lower than the industry average

The turnover rates of PUFsecurity Technology as a whole and new employees were both 0%. eMemory continues to proactively recruit outstanding talents in various fields globally. A total of 34 new employees joined eMemory and PUFsecurity in 2023, of which 70.6% were male and 29.4% were female.

**2023 Number of New Employee/ Employee resigned – by Age**

Number	Location Age	eMemory Taiwan		eMemory Japan		PUFsecurity Taiwan		PUFsecurity USA	
		Male	Female	Male	Female	Male	Female	Male	Female
Number of New Employees	21 -30 years old	4	2	-	-	2	-	-	-
	31 -40 years old	5	6	-	-	4	-	-	-
	41 -50 years old	3	1	-	-	3	-	-	-
	51 -60 years old	1	-	1	1	-	-	1	-
	61 years old and above	-	-	-	-	-	-	-	-
	Total	13	9	1	1	9	0	1	0
Number of Employees resigned	21 -30 years old	1	3	-	-	-	-	-	-
	31 -40 years old	-	2	-	-	-	-	-	-
	41 -50 years old	2	4	-	-	-	-	-	-
	51 -60 years old	-	-	-	-	-	-	-	-
	61 years old and above	-	-	-	-	-	-	-	-
	Total	3	9	0	0	0	0	0	0

To provide the company with strong growth momentum, eMemory continues to explore different talent recruiting methods. We formulate talent recruiting plans following the annual business direction and strategic goals and enrich human resources through various channels, including online platforms, campus recruitment, internship programs, employee referral bonus programs, etc.

We attach great importance to the opportunity to cooperate with schools. Through internship programs and cooperation with universities, we reach out, attract and cultivate sustainable young talents, and at the same time establish a more distinctive branding in academia. Our annual internship program attracts numerous students to join and learn about us. These students get to participate in different projects, and work with their mentors.

The project results are presented publicly at the end of the program. The internship program is for participants to fully and effectively utilize their strengths and establish future life plans and helps the company to attract outstanding talents to join the professional team upon graduation.

eMemory also continues to optimize the official recruitment platform and internal talent management system to make job search more accessible in the talent market. We also accommodate a referral bonus program to encourage employees recommend external talents.

#### eMemory and PUFsecurity New employees in the past three years

Year	2021		2022		2023	
Gender	Female	Male	Female	Male	Female	Male
Number of new employees	12	27	28	36	10	24
Percentage	30.8%	69.2%	43.8%	56.3%	29.4%	70.6%
Total	39		64		34	

#### eMemory and PUFsecurity employees resigned in the past three years

Year	2021		2022		2023	
Gender	Female	Male	Female	Male	Female	Male
Number of new employees	8	20	15	9	9	3
Percentage	28.6%	71.4%	62.5%	37.5%	75%	25%
Total	28		24		12	

## 4.2 Training and Development

To maintain the innovation momentum, eMemory provides comprehensive and diversified training courses for all employees. Every employee can access to these training courses regardless of his/her function or job level. While enriching everyone's professional knowledge, we encourage opinion exchange and stimulate different ideas and innovations. Employees continue to actively participate in course training, acquire more new knowledge and new technologies and make improvements at the same time. We encourage everyone to continue to absorb new knowledge and grow.

In 2023, the total training hours of eMemory and PUFsecurity employees reached 6,696 hours. On average, each employee received 23.5 hours of training. The received training for R&D and non-R&D employees were 28.9 and 21.2 hours respectively. By gender, male and female employees received 24.3 and 19.8 hours of training respectively.

To encourage patent innovation and award excellent performance, eMemory has established various awards for best patent, most patent awarded, most patent proposal, best instructor, and so on. These awards are a part of the compensation program and serve as recognition for personal achievements and valuable contributions to the company.

2023 Training Hours				
Item		Average Training Hours		
		Overall	eMemory	PUFsecurity
Job Function	R&D	28.9	28.2	30.7
	Non-R&D	21.2	21.6	17.7
Gender	Male	24.3	24.3	25.0
	Female	19.8	20.4	15.5
Total Hours		6,696	5,822	874
Average Hours		23.5	23.4	24.3

2023 Training Courses			
Program	Frequency/Class	Attendees	Total Hours
New Employee Training	5	100	486.8
Professional Training	241	1,468	3,807.5
Management Training	7	63	164.6
General Training	61	1,235	2,236.6
Total	314	2,866	6,696

## 4.2.1 New Hire Training

For new hires to better understand the company, eMemory develops thorough training programs for our employees. On the first day, a general orientation is given to each new hire, introducing the working environment, basic policy and procedures, benefits and rights.

In addition, new employees will participate in training related to human rights protection and workplace safety. New hires will later attend a one-day training provided by the executives. This training focuses on delivering the company's core values, functions, and responsibilities of each division and common corporate languages so that the new employees can learn about the firm and build a sense of inclusiveness.

## 4.2.2 Diversified Learning

eMemory makes every possible effort in talent cultivation and development. Through online courses, live lectures, etc., we continue to promote talent development and the inheritance of knowledge. We also have professional knowledge-sharing courses to promote internal training plans and quality. eMemory also focuses on enhancing and encouraging the diverse capabilities of our employees. We have been collaborating with educational institutions such as the Tze-Chiang Foundation of Science and Technology, the Accounting Research and Development Foundation, the Institute of Internal Auditors-Chinese Taiwan, and the Chinese Personnel Executive Association for external training resources. In addition, business English courses and health and wellness workshops are regularly held and open for all employees. This allows employees to not only excel their professional skills but also cultivate additional knowledge and abilities beyond their working life.

## 4.2.3 Performance Evaluation / Career Development

Performance evaluation at eMemory includes goal setting and performance review. Based on individual development plans and responsible projects, each employee sets their annual goals and discusses them with the supervisors at the beginning of the year. The performance review is conducted twice a year at the middle of the year and year-end. After the mid-year performance evaluation, employees could adjust their work goals based on the results and work plans. The year-end performance evaluation would follow the adjusted goals as evaluation items. In addition to work-related performance, there are qualitative categories to guide employees to integrate core values, innovation, customer trust, continuous improvement, and teamwork into their jobs and daily operations. We believe it would improve team efficiency and personal inclusiveness. In 2023, every employee completed the performance evaluation.

eMemory has a complete promotion system to find the right people for the right job. eMemory holds promotion reviews every six months to promote outstanding colleagues and has a dual-track promotion system for employees. At the same time, eMemory provides employees with solid technical and managerial skill training and formulates development plans for supervisors and leaders at all levels. We constantly encourage employees to demonstrate their talents and develop diversified career plans.





## 4.3 Benefits and Welfare

With employees being our most important asset, eMemory provides competitive compensation, a healthy workplace, and other benefits for our employees. Maintaining a good work-life balance is the key to innovation, productivity, and satisfaction. We also offer more vacation days than regulation requires and regularly organize various company activities. For information about employee shareholding, please refer to the [company's 2023 annual report](#). eMemory has established relevant welfare systems to take care of employees' physical and mental health, improve work efficiency and enhance personal accomplishment.

To understand the status of our employees' welfare, we encourage employees to fill out a health examination survey every year. In 2023, we implemented a more comprehensive survey including the following categories: "leave and attendance system", "education and training", "subsidies and allowances", "activities and recreation", "food subsidies", "friendly environment", "on-site services", etc.. The results of the 2023 employee welfare satisfaction survey show that nearly 80% of colleagues expressed satisfaction or above. We hope to gain more insights into employees' needs and improve welfare services and quality accordingly to better handle and fulfill employees' needs.

### 4.3.1 Compensation Program

Salary for new employees is determined based on objective factors such as the professions, academic qualifications, relevant work experience, salary market situation required for the position and the salaries of current employees holding the same position. The starting salary for all positions is higher than the minimum wage stipulated in the Labor Standards Act. eMemory ensures that employees' wages are not differentiated based on gender, race, age, religion, sexual orientation or marital status.

The Articles of Incorporation stipulate that irrespective of sexuality or job level, quarterly, performance and project bonuses are also distributed to employees for encouragement on top of the monthly salary and fixed bonus paid for the three traditional festivals. eMemory also distributes a range from 1% to 25% of the pre-tax profits to eligible employees as profit sharing.

Employee promotions are based on the "Performance Management System" and evaluated twice a year for salary adjustments, promotions, and bonuses. In 2023, the average and median of individual contributors' annual salary were 2.576M and 2.264M NT\$ respectively. eMemory reviews the compensation system in a timely manner depending on the actual operating conditions, and the bonuses based on the status of revenue achievement to strike a balance between the Company's sustainable operation and risk management.

The company's managers' performance evaluation and the reasonableness of their remuneration are reviewed by the Compensation Committee and the Board of Directors. Reasonable compensation is provided based on the company's overall performance and business conditions to fulfill the company's philosophy of sustainable management. Operational performance includes "IP Design Re-used Count" and "Royalty", which are key items linked to sustainable management in the evaluation. Each "IP Design Re-use" means that the products we develop eliminate the need for customers to repeatedly invest in development, verification and other processes, thereby reducing overall energy consumption and burden on the environment. "Royalty" is generated when our products are effectively used (not just samples or experimental products). Through the above indicators, eMemory effectively integrates daily operating activities with sustainable goals.

## 4.3.2 Leave Program

In addition to the vacation days regulated in the Labor Standards Act, eMemory also offers paid leave for health checkup, 7 extra days of paid leave per year and a birthday holiday, which can be redeemed within the birth month. Under specific requirements, employees could have 7 days of paid sick leave if needed.

For families expecting newborns, we offer 7 days of prenatal checkup leave, 7 days of paternity leave, and 8 weeks of maternity leave are granted before and after childbirth. In 2023, the reinstatement was 100% after parental leave; the retention rate for the reinstated employee in 2022 was also 100% after the full working year of 2023.

Item	Definition	Male	Female	Total
<b>A. In 2023, the number of people eligible to apply for parental leave</b>	Number of people who have applied for paternity leave and maternity leave during 2021/01/01-2023/12/31	24	8	32
<b>B. Actual number of people who apply for parental leave in 2023</b>	Number of people applying for parental leave during 2023/01/01-2023/12/31	0	1	1
<b>C. Estimated number of people returning to work on parental leave in 2023</b>	The number of people whose parental leave expires during the period 2023/01/01-2023/12/31	0	1	1
<b>D. The actual number of people returning to work on parental leave in 2022</b>	The number of people whose parental leave expires from 2023/01/01-2023/12/31 and who will return to work during this period	0	1	1
<b>E. The number of people returning to work on parental leave in 2022</b>	Number of people returning to work on parental leave during 2022/01/01-2022/12/31	0	1	1
<b>F. In 2022, the number of people who continue to work for one year after resuming parental leave</b>	The number of people who returned to work during the period 2022/01/01-2022/12/31 and are still working one year after reinstatement	0	1	1
<b>Reinstatement rate (%)</b>	D/C	-	100%	100%
<b>Retention rate (%)</b>	F/E	-	100%	100%

### 4.3.3 Employee Benefits

In addition to the competitive compensation program and vacation program mentioned, we also care about our employees' physical and mental health. There has been a long-established tradition of "the snack shelf" since the company's inception. Healthy snacks, fruit, and beverages are available at all times. Employees can also use the tea-break subsidy daily for refreshments. We offer a "sports and fitness" subsidy for on-campus gym membership to encourage a regular fitness regime. We also have a weekly clinical medical service onsite to provide counseling services. To facilitate the health management, and we provide annual health checkup for employees. Extra checkup items are provided to managers and long-tenured employees.

In the office, eMemory preserves space for a rest area and nursery room to create a pleasant and comfortable environment for our employees. We also provide parking space and commute subsidy for employee's convenience getting to the office.

eMemory established an "Employee Welfare Committee" in the early days, and it was approved by the Hsinchu Science and Industrial Park Administration Bureau. The committee is formed by employees of each department every year, and monthly funding is allocated. Detailed activity plans and budgets are prepared every year. The Welfare Committee holds various activities, such as quarterly birthday celebrations, festival gifts, domestic and overseas employee travel, family day event and eMemory's year-end party, etc., to build a positive and strong relationship between coworkers. In addition, eMemory club activities are popular, such as fitness club, wine-tasting club, board game club, golf club, etc. Employees can get to know cross-department colleagues through common interests and develop diverse interests outside of work.

### 4.3.4 Retirement Plan

Continuing to take care of our retired employees, the Rules for Retirement Management of eMemory was established following the Labor Act and Labor Pension Act and applied to all employees. Guidelines and procedures on retirement standards and the application process for benefits were clearly defined and implemented. Labor Retirement Reserve Fund Supervisory Committee has been established according to the law, and 2% of retirement funds are allocated monthly to the reserve account. eMemory deducted an additional 6% monthly Labor Pension and saved into individual labor retirement accounts since 2005.

## 4.4 Occupational Safety

### 4.4.1 Occupational Health and Safety Management

Since eMemory licenses IP designs and does not manufacture tangible products, our operations are mainly in the office environment. Thus, no work-related hazards or incidents occurred at eMemory in 2023. eMemory encourages employees to proactively report potential hazards or risks in the workplace through internal communication channels (Employee Mailbox), which would be handled by the responsible unit. Employees are entitled to leave the working scenarios that they believe could lead to injury or illness for them or others, and would not be penalized for doing so.

eMemory has always been committed to maintaining the health of workers and the working environment since inception, so we constantly have safety and health related activities every year. We implement safety and health education under laws and regulations related to occupational safety and health. A "Fire Safety Lecture" course is held every six months, and our fire protection equipment is inspected yearly. We fully cover occupational accident insurance expenses to ensure the safety of colleagues at work. Our office also has an active security system to control the entry and exit of personnel, ensuring the safety and security of the working environment of all employees.

Item/Year	Gender	2020	2021	2022	2023
Occupational injury rate (OIR)	Male	0	0	0	0
	Female	0	0	0	0
Occupational disease rate (ODR)	Male	0	0	0	0
	Female	0	0	0	0
Fatalities	Male	0	0	0	0
	Female	0	0	0	0
Disabling injury frequency rate (FR)	Male	0	0	0	0
	Female	0	0	0	0
Disabling injury severity rate (SR)	Male	0	0	0	0
	Female	0	0	0	0



## 4.4.2 Health Checks and Insurances

An annual health checkup is offered to every employee. While most employees receive a regular medical examination, employees who regularly work at the laboratory receive additional audiometry exam due to the potential exposure to louder noises. In 2023, 35 employees took the exam with a 90% completion rate.

eMemory corporates with medical professionals by offering weekly on-site medical consultations for our staff. Although no medical treatment is provided during the consultation sessions, employees receive professional and detailed suggestions and possible referrals when necessary. In addition, eMemory also invites guest speakers for health promotion seminars.

For employee insurance, eMemory provides various types of insurance, such as basic labor and health insurance, employee group insurance (life insurance, accident insurance, medical insurance, cancer prevention insurance), family group insurance (free insurance for spouses and children), occupational accident insurance and travel safety insurance. We also cooperate with insurance companies to provide on-site services regularly to ensure that the employees and their families can receive complete protection.

## 4.5 Human Rights

eMemory actively protects the rights of our employees and fully complies with local regulations and internationally recognized human rights standards, such as the UN Guiding Principles on Business and Human Rights, the International Labor Organization Declaration of Fundamental Principles and Rights at Work, the Universal Declaration of Human Rights, and the Responsible Business Alliance Code of Conduct during operations. All full-time employees, contractors, and interns are treated with dignity and respect.

eMemory is committed to the safety of the working environment in the supply chain, promoting environmental protection in business operations, and complying with ethical conduct. To better identify and assess the potential human rights risks within the company, there are multiple measures. New employees are provided with training in human rights protection. The total number of hours of training in human rights protection amounted to 52.6 hours in 2023, with a total of 327 employees undergoing the training. To reduce the risk to human rights in the workplace, eMemory complies with relevant labor laws and regulations such as the Employment Service Act and the Labor Standards Act, hires employees with disabilities in accordance with the regulations, prohibits child labor, and does not force labor. We clearly stipulate working hours, leave and attendance systems, etc. in work rules and attendance management methods. The normal working day is from Monday to Friday; the normal working hours are 8 hours, and the total working hours per week are 40 hours. Flexible working hours for commuting is also provided; in addition, through continuously advocating normal working hours and regulations regarding extended working hours, we use the leave and attendance management system to review the overtime status, provide overtime pay or compensatory time off mechanisms, and safeguard the normal working hours and rights of colleagues.

Before a formal appointment, eMemory will explain the labor conditions in detail, and the candidates will confirm their consent to the appointment. eMemory does not use involuntary labor; eMemory also conducts salary surveys to regularly review and ensure that the salary structure is adequate to support the employees' livelihood. We also keep track of the attendance status of the employees and ensure that there is no occurrence of consecutive hours of work. To reduce the risk of human rights in the environment, we provide employee health checks and implement safety lectures every year to create a safe workplace.

eMemory requires our suppliers to sign the Supplier Social Responsibility Commitment, which requires all suppliers to operate based on local laws and regulations and [eMemory's Supplier Code of Conduct](#). In addition, we require suppliers to conduct self-checks based on the "[Supplier Code of Conduct Checklist](#)" as a basis for supplier management and conduct on-site audits when necessary to ensure that the supply chain complies with its corporate social responsibility.

For our human rights policy, please see [our website](#).

## Employees

- Company-wide Human Rights Commitment (publicly available)
- Set up a whistleblowing system and related procedure
- Communication channel:
  1. President's mailbox
  2. Employee feedback mailbox
  3. Employee satisfaction survey

## Suppliers

- Company-wide Human Rights Commitment (publicly available)
- Supplier Code of Conduct (publicly available)
- Communication Channel:
  1. Self-Inspection according to our Supplier Code of Conduct Checklist
  2. Supplier Audit annually

## Stakeholders

- Company-wide Human Rights Commitment (publicly available)
- Communication Channel:
  1. Publicized contact windows
  2. ESG stakeholders concern survey
  3. Customer satisfaction survey

## 4.5.1 Whistleblower System

eMemory established the "Internal Reporting and Handling Procedures" and "Whistle Blower Policy", which explain the principles of preventive regulations and reporting procedures. The "President's Mailbox" and an "Employee Mailbox" on the company's internal "My eMemory" portal provide channels for employees to voice their opinions. Upon receiving the complaint, we would assign a designated person to handle and investigate the complaint. The person handling the complaint shall report the handling method, progress and results to the company and the person concerned. The person concerned and the person handling the complaint need to maintain the confidentiality of the investigation process and related information, and shall not disclose the information without authorization. The company protects the person concerned from any retaliation or other unfavorable treatment. Those who are unable to maintain confidentiality and cause the case to be disclosed to the public would be reviewed and handled following the relevant regulation.

In addition, eMemory protects the employees' right to make a complaint. There are protection mechanisms and assistance programs, whereby employees could directly report any discrimination-related incidents to the Human Resource department (HR) and supervisors, and the HR would respond and investigate the cases as soon as possible in a confidential manner. There were no relevant discriminatory incidents in 2023. We also conduct a questionnaire survey for all employees to participate in the improvement proposals and feedback on the implementation of various measures to understand whether there is any need for adjustment. eMemory follows closely to human rights protection topics and promotes related training to enhance workplace safety and minimize human rights risks.

## 4.5.2 Violence / Sexual Harassment Prevention

eMemory is committed to protecting human rights and promoting human rights education. To protect all our employees from illegal violations in the workplace and to prevent and eliminate workplace violence and sexual harassment, we comply with the "Gender Equality Work Law" and Relevant laws and policies clearly stipulate "Work Rules", "Human Rights Policy", "eMemory Supplier Code of Conduct" and other relevant policies and measures. We regularly arrange relevant training courses, aiming to provide a fair and non-discriminatory working environment, to prevent workplace violence and sexual harassment. Appropriate reporting channels are available at all times to implement gender equality and a healthy and sustainable workplace environment.





# Social Responsibility

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eMemory takes giving back to the community as an obligation for our business and an opportunity to foster a positive team spirit among our staff through engaging with our community. We are dedicated to participating in educational events for knowledge sharing and in a variety of community events to aid those in need. We also encourage our employees to volunteer in the community as we believe that social involvements generate positive energy for our employees and the company and make the world better.

## Academic Contribution Community Engagement

## 5.1 Academic Contribution

We also cooperate with universities and colleges to offer industry-related courses and summer internship programs to take advantage of resource-sharing opportunities to fulfill our corporate social responsibility and to provide a platform for industry-academia cooperation for sharing and exchanges, so as to enhance the application of theories in conjunction with practice.

### 5.1.1 Education and Learning

Education is the stepping stone to a brighter future. eMemory has provided professional courses and educational events for our employees and developed long-term partnerships with universities and NGOs to share our experiences and inspire young people to pursue their potential. eMemory is a long-term partner of National Tsing-Hua University (NTHU) in Hsinchu. eMemory offers industry-related courses and summer internship programs. This resource-sharing opportunity fulfils corporate social responsibilities, provides industry-university cooperation platforms, and enhances the combined application of theory and practice.

The students undertaking an internship in eMemory are assigned a mentor to guide and supervise them in areas that suit their talents and provide them with performance evaluations. We want these experiences to be formative in their professional development wherever they venture in the future.





With the aim of nurturing talents and contributing to the society, PUFsecurity, a subsidiary of eMemory, has created an educational platform - "PUFacademy", which is taught by the technical teams of eMemory and PUFsecurity. The lecturers have been deeply engaged in the semiconductor industry for many years. They share and pass on their practical experience to the students and people who are interested in and enthusiastic about the IC security and layout design. We have spared no effort in sharing our teaching and transferring our practical experience to help students to develop more job opportunities and move towards their desired future through the learning in PUFacademy, and we will continue to include more students from different fields to cultivate more talents in the IC industry in the future.

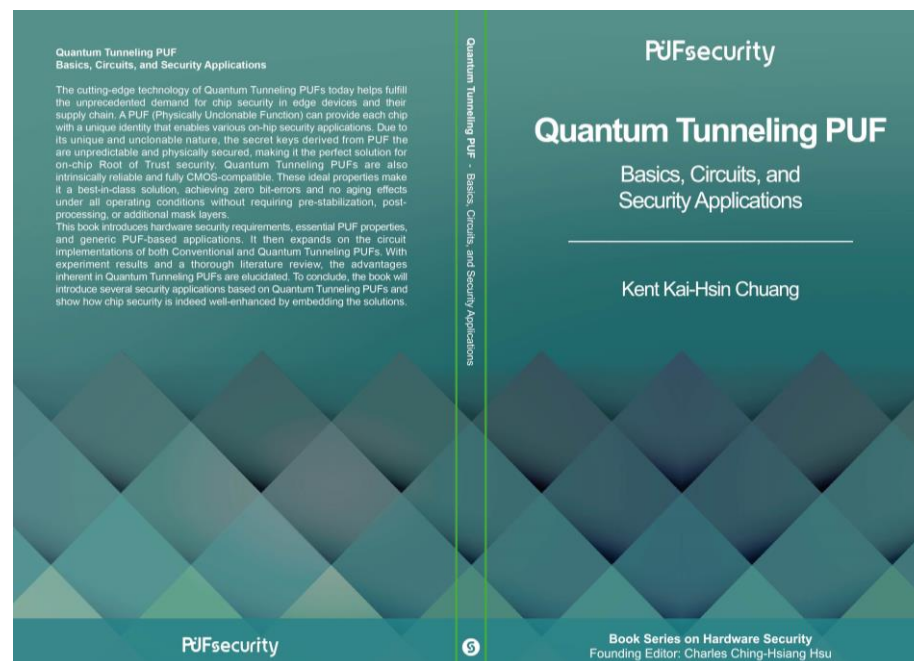


In addition to the courses offered by the PUFsecurity in the universities, in 2023, eMemory also collaborated with National Tsing Hua University to offer a course focusing on Non-Volatile Memory (NVM) technology. The lecturers were senior executives and R&D colleagues from eMemory, and their specialties include component design and process integration, product layout validation and testing, new product planning, and analysis of the development of industrial demands. With solid experience in the industry and practical case studies, students will be able to grasp the application of theoretical knowledge and work together for the creation of domestic semiconductor R&D technology.

At the same time, eMemory also sponsors to provide each student with the "Logic Non-volatile Memory" book as a textbook for the classroom to assist students in having a more in-depth understanding and effectively absorbing the new knowledge of non-volatile memory technology. The course is a total of 10 weeks, a cumulative total of 30 hours, 50 students to take the course, 14 instructors, and an overall investment of about NT\$300,000.

## 5.1.2 Knowledge Sharing

eMemory has published the first book on logic process non-volatile memory "LOGIC NON-VOLATILE MEMORY-The NVM Solutions" and continues to teach practical experience in the industry through university courses and internship classes to cultivate a new generation of talents. At the same time, our subsidiary PUFsecurity has also published the first "Quantum Tunneling PUF" book in 2023. The compilation of this series of books is currently in progress and will be published in succession in the future.



## 5.1.3 Scholarship

eMemory provides aspiring students with scholarships and support for long-term research projects to establish a resource-rich R&D environment and encourages them to focus on various academic research and continue to learn. We hope to stimulate more R&D potential and innovative technologies, and improve the international visibility and industrial competitiveness of Taiwan's overall technology.

In 2023, eMemory donated NT\$ 1.5 million to the Department of Electrical Engineering of National Tsing Hua University to establish the "eMemory Academic Research Fund" to help improve the quality of teaching and research, cultivate outstanding talents, and inject new energy into the innovative development of the semiconductor industry.



## 5.2 Community Engagement

### 5.2.1 Support for the Disadvantaged

In 2023, eMemory donated NT\$ 300,000 to National Tsing Hua University's "Economically Disadvantaged Enrollment and Counseling Program—Rising Sun Project" to assist outstanding students with socioeconomic disadvantages who have the potential to fly against the tide. The program aims to promote vertical mobility of social classes and create a better future for society.

eMemory has been a long-term sponsor of the non-profit organization "Teach for Taiwan (TFT)" to help children in remote areas have stable high-quality education and teachers. At the same time, eMemory gathers the love of all colleagues, encourages free donations, and jointly helps remote schools. and a better educational environment for school children. The cumulative donation amount in 2023 reached approximately NT\$ 250,000.

### 5.2.2 Local Charity

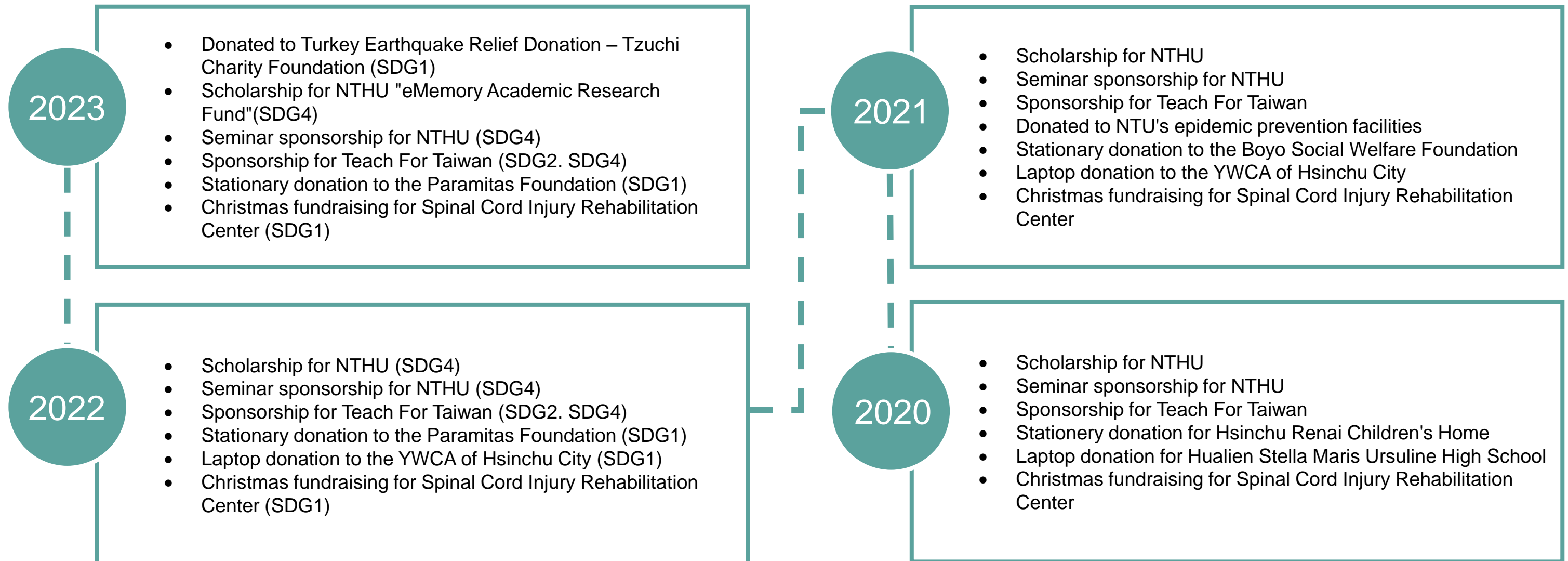
eMemory promotes a cycle of kindness, allowing society to collaborate for the greater good, emphasizing the power of kindness, and instilling hope in society. In 2023, we placed orders for gift boxes from the public welfare group "TriBake" to support people with physical and mental disabilities, promote inclusive employment, and participate in the "Spinal Cord Rehabilitation Center" Christmas charity event, donated stationery supplies to the Paramitas Foundation, with the cumulative donation amount in 2023 reaching approximately NT\$260,000.



## 5.2.3 International Participation

In addition to actively participating in local charity activities, eMemory also spares no effort in international issues and charity. The devastating earthquake in Turkey in 2023 caused severe disasters. eMemory and all its colleagues have jointly donated approximately NT\$600,000 to the "Tzu Chi Foundation-Turkey Earthquake Aid Special Account" to contribute to international rescue operations.

The following is the list of eMemory participated community events from 2020 to 2023. For more information, please refer to company's [official website - Corporate Sustainability](#) for more details.



# Appendix

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## GRI Content Index

eMemory discloses information from January 1st 2023 to December 31st 2023 based on the GRI reporting principles.

GRI Standard	Disclosure	Location or Information
<b>GRI 2: General Disclosures 2021</b>		
<b>The organization and its practices</b>	2-1 Organizational details	About This Report
	2-2 Entities included in the organization's sustainability reporting	About This Report
	2-3 Reporting period, frequency and contact point	About This Report
	2-4 Restatements of information	No restatements of information during the reporting period
	2-5 External assurance	None
<b>Activities and workers</b>	2-6 Activities, value chain and other business relationships	1.1 Corporate Overview 1.2 eMemory's Business Model
	2-7 Employees	4.1 Human Resources Structure
	2-8 Workers who are not employees	4.1 Human Resources Structure
<b>Governance</b>	2-9 Governance structure and composition	2.1 Governance Structure and Management
	2-10 Nomination and selection of the highest governance body	2.1 Governance Structure and Management
	2-11 Chair of the highest governance body	The chair of the highest governance body and the senior management are served by different persons
	2-12 Role of the highest governance body in overseeing the management of impacts	2.1 Governance Structure and Management
	2-13 Delegation of responsibility for managing impacts	2.1 Governance Structure and Management
	2-14 Role of the highest governance body in sustainability reporting	About This Report
	2-15 Conflicts of interest	2.1 Governance Structure and Management
	2-16 Communication of critical concerns	2.6 Stakeholder Management
	2-17 Collective knowledge of the highest governance body	2.1 Governance Structure and Management
	2-18 Evaluation of the performance of the highest governance body	2.1 Governance Structure and Management



GRI Standard	Disclosure	Location or Information
<b>GRI 2: General Disclosures 2021</b>		
<b>Governance</b>	2-19 Remuneration policies	2.1.4 Remuneration Committee
	2-20 Process to determine remuneration	2.1.4 Remuneration Committee
	2-21 Annual total compensation	4.3.1 Compensation Program
	2-22 Statement on sustainable development strategy	A Word from Our Chairman
	2-23 Policy commitments	3.4 Supply Chain Management 4.5 Human Rights
	2-24 Embedding policy commitments	3.4 Supply Chain Management 4.5 Human Rights
	2-25 Processes to remediate negative impacts	4.5 Human Rights
	2-26 Mechanisms for seeking advice and raising concerns	2.6 Stakeholder Management 4.5.1 Whistleblower System
	2-27 Compliance with laws and regulations	No violation during the reporting period
	2-28 Membership associations	1.1 Corporate Overview 1.1.5 Membership of Associations
<b>Stakeholder engagement</b>	2-29 Approach to stakeholder engagement	2.6 Stakeholder Management
	2-30 Collective bargaining agreements	Labor and Management Council is held regularly to communicate about issues on compensation and benefit.
<b>GRI 3: Material Topics 2021</b>		
	3-1 Process to determine material topics	1.4 Our Approach to Materiality
	3-2 List of material topics	1.4 Our Approach to Materiality
	3-3 Management of material topics	1.4 Our Approach to Materiality 2.5 Risk Management

GRI Standard	Disclosure	Location or Information
<b>GRI 201: Economic Performance 2016</b>		
	201-1 Direct economic value generated and distributed	2.1.5 Management Performance
	201-2 Financial implications and other risks and opportunities due to climate change	2.5 Risk Management
	201-3 Defined benefit plan obligations and other retirement plans	4.3.4 Retirement Plan
	201-4 Financial assistance received from government	Our subsidiary, PUFsecurity, applied for the A+ Industrial Innovative R&D Program hosted by the Ministry of Economic Affairs. The project "PUF-based AloT Secure Element R&D program" passed the review on January 14 <sup>th</sup> , 2022 with estimated budget of NT\$70,000 thousand and won NT\$28,000 thousand of government's sponsorship. The actual amount received in 2023 was NT\$21,003 thousand. For details see <a href="#">Financial Report</a> .
<b>GRI 202: Market Presence 2016</b>		
	202-2 Proportion of senior management hired from the local community	4.1 Human Resources Structure
<b>GRI 203: Indirect Economic Impacts 2016</b>		
	203-1 Infrastructure investments and services supported	5.2 Community Engagement
	203-2 Significant indirect economic impacts	5.1 Academic Contribution
<b>GRI 204: Procurement Practice 2016</b>		
	204-1 Proportion of spending on local suppliers	3.4 Supply Chain Management
<b>GRI 205: Anti-corruption 2016</b>		
	205-1 Operations assessed for risks related to corruption	2.3 Integrity and Ethics
	205-2 Communication and training about anti-corruption policies and procedures	2.3 Integrity and Ethics
	205-3 Confirmed incidents of corruption and actions taken	2.3 Integrity and Ethics

GRI Standard	Disclosure	Location or Information
<b>GRI 206: Anti-competitive Behavior 2016</b>		
	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	There were no legal actions for anti-competitive behavior, anti-trust, or monopoly practices during the reporting period
<b>GRI 301: Materials 2016</b>		
	301-1 Materials used by weight or volume	Not applicable; eMemory is a SIP provider and does not manufacture tangible products
	301-2 Recycled input materials used	Not applicable; eMemory is a SIP provider and does not manufacture tangible products
	301-3 Reclaimed products and their packaging materials	Not applicable; eMemory is a SIP provider and does not manufacture tangible products
<b>GRI 302: Energy 2016</b>		
	302-1 Energy consumption within the organization	3.1.3 Environmental Management and Implementation Results
	302-2 Energy consumption outside of the organization	3.1.3 Environmental Management and Implementation Results
	302-3 Energy intensity	3.1.3 Environmental Management and Implementation Results
	302-4 Reduction of energy consumption	3.1.3 Environmental Management and Implementation Results
	302-5 Reductions in energy requirements of products and services	3.2.4 Clean Technology Achievements
<b>GRI 303: Water and Effluents 2018</b>		
	303-1 Interactions with water as a shared resource	3.1.3 Environmental Management and Implementation Results
	303-2 Management of water discharge-related impacts	3.1.3 Environmental Management and Implementation Results
	303-3 Water withdrawal	3.1.3 Environmental Management and Implementation Results
	303-4 Water discharge	Information not retrievable
	303-5 Water consumption	Information not retrievable

GRI Standard	Disclosure	Location or Information
<b>GRI 304: Biodiversity 2016</b>		
	304-1 Operational sites owned, leased, managed in, or adjacent to protected areas and areas of high biodiversity value outside protected areas	eMemory does not own, lease, manage in, or adjacent to protected areas and areas of high biodiversity value outside protected areas
	304-2 Significant impacts of activities, products, and services on biodiversity	eMemory is a SIP provider and does not manufacture tangible products or own any factories, having low impacts of activities on biodiversity
	304-3 Habitats protected or restored	Not applicable, eMemory does not have habitats protected or restored
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	No IUCN Red List species and national conservation list species with habitats in areas affected by operations
<b>GRI 305: Emissions 2016</b>		
	305-1 Direct (Scope 1) GHG emissions	3.1.3 Environmental Management and Implementation Results
	305-2 Energy indirect (Scope 2) GHG emissions	3.1.3 Environmental Management and Implementation Results
	305-3 Other indirect (Scope 3) GHG emissions	3.1.3 Environmental Management and Implementation Results
	305-4 GHG emissions intensity	3.1.3 Environmental Management and Implementation Results
	305-5 Reduction of GHG emissions	3.1.3 Environmental Management and Implementation Results
	305-6 Emissions of ozone-depleting substances (ODS)	No ODS emission during the reporting period
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	No significant air emissions during the reporting period
<b>GRI 306: Effluents and Waste 2020</b>		
	306-1 Waste generation and significant waste-related impacts	3.1.3 Environmental Management and Implementation Results
	306-2 Management of significant waste-related impacts	3.1.3 Environmental Management and Implementation Results
	306-3 Waste generated	3.1.3 Environmental Management and Implementation Results
	306-4 Waste diverted from disposal	3.1.3 Environmental Management and Implementation Results



GRI Standard	Disclosure	Location or Information
<b>GRI 306: Effluents and Waste 2020</b>		
	306-5 Water bodies affected by water discharges and/or runoff	3.1.3 Environmental Management and Implementation Results
<b>GRI 308: Supplier Environmental Assessment 2016</b>		
	308-1 New suppliers that were screened using environmental criteria	3.4.3 Supply Chain Management Mechanism
	308-2 Negative environmental impacts in the supply chain and actions taken	3.4.3 Supply Chain Management Mechanism
<b>GRI 401: Employment 2016</b>		
	401-1 New employee hires and employee turnover	4.1.1 Talent Attraction and Retention
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.3 Benefits and Welfare
	401-3 Parental leave	4.3.2 Leave Program
<b>GRI 402: Labor Management Relations 2016</b>		
	402-1 Minimum notice periods regarding operational changes	eMemory provides notice of significant operational changes which could substantially affect the employees based on governmental regulations
<b>GRI 403: Occupational Health and Safety 2018</b>		
	403-2 Hazard identification, risk assessment, and incident investigation	4.4.1 Occupational Health and Safety Management
	403-3 Occupational health services	4.4.2 Health Checks and Insurances
	403-4 Worker participation, consultation, and communication on occupational health and safety	4.4.1 Occupational Health and Safety Management
	403-5 Worker training on occupational health and safety	4.4.1 Occupational Health and Safety Management
	403-6 Promotion of worker health	4.4.2 Health Checks and Insurances
	403-9 Work-related injuries	4.4.1 Occupational Health and Safety Management
	403-10 Work-related ill health	4.4.1 Occupational Health and Safety Management

GRI Standard	Disclosure	Location or Information
<b>GRI 404: Training and Education 2016</b>		
	404-1 Average hours of training per year per employee	4.2.2 Diversified Learning
	404-2 Programs for upgrading employee skills and transition assistance programs	4.2.3 Performance Evaluation / Career Development 4.3.4 Retirement Plan
	404-3 Percentage of employees receiving regular performance and career development reviews	4.2.3 Performance Evaluation / Career Development
<b>GRI 405: Diversity and Equal Opportunity 2016</b>		
	405-1 Diversity of governance bodies and employees	2.1.2 Board of Directors 4.1.1 Talent Attraction and Retention
<b>GRI 406: Non-discrimination 2016</b>		
	406-1 Incidents of discrimination and corrective actions taken	4.5 Human Rights
<b>GRI 407: Freedom of Association and Collective Bargaining 2016</b>		
	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	3.4 Supply Chain Management 4.5 Human Rights
<b>GRI 408: Child Labor 2016</b>		
	408-1 Operations and suppliers at significant risk for incidents of child labor	3.4 Supply Chain Management 4.5 Human Rights
<b>GRI 409: Forced or Compulsory Labor 2016</b>		
	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	3.4 Supply Chain Management 4.5 Human Rights
<b>GRI 410: Security Practices 2016</b>		
	410-1 Security personnel trained in human rights policies or procedures	Not applicable, security personnel is hired and trained by Tai-Yuan Science Park

GRI Standard	Disclosure	Location or Information
<b>GRI 413: Local Communities 2016</b>		
	413-1 Operations with local community engagement, impact assessments, and development programs	5.2 Community Engagement
	413-2 Operations with significant actual and potential negative impacts on local communities	No significant actual or potential negative impacts on local communities during the reporting period
<b>GRI 414: Supplier Social Assessment 2016</b>		
	414-1 New suppliers that were screened using social criteria	3.4 Supply Chain Management
	414-2 Negative social impacts in the supply chain and actions taken	3.4 Supply Chain Management
<b>GRI 415: Public Policy 2016</b>		
	415-1 Political contributions	Most of the company's shareholders are foreign investors. According to Taiwan's Political Donation Law, the company is not allowed to make political donations. The Company has always complied with this legal requirement, so there were no political contributions during the reporting period.
<b>GRI 416: Customer Health and Safety 2016</b>		
	416-1 Assessment of the health and safety impacts of product and service categories	eMemory is an SIP provider and does not manufacture tangible products
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	No such incidents happened during the reporting period
<b>GRI 417: Marketing and Labeling 2016</b>		
	417-1 Requirements for product and service information and labeling	eMemory is an SIP provider and does not manufacture tangible products
	417-2 Incidents of non-compliance concerning product and service information and labeling	No such incidents happened during the reporting period
	417-3 Incidents of non-compliance concerning marketing communications	No such incidents happened during the reporting period
<b>GRI 418: Customer Privacy 2016</b>		
	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	No such complaints happened during the reporting period

# Appendix

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SASB Standards Index



Disclosure Topics	Code	Accounting Metric	Location
Greenhouse Gas Emissions	TC-SC-110a.1	(1) Gross global Scope 1 emissions	3.1.3 Environmental Management and Implementation Results
		(2) Amount of total emissions from perfluorinated compounds	Total emission was 0, no such situations happened during the reporting period
	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	3.1.3 Environmental Management and Implementation Results
Energy Management	TC-SC-130a.1	(1) Total energy consumed	3.1.3 Environmental Management and Implementation Results
		(2) Percentage grid electricity	100 % of electricity of total energy consumed
		(3) Percentage renewable	0%, no use of renewable energy
Water Management	TC-SC-140a.1	(1) Total water withdrawn, percentage of each in regions with High or Extremely High Baseline Water Stress	0%, Operation location not in regions with High or Extremely High Baseline Water Stress
		(2) Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	0%, Operation location not in regions with High or Extremely High Baseline Water Stress
Waste Management	TC-SC-150a.1	Amount of hazardous waste from manufacturing, percentage recycled	3.1.3 Environmental Management and Implementation Results Total amount of hazardous waste from manufacturing was 0
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards	4.4 Occupational Safety
	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	No such situations happened during the reporting period
Recruiting & Managing a Global & Skilled Workforce	TC-SC-330a.1	(1) Percentage of employees that are foreign nationals	4.1 Human Resources Structure
		(2) Percentage of employees that are located offshore	4.1 Human Resources Structure
Product Lifecycle Management	TC-SC-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	eMemory is an SIP provider and does not manufacture tangible products and does not have revenue that contains IEC 62474 declarable substances
	TC-SC-410a.2	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops	3.2.4 Clean Technology Achievements

Disclosure Topics	Code	Accounting Metric	Location
Materials Sourcing	TC-SC-440a.1	Description of the management of risks associated with the use of critical materials	4.5 Human Rights 3.4 Supply Chain Management
Intellectual Property Protection & Competitive Behavior	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	There were no legal actions for anti-competitive behavior, anti-trust, or monopoly practices during the reporting period

Activity Metric	Code	Location
Total production	TC-SC-000.A	1.1 Corporate Overview
Percentage of production from owned facilities	TC-SC-000.B	0%, eMemory is a SIP provider and does not manufacture tangible products