PLAYNITRIDE

2022

永續報告書
Sustainability Report

PlayNitride Inc.

PLAYNITRIDE

A Word from the Chairman

Since the Company's establishment eight years ago, we have remained committed to being at the forefront of the new generation of display technology. In August 2022, we became the world's first publicly traded MicroLED company with the support of our employees, shareholders, and numerous corporate partners. We are committed to using innovative technology to lead the upstream and downstream development of the industry and its applications, embracing a future where displays are ubiquitous.

Our long-term focus on breakthroughs and innovations in MicroLED technology is not only aimed at upgrading and optimizing the existing display experience, but also at exploring and pioneering unprecedented applications that can only be achieved with MicroLED. Currently, MicroLED has been applied to large-scale televisions, allowing for seamless splicing that breaks through the existing size limit while maintaining high resolution even at close range, while reducing energy consumption to 10% of LCD and 50% of OLED. Transparent displays can also be used in new-generation smart cabins for applications such as car windows and windshields. Additionally, the breakthrough 0.49-inch full-color FHD transparent display will open up possibilities for augmented reality/virtual reality applications in the metaverse. In the coming years, MicroLED is expected to become a key technology in human-machine interaction interfaces, combining with technologies such as big data and the Internet of Things to create diverse terminal applications.

In the face of climate change, countries and leading companies worldwide are committed to implementing net-zero carbon policies and addressing climate risks. MicroLED, with its high efficiency, low power consumption, and long lifespan, is poised to be an advantageous product in the medium to long term under a low-carbon economy. Since 2021, we have integrated sustainable development into our business strategy, launching a sustainability project to enhance employees' awareness of sustainable trends. Furthermore, we have incorporated the principles of environmental protection, social responsibility, and corporate governance into our business processes. In 2022, we

1

established annual sustainability goals and regularly convened the Sustainability Development Committee to monitor progress and achievements towards these goals. The details of our progress and achievements are disclosed in this report. In the past year, due to increased demand and capacity, the use of related energy resources has also increased. However, we have continued to improve energy efficiency, with an energy intensity of 79.81 GJ/million dollars, a significant decrease from last year's 170.75 GJ/million dollars. We have voluntarily completed a greenhouse gas inventory for 2022 and passed third-party verification, and additionally, we are seeking more efficient process improvements to effectively reduce chemical waste. We are also continuously reviewing and improving various management systems to enhance corporate governance effectiveness. Furthermore, in 2023, we will collaborate with our supplier partners to provide customers with greener, more sustainable products and services through the establishment of a supplier code of conduct. We will also implement an education and training system to provide continuous learning and growth opportunities for our colleagues, working together to achieve our vision for the environment.

Transitioning from a "stealth" startup focused on technological advancements to a public offering is a significant milestone for PlayNitride, signifying greater responsibility. As the first listed company on the Taiwan Innovation Board, we will uphold the spirit of the TIB and continue to devote ourselves to transforming innovative technology into commercial value. At the same time, we will integrate the principles of ESG and sustainable development into our operational strategies to respond to the support and expectations of our employees, shareholders, customers, suppliers, and the general public.

Chairman and CEO

PLAYNITRIDE

About this Report

This report is PlayNitride Inc.'s (British Cayman Islands), 2022 Sustainability Report, which discloses PlayNitride's sustainable development plans and practices in the areas of Environment (E), Social (S), and Governance (G).　A global pioneer in the MicroLED display technology industry, and the first listed company on Taiwan's Innovation Board.　Committed to operational development and meeting stakeholder expectations, we have initiated a sustainable development promotion plan and voluntarily compile and publish sustainability reports on a regular basis.　The relevant information is as follows:

|	
Scope of Disclosure	The reporting boundary encompasses all operational activities of the consolidated entities within PlayNitride, including its Taiwan branch and subsidiary, PlayNitride Display Co., Ltd.　The performance is evaluated across economic, social, and environmental dimensions.　The primary operational location is within Zhunan Science Park, Zhunan Township, Miaoli County.　Further elaboration will not be provided in subsequent reports.　Additionally, considering that PlayNitride's production line was only officially launched in 2019, the operating environment has changed significantly over the last 3 years, making information collection more difficult and variable.　Therefore, the primary scope of disclosure will focus on quantifiable data from 2021 onwards.
Reporting Period and Frequency	This report is PlayNitride's second sustainability report and covers information from January 1 to December 31, 2022.　Listed on Taiwan Stock Exchange's Innovation Board in 2022, this report is released annually. This Release: September 2023 Next Release: September 2024
Adhere to the Specifications	This report is based on the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) and the standards of the Sustainability Accounting Standards Board (SASB) for the Technology and Communications - Semiconductor sector.　It also draws on the UK AccountAbility Organization's AA1000 v3 Accountability Principles for the four principles of materiality, inclusiveness, responsiveness, and impact, and covers as many material stakeholder concerns as possible.
Management Style	The information disclosed in this report, including financial performance, is based on financial statements audited by certified public accountants.　All financial figures are presented in New Taiwan Dollars (NTD) and the financial data is based on IFRSs.　Other information in the report consists of self-collected data and statistical findings, rounded according to the principles of general numerical description. The data and information presented in this report are sourced from responsible departments and compiled by the reporting team.　Once confirmed, the finalized report is distributed to department supervisors and the sustainability officer.　Following an internal review process, it is submitted to the chairman and CEO for approval before being published on the official website.
Contact Information	If you have any questions regarding this report or any suggestions, please don't hesitate to reach out to us using the following methods. Company Address: No. 13, Kezhong Road, Zhunan Township, Miaoli County. Company Tel: +886-37-586610 Mr. Yeh Email:esg@playnitride.com Company website: www.playnitride.com

1. About PlayNitride

1-1 Company Profile

PlayNitride Co., Ltd. was founded in February 2014 and established an investment holding company in the British Cayman Islands. In June of the same year, the company set up its Taiwan branch in the Cayman Islands, and in February 2016, it also established a subsidiary named "PlayNitride Display Co., Ltd." PlayNitride was listed on the Innovation Board of the Taiwan Stock Exchange in August 2022, making it the inaugural company to be listed on this board.

PlayNitride is a global leader in MicroLED technology and its applications, with a primary focus on providing comprehensive MicroLED display solutions. These solutions encompass the sale of chips, modules, and full production line technologies and equipment. The company employs multiple business models and continuously develops key technologies such as epitaxy, die manufacturing, mass transfer, and quality testing and maintenance. PlayNitride stands as the world's first and one of the few manufacturers to have shipped products using MicroLED technology to date.

Company Name	PlayNitride Inc.
Stock Code	6854
Chairman	Mr. Li, Yun-Li
Date of Establishment	February 25, 2014
Listing Date	August 18, 2022 (Taiwan Stock Exchange's "Taiwan Innovation Board")
Operational Headquarters	No. 13, Kezhong Road, Zhunan Township, Miaoli County, (Hsinchu Science Park, Zhunan Campus)
Operating Location	Taiwan
Sales and Services	R&D, manufacturing, and sales of nitride semiconductor materials and related applications.
Product Line	Chip on Carrier (COC) pixel chip carrier board and MicroLED display samples
Amount of Capital	NT$1,071 million (as of end 2022)
Number of Employees	392 people (as at end of 2022)
Revenue Scale	NT$404 million (2022)

PlayNitride Investment Structure
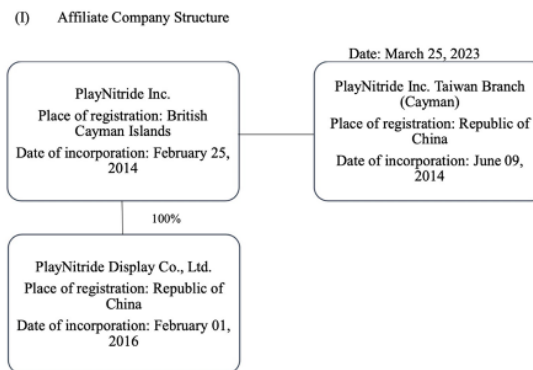
Product sales region 2022
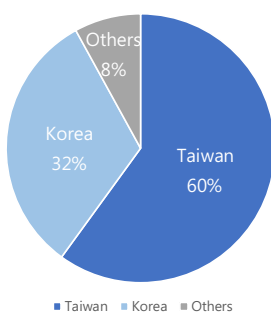
MicroLED is recognized as the next generation display technology. PlayNitride's products are currently mainly sold to domestic and international display terminal brands and panel manufacturers. Related terminal applications include ultra large-screen TVs, automotive smart cockpit displays, wearable devices, AR/VR displays, and more. The year 2023 will mark the beginning of mass production of MicroLED displays as market demand begins to sprout and surge. Since its establishment, PlayNitride has been actively integrating the upstream and downstream sectors of the MicroLED industry and promoting the commercialization of innovative technologies. Through strategic alliances and the expansion of Taiwan's MicroLED production capacity, the company aims to transform Taiwan into a global hub for primary MicroLED manufacturing. The goal is to capitalize on the vast new opportunities in the coming wave of smart industries and ubiquitous display innovations.

PlayNitride is listed on the Taiwan Innovation Board

"In the face of Taiwan's capital market, in the face of Taiwan's Innovation Board, we are ready!"Chairman Li Yun-li expressed this at the listing press conference.

Since our establishment in 2014, we have been committed to the development of MicroLED display technology, recognizing its potential and emerging trends within the industry. Through innovative R&D and diversified business models, we have become one of the leading MicroLED companies. Taiwan has the technological expertise, skilled workforce and industrial environment necessary for the development of MicroLED. PlayNitride has deep roots in Taiwan and has chosen to be listed in Taiwan as well.

With the support of the regulatory authorities, PlayNitride has taken its first step into the capital market by listing on the Taiwan Innovation Board. The affirmation of MicroLED's value by investors, the sincere wishes of many competent authorities, customers, suppliers and other partners on the day of listing, as well as the proud excitement of our employees - all these will serve as the driving force for PlayNitride's continued progress. As a pioneer on the Innovation Board, PlayNitride's successful listing experience has also inspired eight other promising startups to apply in 2022.

What is Taiwan Innovation Board?

The Taiwan Innovation Board (abbreviated as TIB), was introduced by the Taiwan Stock Exchange in 2021. It serves as an innovative trading platform aimed at encouraging companies with key core technologies and innovative capabilities (such as IoT, artificial intelligence, big data, and other new technology applications) or innovative business models to apply for listing, providing a diverse equity fundraising platform for innovative enterprises. (Source: Stock Exchange website)

1-2 Products and Services

What is MicroLED

MicroLED is to miniaturize and matrix the structure of LED (Light Emitting Diode), removing the package and substrate of the LED, leaving only the epitaxial film, so that the MicroLED chip size can be reduced from 1mm to less than 50 μm (more than 20 times smaller), and each pixel can be individually addressed and driven.
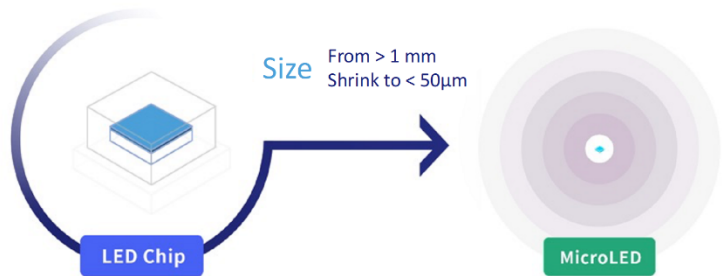
Millions of micro-sized (μm) MicroLED chips are transferred onto driver backplanes designed with circuit structures using the "mass transfer" method.   Combined with various driving technologies, this process enables the creation of display applications in different sizes and fields.

MicroLED displays find applications across a variety of display scenarios, spanning from large-scale displays to automotive and wearables, among other fields.   Whether it's improving the user experience of existing displays or venturing into entirely new application areas that have yet to emerge, MicroLED demonstrates remarkable specifications and product advantages as the "torchbearer" of the new generation of displays.

Note: 1 mm (mm) = 0.1 cm, 1 μm (micron) = 0.001mm

MicroLED Manufacturing Process

In the MicroLED display production process, the R (red), G (green), and B (blue) chips must be transferred from their respective epitaxial wafers to a temporary substrate. Following that step, the chips are arranged correctly according to the display's pixel size, preparing them for the subsequent mass transfer process.

The temporary storage substrate, known as COC (Chip on Carrier), was invented by PlayNitride and has since become an industry standard.

For more details, please refer to the company's official website
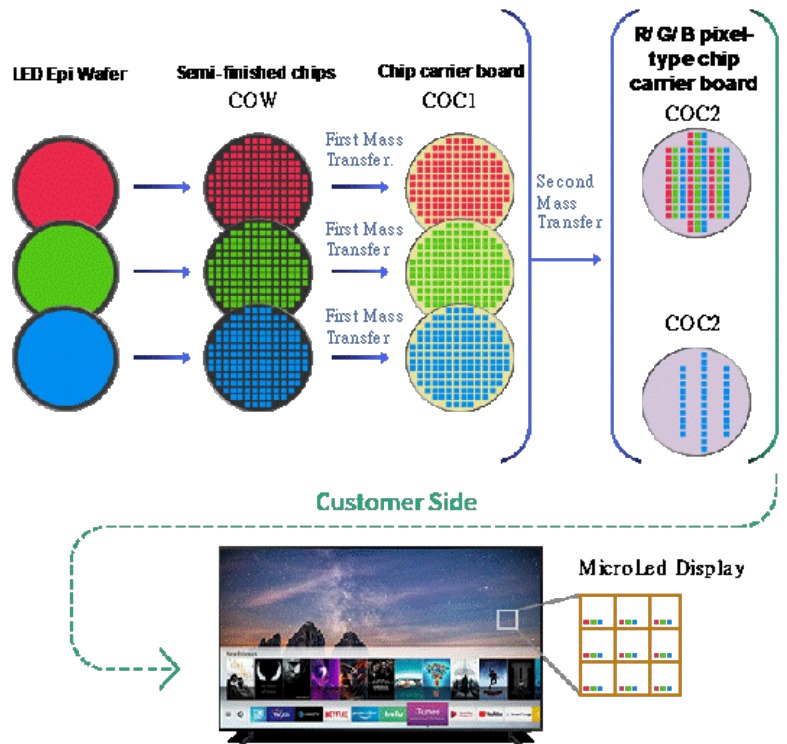
Product/Service Overview

PlayNitride primarily offers products featuring 6-inch COC (Chip on Carrier) pixel-type chip carriers and MicroLED display samples.   Additionally, the company provides technical services and turnkey solutions for customer production line setup.

As a leader in MicroLED solutions, PlayNitride has been developing MicroLED applications in various fields every year and working with world-renowned brand customers to expand more applications that have not yet received attention, developing standard products for major application types and customized product opportunities, and engaging in discussions and evaluations regarding the possibility of custom-made products.   This approach accelerates the commercialization of MicroLED and expands the potential market size for MicroLED in the future.

Production value and output over the years
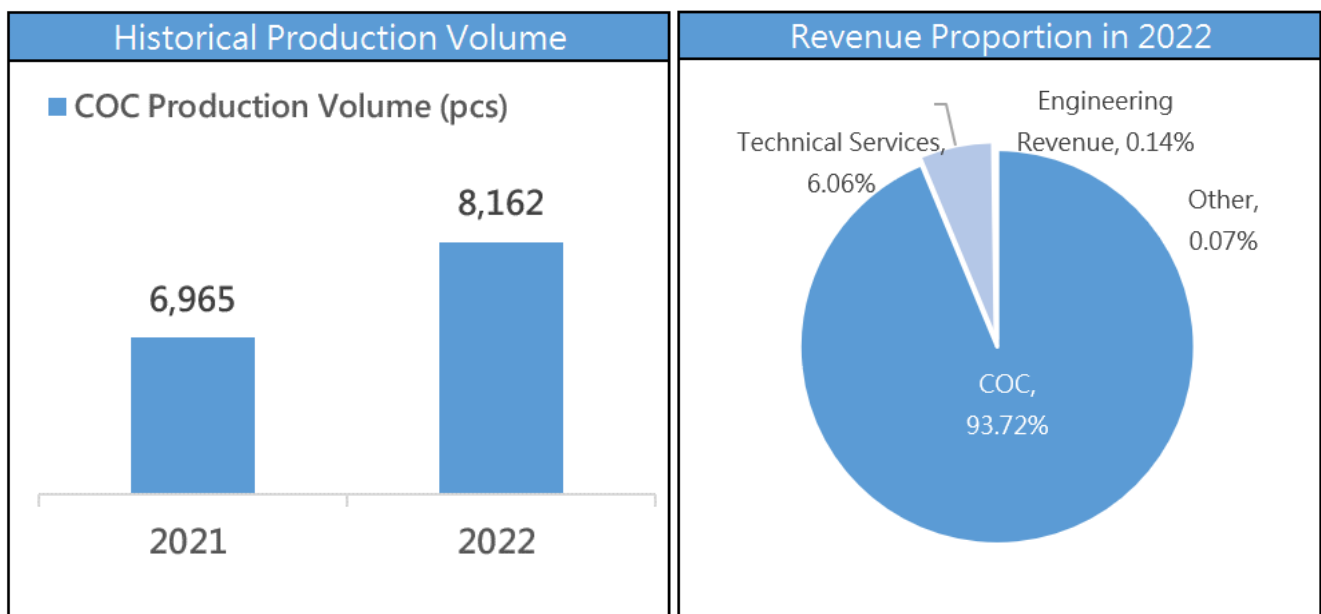
Note 1: In addition to producing and selling finished products, our company's production line also includes output used for internal research and development purposes.

Note 2: The unit of COC is pcs.   However technical services, engineering revenue, and other products do not have a consistent measurement unit, so their production volume has not been calculated.

Products and Services	Primary Application Areas
COC（Chip on Carrier）	
6 inch Red MicroLED COC **6 inch Green MicroLED COC** **6 inch Blue MicroLED COC**	The COC process is crucial for MicroLED technology. It primarily uses advanced epitaxial and mass transfer techniques to move MicroLED chips from their native epitaxial wafers to temporary substrates. These chips are then arranged according to customer requirements, paving the way for the creation of the final MicroLED display product.
Different drive technologies for different applications	
PixeLED Display MicroLED Display	Possesses transparent display and flexible characteristics. A 9.38-inch display with a 65% transparency standard designed for automotive transparent displays is available, making it suitable for evaluating next-generation automotive displays on windshields, dashboards, and side windows.
PixeLED Matrix MicroLED Display (Unit Module)	For large display boards, it offers seamless, arbitrary resolution, and size splicing displays with a pixel pitch ranging from P0.4 to P0.9 (dot pitch of 0.4~0.9mm). These displays can be customized to meet the specific size requirements of large stores, hotels, airports, museums, and other specialized designs.
µ-PixeLED MicroLED Display	Ultra-thin, ultra-bright, and with high-definition picture quality. The 0.49-inch FHD full-color standard panel has been introduced to major AR vendors for rapid evaluation and discussion regarding customized products.

1-3 Value Chain

To ensure the growth of the MicroLED product market, we have established both upstream and downstream supply chains. To facilitate the expansion of the MicroLED product sales market, manufacturers collaborate rather than compete, form strategic alliances, and maintain strong relationships within the MicroLED supply chain. Leveraging years of R&D experience and close cooperation with customers, we provide customized R&D and design solutions. This allows us to continuously meet evolving market demands, develop products that are ready for mass production, and maintain a competitive edge.

Industry Chain Association

The MicroLED industry primarily revolves around the R&D, manufacturing, and sales of nitride semiconductor materials and related applications. It also caters to customer-specific requirements by offering customized R&D designs. R&D samples are provided to customers for production, and once tested successfully, products are then produced and sold in large quantities. The relationship between the upstream, midstream, and downstream sectors in the MicroLED industry is as follows:

Upstream	Midstream	Downstream
• **Raw Material Supplier:** Glass, sapphire substrates, targets and semiconductor related chemicals, etc. • **Display Controller Chip Supplier:** Driver ICs, timing controllers, SoC, etc.	• **Chip Factory and Display Module Vendor:** Mass transfer, detection and repair • **Thin Film Transistor LCD Display Manufacturer (TFT-LCD):** Epitaxial wafers and MicroLEDs	• **Various display terminal demand manufacturers:** Applications in various sizes and fields such as electronic devices, electric vehicles, AR glasses and public displays

1-4 Involvement of Public Association

PlayNitride aims to gather the strength of the entire MicroLED industry supply chain, fostering the development of Taiwan's MicroLED industry ecosystem. As such, the company actively participates in relevant association organizations, uniting efforts to accelerate technological innovation and market promotion.

Participating public associations and organizations	Participating Roles
Director of Society for Information Display (SID, Taipei Chapter)	Director
Director of Taiwan Optoelectronic Semiconductor Industry Association (TOSIA)	Deputy Chairman
TOSIA Association — Industrial Development and Technology Committee of Taiwan MicroLED Industry Association (Taiwan MicroLED SIG)	Director Member
Taiwan Display Union Association (TDUA)	Supervisor
Taiwan Panel & Solution Association (TPSA)	Executive Director, Deputy Chairman of the Technical Committee
Director of Taiwan Display Materials & Devices Association (TDMDA)	Executive Director
The Society for Information Display (SID)	Members
Smart Display Industrial Cross-Domain Cooperation Alliance (SDIA) — Smart Mobility SIG Group, IDB, MOEA	Members
Chinese Photonics Association (TPS)	Members
Photonics Industry &Technology Development Association (PIDA)	Members
Maskless Lithography Alliance	Members
Semiconductor Equipment and Materials International (SEMI)	Members

1-5 Milestones

Company Development History

Year	Key Events
2022	• PlayNitride Inc. was listed on the Taiwan Stock Exchange on August 18, 2022 at NT$105 per share, becoming the first company listed on the Taiwan Venture Exchange since the official opening of the board in 2021. (Stock Code 6854) • Awarded the Taiwan Gold Panel Award in 2022 for Technical Excellence • Awarded Best Display Technology and Best Mid-Size Booth at SID Display Week • Awarded 2022 SDIA Award - Foresight Display Award Gold • Awarded Hsinchu Science Park 42 Innovative Product Award • Selected for the 2022 Red Herring Top 100 Global List
2021	CEO Li, Yun-Li becomes Chairman of MicroLED SIG (Special Interest Group), linking the upstream, midstream, and downstream MicroLED supply chain.
	Awarded Hsinchu Science Park 41 Innovative Product Award
2020	• Awarded Taiwan Gold Panel Award • Awarded Taiwan Digital Signage Innovative Product Award • Awarded Hsinchu Science Park 40 Innovative Product Award • Mr. Li, Yun-Li, CEO of PlayNitride, received the Special Contribution Award from the International Society for Information Display (SID) in recognition of his team's achievements in developing and commercializing MicroLED technology
2019	• First MicroLED production line commences operations • Awarded the Best Display Technology and Best Booth Award at the SID Display Week
2014	PlayNitride Inc.

Product Development History

Year	Item	Description
2022	**0.49 inch** **The world's highest pixel-density single-panel AR full-color MicroLED display.**	Developed the first 0.49-inch 4,536 ppi high-resolution AR full-color MicroLED display, winning the Best New Display Technology award at the 2022 Smart Display Exhibition.
2021	**89 inch** **The world's first ultra-wide curved MicroLED display**	The world's first 89-inch ultra-wide curved MicroLED display, assembled using 5-inch unit modules for customized large-scale signage according to customer requirements, received the Hsinchu Science Park Product Innovation Award
2021	**0.39 inch** **The world's highest pixel-density single-panel AR full-color MicroLED display.**	The world's first 0.39-inch 1,141ppi high-pixel AR full-color MicroLED display officially entered the Metaverse industry at Display Smart Display 2021
2020	**9.4 inch** **Flexible Active MicroLED Display**	Collaborated with AUO to introduce a 9.4-inch flexible active MicroLED display designed primarily for automotive applications. The product received an Excellence Award at the Display Component Products Technology Awards (Gold Panel Awards2020) organized by the Taiwan Display Union Association (TDUA).
2019	**7.56 inch** **Transparent three-sided borderless MicroLED display**	Participated in the San Jose Display Exhibition of the International Society of Information Display (SID), showcasing the world's first active transparent 7.56-inch MicroLED display with Pegasus. The company received the People's Choice Award - Best Small Booth' and the 'Best Display Technology' award.
2018	**5 inch** **Passive transparent MicroLED display**	At the International Society for Information Display (SID) Display Week in Los Angeles, the company showcased the world's first passive transparent MicroLED display and received the 'I-zone Best Prototype Honoree'.
2017	**0.9 inch** **Full-Color Passive MicroLED Display**	First showcased at SEMICON Taiwan

2. Sustainability Issue Management

2-1 Sustainability Policy and Operations

Sustainable Development Committee

In 2021, PlayNitride established a "Sustainable Development Best Practice Principles" and concurrently established the "Sustainable Development Committee" as the highest level for making sustainability-related decisions within the company.   This committee reports to the Chairman and CEO and is chaired by the Chairman and CEO.   The committee also comprises a Chief Strategy Officer and a Chief Sustainability Officer, who are responsible for executing sustainability initiatives.   The committee's membership encompasses directors from various functional areas of the company, each tasked with shaping the company's sustainability management policies and objectives.   Together, they formulate medium and long-term sustainable development plans, craft associated management policies, and oversee their implementation.   The implementation status and future work plan are reported to the Board of Directors by the Sustainability Director on a quarterly basis and to the Board of Directors in January, February, April, May, August and November 2022.   The content includes the preparation of the five task groups, the task objectives and the annual implementation plan set by the Board of Directors.   The Board of Directors regularly listens to the team's reporting and strategic planning, assesses the likelihood of success of the strategy and reviews the strategic progress, urging the management team to make adjustments as necessary.

The Sustainable Development Committee is a cross-departmental organization divided into five working groups: Corporate Governance, Climate Governance, Product Development, Environmental Sustainability and Social Sustainability.   A working meeting is held every quarterly, and the Chief Convenor and the Industrial Safety Department as Executive Secretary regularly confirm the quarterly progress, action plan and implementation results of the short-term ESG goals for 2022-2023, and share the latest domestic and foreign policies or trends to strengthen the consensus and sustainability knowledge of the management, ensure that the sustainability strategy is fully implemented in the company's daily operations, while creating corporate value Economic, environmental and social impact, realizing our corporate mission and creating value for all stakeholders.

ESG Committee Organization Chart

CEO

ESG Committee

Executive Secretary

Corporate Governance Taskforce (Leader - Jonathan):
Auditing Office、Intellectual Property & Legal Division、Research & Development Center、information Technology Department、Industrial Safety Department

Climate Governance Taskforce (Leader - Jonathan):
Industrial Safety Department , Administrative Division, Manufacturing Center, CTO office, Research & Development Center、Human Resources Division

Product Development Taskforce (Leader - Jovi):
Research & Development Center、Procurement Division、Quality Division、Industrial Safety Department

Environment Sustainability Taskforce (Leader - JS):
Industrial Safety Department、Manufacturing Center、Research & Development Center、general affair division

Social Sustainability Taskforce (Leader - Joe):
Human Resources Division、Industrial Safety Department、Procurement Division、Quality Division、Administrative Division

PLAYNITRIDE

Sustainable Development Goals and Achievements 2022 — Governance Issues

	Sub-issues	Short-term Goals (2022)	State of Implementation	2023 Goal
Corporate Governance	Risk Management	• Planning the Emergency Response Management Process	• Two Full-Scale Emergency Response Drills	• Enhancing the Emergency Response Management Process
	Board of Directors Operations	• Establishing performance evaluation and compensation policies for directors and managers	• Policy formulation has been completed, and a self-assessment of the Board of Directors of Directors' performance has been conducted.	• Implemented in accordance with the Board of Directors' Governance Mechanism
	Tax transparency	• Formulate tax policies and comply with the relevant country tax regulations and tax payments of their operating locations.	• Policy formulation has been completed, and no tax is payable, so there is no need for payment.	• Execute in accordance with the tax policy
Operational Performance	Sustainability Disclosure	• Regularly publish sustainability reports in accordance with the regulations for publicly traded companies	• The 2021 Annual Report (Adopting SASB Standards) in both English and Chinese has been completed and released	• The 2022 Annual Report (Adopting GRI Standards) in both English and Chinese has been completed
Integrity Management	Business Ethics	• Establishing a Comprehensive Grievance Mechanism and Whistleblower Protection System • Regularly Promoting Ethical Codes of Conduct, Anti-Corruption, and Anti-Bribery • Conducting Annual Integrity and Ethics Training (Directors and All Employees)	• A Code of Conduct Policy for Professional Ethics has been established, which includes the establishment of a comprehensive grievance mechanism and whistleblower protection system. • Completion of policy promotion and education and training for directors and employees	• Regularly conduct code of conduct awareness and education training for all employees
Innovation Management	Sustainable Design	• Assessment of Sustainable Design Improvement Goal: Material Recycling in Production • Assessment of Sustainable Design Improvement Goal: Packaging Material Reuse	• 80% of the gold can be recycled and reused in the coating process • Reusing COC Temporary Carrier Board	• Drafting Sustainable Product Design Standards
Sustainable Supply Chain	Supply Chain Management	• Formulating Supplier Management Policies • Identify key suppliers and implement a grading management system • Developing Supplier Self-Assessment Forms and Promoting Supplier Self-Assessment	• In the supplier management process, a supplier classification system and management objectives have been established • We have implemented and require suppliers to sign commitment agreements for environmental regulations compliance, restricted substances, and the prohibition of conflict minerals	• Continuously enhancing supplier sustainability management mechanism • Supplier Code of Conduct • Requesting Suppliers to Sign the Supplier Code of Conduct Commitment Agreement
Information Security	Digital Governance	• Evaluating the Comprehensive Mechanism for Information Security Management • Regularly Conducting Awareness and Educational Training on Information Security Issues	• Continuously Strengthening Network and Other Infrastructure • Completed Information Security Fraud Prevention Awareness Training	• Revision of Information Security Management Policy • Elevate information security rating • Plan to convene a CEO-level Information Security Committee

PLAYNITRIDE

Sustainable Development Goals and Achievements 2022 — Environmental Issues

Issues	Sub-issues	Short-term Goals (2022)	State of Implementation	2023 Goal
Climate Change	Climate Strategy	• Promote ISO14064-1 Greenhouse Gas Inventory and Verification • Evaluate the implementation of climate risk management mechanism, and incorporating Board of Director's regulation. • Considering the results of climate risk assessments to formulate operational strategies and objectives	• Completed Greenhouse gas inventory and verification • Greenhouse Gas Inventory Management is regularly reported to the Board of Directors • Planning to Implement TCFD in 2023	• Establishing Carbon Reduction Goals and Implementing Improvement Plans: Completed Greenhouse Gas Inventory External Verification • Planning a TCFD Risk Assessment Project
Energy Management	Energy Management	• Reduces overall target power consumption by 20%	• Due to revenue growth and an increase in equipment, total electricity consumption has increased by 1.80%	• Establishing Energy Reduction Goals and Implementing Improvement Plans Based on Energy Intensity • Establish energy saving management standards for plant equipment procurement
Water Resource Management	Water Resource Management	• Setting a goal to reduce the consumption of purified water in the process	• The water consumption per COC unit is 2 tons	• Establishing water resource reduction targets and implementing improvement plans
Waste and Recycling	Waste Management	• The production quantity for COC waste generation: 21.44 kg per piece • The production quantity for COC solvent waste: 13.20 kg per piece	• The production quantity for COC waste generation: 19.67 kg per piece • The production quantity for COC waste solvent:13.85 kg per piece	• Establishing waste reduction targets and implementing improvement plans
Product Management	Product Regulation	• Establish a clear mechanism for chemical management	• We have established a product hazardous meterial management system and policy, comply with RoHS and REACH requirements, and complete personnel education and training	• Improve the chemical management mechanism and formulate a phase out plan for hazardous substances reduction or elimination.
	Source Material Management	• Analyze the use of existing materials and propose an improvement plan for the evaluation of primarily solvent acetone and photoresist stripper • The target consumption for each piece of organic chemicals is 15.33 kg • The target consumption for each piece of acid-base chemicals is 1.28 kg	• The target consumption for each piece of organic chemical is 25.7 kg • The target consumption for each piece of acid-base chemical is 0.78 kg • The use of acetone has increased due to process changes. We will continue to evaluate methods to reduce the amount of photoresist stripper by 13.3%	• Initiate improvements in acetone consumption reduction from the R&D phase onwards

PLAYNITRIDE

Sustainable Development Goals and Achievements by 2022 - Social Issues

Issues	Sub-issues	Short-term Goals (2022)	State of Implementation	2023 Goal
Human Rights Management	Human Rights	• Creating and disclosing Human Rights policies	• Human Rights policy formulation completed	• Planning Human Rights due diligence, updating Human Rights policies, and implementing internal advocacy and training
Talent Development	Human Capital Development	• Plan career development road map/skills inventory • Developing an education and training framework based on job levels and responsibilities	• The inventory is now performed when job requirements are proposed, and the needs of the organization continue to grow • Training for supervisors and general employees is planned and the training structure is being optimized	• Enhancing the development of diverse talents and improving the education and training framework and processes
Talent Attraction and Retention	Talent Attraction and Employee Retention	• Planning compensation and promotion system	• Continuously enhancing the promotion system in accordance with the growth of the organization. The annual job promotions were successfully completed in August 2022 • All evaluators should assess performance for 100% of the cases • Implementing a structured salary adjustment, with an average company-wide increase of 7%	• Continuously enhance the performance evaluation and promotion system • Evaluate employee stock ownership plan
Occupational Safety and Health	Health and Safety	• Enhance the occupational safety management system and promote a safety culture • The goal is to achieve a frequency of 0 for disabling injury incidents, and for near-miss incidents, the goal is <5 • Promote employee physical and mental health promotion programs • Continue to promote preventive measures against infectious diseases	• 0 disabling injury incidents, 3 near-miss incidents • Annually conduct comprehensive health check-ups for all employees, including assessments for cardiovascular diseases and risk factors, and pilot health seminars • Hold weekly rolling discussions to enhance the epidemic prevention mechanism, provide epidemic insurance for employees, and establish a zero confirmed case environment to ensure a safe workplace	• Maintain 0 workplace injuries, continue to implement risk assessment education and training in various departments • Promote a program to balance the physical and mental health of employees with a particular emphasis on strengthening mental health aspects
Product Liability	Product Quality and Recall Management	• Evaluate international safety regulations/quality management system requirements for automotive product	• Implemented the ISO/IATF 16949 quality system, and the development of procedure manuals for the five major tools was completed in December 2022	• Implemented a quality management system in accordance with IATF 16949 and generated the actual records as stipulated in the procedure manuals for various processes

2-2 Sustainability Issue Management

The process of identifying significant sustainability issues in 2022

We regularly assess and identify sustainability issues on an annual basis, follow the reporting principles and guidelines of the GRI Guidelines, and implement the 4-stage process for managing critical sustainability issues (as shown in the table below).

The process of identifying key sustainability issues aims to pinpoint the most significant economic, environmental, and community impacts (including human rights) of operations and business relationships. The outcome of the impact of various issues and the involvement of stakeholders was deliberated upon by the Sustainable Development Committee. This process involves identifying and ranking material sustainability issues, assessing the impact of each material issue, confirming the scope of management targets, and formulating management policies for each issue as a reference for subsequent disclosure of sustainability information.

Phase 1 Understand the Organizational Context	1. **Establishing Communication Targets**	· Identification of 4 categories of important stakeholders: shareholders, customers, employees, and suppliers
	2. **Collect Sustainability Issues**	· 19 issues · Stemming from global sustainability disclosure, industry benchmarking companies, international sustainability ratings, stakeholder communications, and so on.
Phase 2 Identify the Impact Level	3. **Assessing the Level of Concern**	· 110 valid stakeholder questionnaires
	4. **Identify Actual and Potential Impacts**	· 24 supervisors of the Sustainable Development Committee.
Phase 3 Assessing Impact Significance	5. **Assess the Impact Level**	· Severity of impact: Positive or negative benefits/losses · Impact probability: actual/potential probability of occurrence
	6. **Creating a Significance Matrix**	· Draw a three-dimensional matrix using a combination of stakeholder concern, impact severity and likelihood.
Phase 4 Determine Significant Sustainability Issues	7. **Identifying Priority Disclosure-Worthy Significant Issues**	· Confirming 10 major issues
	8. **Determining Disclosure Boundaries**	· Examine the impact scope and dimensions of each major issue across the entire value chain, including upstream and downstream stages of our operations, as well as our interactions with customers and suppliers
	9. **Corresponding Disclosure Indicators**	· GRI criteria: subject-specific disclosure indicators · SASB Guidelines: Technology & Communications Industry - Semiconductor Industry (TC-SC) Indicators

2-3 Identify Key Stakeholders

Identify Key Stakeholders

In 2021, PlayNitride placed a strong emphasis on stakeholder engagement and followed the AA1000 SES Stakeholder Engagement Standard.   This involved an assessment carried out by 43 managers and relevant colleagues involved in ESG projects.   They assessed the relevance of different types of stakeholders to PlayNitride across five dimensions: responsibility, influence, tension, diverse perspectives and dependency.   After reviewing the comprehensive scoring results and discussions with senior managers, We have identified four key stakeholder categories as the most important: employees, customers, suppliers and shareholders.   In 2022, following discussions within the Sustainability Committee, it was confirmed that there were no significant changes to the existing stakeholder identification.

Stakeholder Identification Results
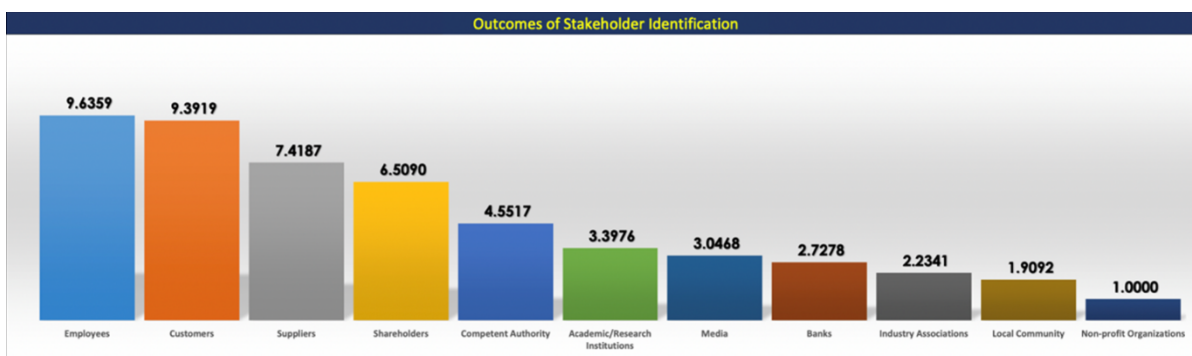
Note: The values on the vertical axis are determined through statistical aggregation based on assessments made by various managers, indicating their relative importance.   This summary reflects the analysis results across the five dimensions.

The Significance of Key Stakeholders to PlayNitride.

Ongoing communication with the various stakeholders in the operational process to ensure that their concerns and expectations are taken into account in the development of operational strategies and objectives, and to respond to stakeholders with substantive operational results.

Key Stakeholders	Their significance to PlayNitride
Staff	Talent is a critical element for PlayNitride to sustain innovation and maintain its industry position. We expect our employees to be innovative and mobile, to attract and retain talent through a variety of compensation and benefits programs, to continue to add value to talent, to enhance the contribution of individual employees to the team, and to achieve the operational development goals of innovation.
Client	Customer support enables us to commercialize the advanced technology of MicroLED and the customer's insight into market information, and enables PlayNitride to develop technologies that are more in line with the end user. With innovative and high quality MicroLED products, we continue to develop new horizons and new visions for the display industry.
Suppliers	Suppliers provide high-quality raw materials and services, which are not only the foundation of PlayNitride's product quality, but also the best partner to create key technologies. We expect to work more closely with upstream and downstream suppliers, but also to push each other towards sustainable development to create a more resilient MicroLED industrial chain.
Shareholders	With the support of shareholders and investors in PlayNitride's sustainable development potential and operational decisions, we can concentrate on innovation and pushing boundaries. Our focus will be on business growth, sustainability, and transparent information to meet the expectations of our shareholders and investors. This will allow us to gradually fulfill the responsibility of becoming Taiwan's first listed company

Stakeholder Communication Channels and Frequency

	Communication Channels	Communication Frequency	Description
Staff	・Occupational Safety and Health Committee ・Labor-Management Meeting ・Employee Welfare Committee ・Employee Counseling / Employee Consultation ・Employee Suggestion Box, Sexual Harassment / Workplace Bullying Complaint Box.	・Per Quarter ・Per Quarter ・Per Quarter ・Irregularly ・Anytime	・Four meetings were held in 2022 ・Four meetings were held in 2022 ・Four meetings were held in 2022 ・In 2022, a total of 9 formal employee negotiations were initiated, all of which have been concluded ・Every one of the 18 opinion emails from 2022 has been resolved.
Client	・Client Visits, Con-Call ・Email ・Project Meeting ・Customer Satisfaction Survey	・Irregular ・Anytime ・Irregular ・Yearly	・Acquired 11 customers in 2022 ・In 2022, the customer satisfaction survey yielded a score of 88.5
Suppliers	・New Supplier Evaluation ・Supplier Audits ・Environmental and Safety Risk Assessment	・Irregular ・Yearly ・Irregular	・Verification and audit of new materials and substitutes are required to attach hazardous substance report ・Conducting focused audits on Tier 1 raw material suppliers ・Evaluate safety, health, and environmental performance of construction or service suppliers
Shareholders	・Convene an Annual Shareholders' meeting ・Convene a Board of Director's meeting ・Spokesperson System	・Yearly ・Per Quarter ・Irregular	・Annual Shareholders' Meetings are held each year in accordance to the Company Law and Articles of Incorporation. ・The Board of Director's Meeting is held regularly every quarter, with additional meetings schedules as needed. ・Engage with shareholders or prospective investors through official corporate meetings (4 times in 2022)

2-4 Assess the impact severity of identified issues

Collect Sustainability Issues

Having recently transitioned from a startup to a public company listed on the Taiwan Innovation Board, PlayNitride recognizes the need to quickly establish strong corporate governance. It aims to build comprehensive systems that ensure compliance and transparency, laying the foundation for the company's long-term success. In recent years, human rights issues have received significant public attention, and PlayNitride is committed to emphasizing the importance of human rights in our organizational activities and business relationships. This commitment aligns with the expectations of top talent, investors, customers, and regulators. Therefore, PlayNitride has prioritized "Corporate Governance" and "Human Rights Management" as our primary sustainability initiatives.

Drawing from references such as the Global Reporting Initiative (GRI) guidelines, Sustainability Accounting Standards Board (SASB) standards, Task Force on Climate-related Financial Disclosures (TCFD) framework, sustainable information disclosures and practices of industry benchmarks, and international sustainability assessments, we have identified 19 sustainability issues. These issues are derived from the context of our company's operational activities, business relationships, and the concerns raised through our engagement processes with various key stakeholders. We will now proceed to assess the impact severity of these sustainability issues

Investigate Stakeholder Concern

In order to understand the concerns and expectations of key stakeholders in the promotion of various sustainability issues, a survey on the level of concern of key stakeholders was conducted in November 2022 and provided to the Sustainability Committee as a reference for the impact analysis of sustainability issues.

A total of 110 survey responses were collected in the questionnaire survey. Based on the feedback received in the questionnaires, the following chart summarizes the issues of concern to various key stakeholders, ranked in order of their level of concern

The Top Three Issues of Concern for Various Stakeholders

Shareholders	Client	Staff	Suppliers
• Economic Impact • Innovation Management • Quality Management	• Sustainable Supply Chain • Quality Management • Information Security	• Innovation Management • Integrity Management • Talent Attraction and Retention	• Integrity Management • Quality Management • Sustainable Supply Chain

Stakeholder Concerns Survey Results
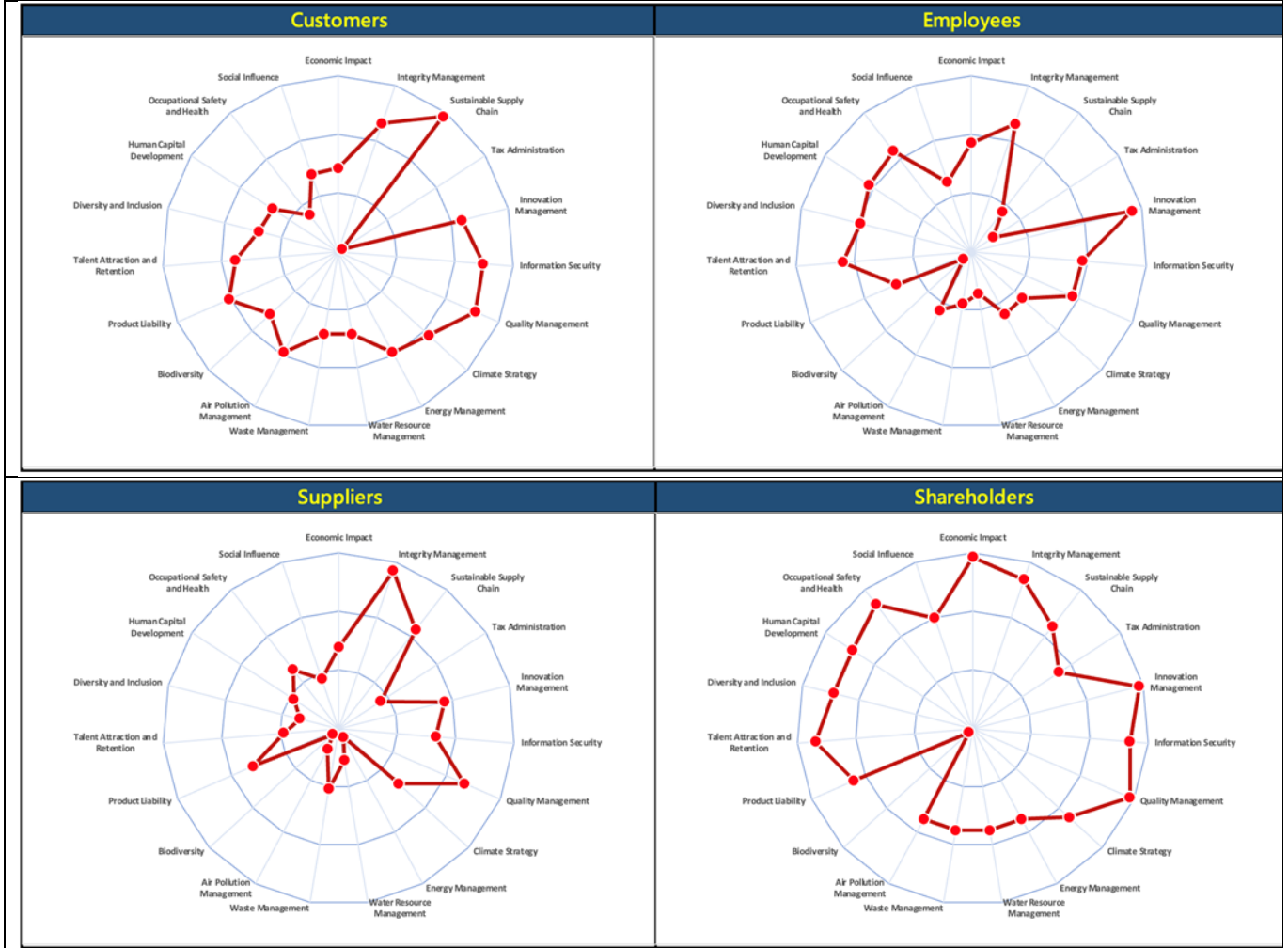
Identify Actual and Potential Impacts

In response to the potential positive or negative, actual or potential impact of the 19 issues, the impact level is assessed based on "severity" and "likelihood" through the evaluation and on-site discussions using an impact assessment questionnaire. The judgment of the impact severity follows a dual-significance approach, considering whether the issue has "financial materiality" and "impact materiality." In other words, it assesses whether the issue significantly affects the company's development, performance, and status or if it could potentially have economic, environmental, and societal impacts (including human rights). When identifying issues with actual or potential human rights risks, they are rated with the highest severity.

Summarizing the impact assessment results of various sustainability issues, combined with the attention of key stakeholders, are plotted on a 3-dimensional impact analysis matrix (such as the chart on the second page).

2-5 Identification of major sustainability issues

Sustainability Issue Impact Analysis Matrix
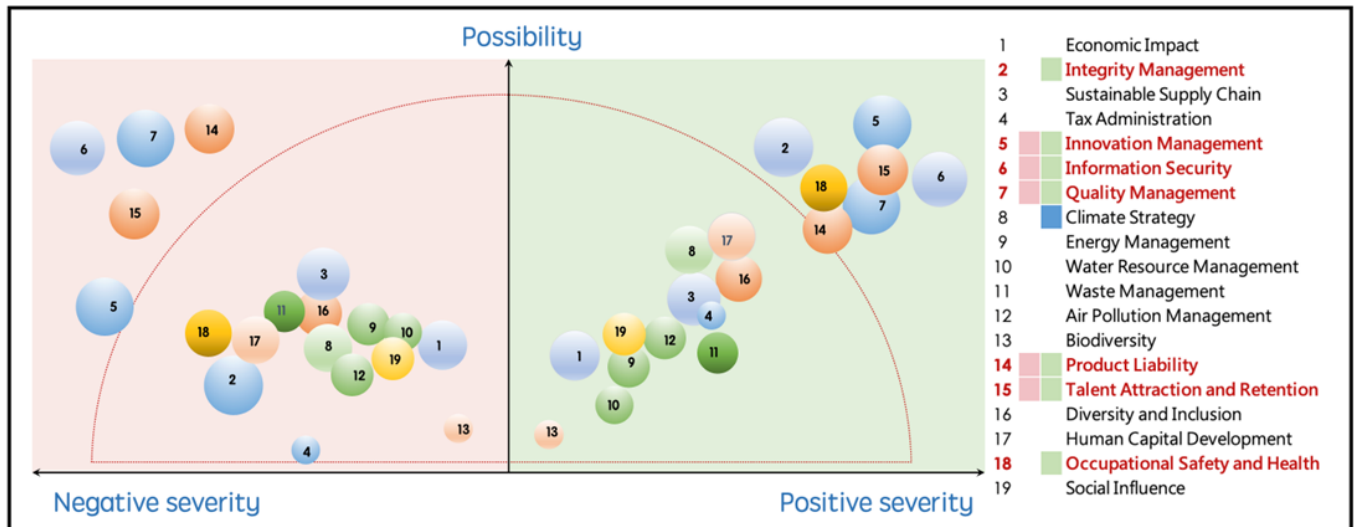
Note: X-axis: impact severity (positive/negative) Y-axis: impact likelihood bubble size: stakeholder concern level

Priority Disclosure of Major Sustainability Issues

Based on the matrix analysis results, the Sustainability Committee has identified ten major sustainability issues for the promotion of sustainable management.   These issues include "Integrity Management, Innovation Management, Information Security, Quality Management, Product Responsibility, Talent Attraction and Retention, Occupational Safety and Health, Climate Strategy," in addition to the previously mentioned corporate governance and human rights as the two core issues.   Among them, the "climate strategy" was not included in the key issues according to the matrix analysis.   After discussion with the meeting supervisors, the net-zero transition trend at home and abroad is still listed as a priority issue of concern and management.   Energy management, water resource management, and waste and recycling, which were not initially identified as major issues in the analysis, have gained importance due to the requirements outlined in the SASB standard for the semiconductor industry.   These areas are now being emphasized for management performance improvement and promotional efforts.

The identification results of this major issue are little different from last year.   Based on the identification of major sustainability issues, we create short-term promotion goals, continue or adjust related promotion goals and programs to meet the needs of the organization's development.   In addition, the identification results and established goals will be presented in a report to the Board of Directors to gain insight into the Board of Directors' perspective and recommendations regarding PlayNitride's sustainability management initiatives.   The results of the identification of this key sustainability issue will be used to continue planning in 2023, formulate long-term management guidelines, plan and promote related programs, reduce potential impacts, and serve as the basis for future sustainability information disclosure.

2-6 Corresponding Key Performance Indicators for Significant Sustainability Issue Disclosure

In our sustainable information disclosure presentations, we incorporate semiconductor industry indicators that align with both GRI and SASB guidelines.   This allows us to report on our management approach, strategic objectives, actual performance, and future plans related to our significant sustainability issues After assessing the impact of each major issue across our upstream and downstream value chains, we have found that the extent of impact varies slightly depending on the specific issue.

Sustainability Issues	Corresponding to last year	Impact Time Frame			Impact Oriented				Alignment with GRI Guidelines and SASB Standards	Corresponding Sections
		PlayNitride Operations	Client	Suppliers	Economic Aspect	Environmental Aspect	People	Human rights		
Major Themes										
Corporate Governance	Maintaining Significance	◉	◉	◉	◉		◉		GRI 2 General Disclosure 2021:3 Governance	4-1 Corporate Governance
Human Rights Management	Maintaining Significance	◉		◉			◉	◉	GRI 2 General Disclosures 2021: 4 Strategy, Policies, and Practices GRI 406 Non-Discrimination 2016	6-3 Human Rights Management
Integrity Management	Maintaining Significance	◉		◉	◉		◉		GRI 205 Anti-Corruption 2016 TC-SC-520a.1 Intellectual Property Rights Protection and Competitive Conduct	4-2 Integrity Management
Innovation Management	Maintaining Significance	◉	◉	◉	◉	◉	◉		Custom Theme	3-1 Product Advantages 3-2 Technical Advantages 3-3 Intellectual Property Protection and Trade Secret Management
Quality Management	Maintaining Significance	◉	◉	◉	◉	◉			Custom Theme	3-6 Quality Management

Sustainability Issues	Corresponding to last year	Impact Time Frame			Impact Oriented				Alignment with GRI Guidelines and SASB Standards	Corresponding Sections
		PlayNitride Operations	Client	Suppliers	Economic Aspect	Environmental Aspect	People	Human rights		
Talent Attraction and Retention	Maintaining Significance	◉			◉		◉	◉	GRI 202 Market Presence 2016 GRI 401 Employers-employee relations 2016 GRI 402 Labor relations 2016 TC-SC-330a.1 Recruiting and managing global talents	6-1 Talent attraction and retention
Occupational Safety and Health	Maintaining Significance	◉		◉	◉		◉	◉	GRI 403 Occupational Health and Safety 2018 TC-SC-320a.1, TC-SC-320a.2 Employee Health and Safety	6-4 Employee Health and Safety
Climate Strategy	Maintaining Significance	◉	◉	◉	◉	◉			GRI 305 Emissions 2016 TC-SC-110a.1, TC-SC-110a.2 Greenhouse Gas Emissions	5-1 Greenhouse Gas Emissions
Product Liability	Maintaining Significance	◉	◉	◉	◉	◉			GRI 416 Customer Health and Safety 2016 GRI 417 Marketing & Labeling 2016 TC-SC-410a.1, TC-SC-410a.2 Product Lifecycle Management	3-4 Product Lifecycle Management
Information Security	Maintaining Significance	◉			◉		◉		Custom Theme	4-5 Information Security

Continuing Monitoring of Themes (Voluntary Disclosure)

Sustainability Issues	Corresponding to last year	Impact Scope			Impact Oriented				Alignment with GRI Guidelines and SASB Standards	Corresponding Sections
		PlayNitride Operations	Client	Suppliers	Economic Aspect	Environmental Aspect	People	Human Rights		
Voluntary Disclosure Theme										
Financial Performance	Ongoing Monitoring	◉			◉				GRI 201 Economic Performance 2016	4-3 Operating Performance
Energy Management	Ongoing Monitoring	◉				◉			GRI 302 Energy 2016 TC-SC-130a.1 Process Energy Management	5-2 Energy Management
Water Resource Management	Ongoing Monitoring	◉				◉			GRI 303 Water 2018 TC-SC-140a.1 Water Resource Management	5-3 Water Resource Management
Waste and Recycling	Ongoing Monitoring	◉				◉			GRI 306 Waste 2020 TC-SC-150a.1 Waste Management	5-4 Waste Management

2-7 Major Sustainability Issue Management Policy

Significant Topic Name	Corporate Governance/Integrity Management					
Impact Management Description	**Positive Benefits**	Good corporate governance and integrity management is the core foundation of the enterprise, protecting the rights of shareholders and stakeholders, so that the company can continues to grow steadily and gradually improve the sustainable development of the group.				
	Negative Impact	Failure to implement or violate these regulations may result in penalties that undermine the trust of both customers and suppliers, thereby impacting the company's future development in the capital market.				
Impact Scope	◉	PlayNitride Operations		◉	Client	◉ Suppliers
Impact Oriented	◉	Economy		Environment	◉ People	Human Rights
Impact Time Frame	◉	Has already happened		Within the next year	◉ Within the next 2-3 years	More than 3 years
Policy	• Corporate Governance Best Practice Principles, Sustainable Development Best Practice Principles • Code of Ethnics, Integrity Management Criterion, Procedures for Ethnical Development and Guidelines for Conduct					
Commitment	• Comply with various regulations and implement corporate governance to protect the rights of relevant stakeholders • Do not directly or indirectly provide, promise, demand or receive any improper benefits, or otherwise dishonest acts such as violation of integrity, unlawful or contrary to fiduciary obligations, gain or maintain benefits					
Goals and Targets	• By 2025, aiming to enter the company governance assessment (ESG assessment) within the top 21-35% • Zero number of penalties for violations of law, zero integrity violations, or unresolved complaints					
Responsibility	• Corporate Governance: Board of Directors, Management, Meeting Units, Corporate Governance Officer • Integrity Management: Human Resources Department, Auditing Office, Legal Office					
Course of Action	• Continue to improve policies, systems and disclosure through corporate governance evaluation projects • Rules for Performance Evaluations of the Board of Directors have been established and self-evaluation are conducted • Establish a self-reporting mechanism for conflicts of interest, as well as an integrity complaint channel and mailbox; provide regular education and training to employees and new hires; and include relevant business integrity provisions in supplier contracts					
Tracking action plan approach (performance measurement)	• Corporate Governance Officer and Meetings Unit regularly monitor management performance and report to the Board of Directors • The Board of Directors is expected to perform performance self-evaluation of its performance once a year and at least once every three years by an external professional independent institution or a team of external experts • Regularly track the progress of different communication channels or complaint mailboxes					
Performance Measurement Results	• Listed in 2022, there are no evaluation results available as of now • Excellent results for 2022 Board of Directors and Functional Committee performance self-evaluation • In 2022, there were no reported complaint cases or associated penalties for breaches of integrity or similar issues • All relevant cases of interest avoidance were resolved/completed in 2022					
Stakeholder Engagement and Grievance Mechanism	• Board of Directors Performance Evaluation • Various communication channels or complaint mailboxes					

Significant Topic Name	**Human Rights Management**					
Impact Management Description	**Positive Benefits**	Perfect human rights management can create a more harmonious and friendly work environment, meet the requirements of government regulations, and satisfy customers' expectations of suppliers.				
	Negative Impact	In the event of human rights disputes, employees may be subjected to inappropriate treatment and harm, and the company's external image may suffer				
Impact Scope	◉	PlayNitride Operations			Client	◉ Suppliers
Impact Oriented		Economy		Environment	◉ People	◉ Human rights
Impact Time Frame		Has already happened		Within the next year	◉ Within the next 2-3 years	More than 3 years
Policy	• Formulate human rights policies and regulations, establish equal opportunity standards, and implement them in human resource management • Establish relevant grievance channels					
Commitment	• Promote the importance and criteria of the human rights policy in the company through the formulation of relevant policies and application channels, and through promotion and training through various channels					
Goals and Targets	• Zero violation of human rights related complaints • Continue to be a company that values human rights, diversity and equal opportunity					
Responsibility	Human Resources Office					
Course of Action	• Provide mailboxes for reporting sexual harassment prevention, workplace bullying, and other complaints • Clear and smooth internal communication channels, including: opinion mailboxes, regular labor management meetings					
Tracking action plan approach (performance measurement)	• Track the status of sexual harassment prevention, workplace bullying, and other complaint cases • Tracks the execution and case status of internal communication channels					
Performance Measurement Results	• No Human Rights Violation Complaint Cases in 2022 • In 2022, all internal communication cases were resolved • Aiming to update the Human Rights Policy and Human Rights Due Diligence Planning in 2023					
Stakeholder Engagement and Grievance Mechanism	• Conduct regular human rights management education and training for employees and new hires • Feedback channels such as complaint mailbox and labor conference					

Significant Topic Name	**Innovation Management**						
Impact Management Description	**Positive Benefits**	Establish a leadership position in MicroLED technology, provide customers with complete technology solutions, reduce product costs, increase market competitiveness, and continuously optimize R&D and design to reduce environmental impact.					
	Negative Impact	Failure to properly protect trade secrets can cause significant damage to the company.					
Impact Scope	◉	PlayNitride Operations		◉	Client	◉	Suppliers
Impact Oriented	◉	Economy	◉	Environment	◉	People		Human Rights
Impact Time Frame	◉	Has already happened	◉	Within the next year		Within the next 2-3 years		More than 3 years
Policy	• Invest in R&D, develop independent equipment and materials for key processes, and continue process optimization • Encourage colleagues to think innovatively, manage innovation contests, and provide patent and trade secret bonuses						
Commitment	Improve product yield, shorten the product output cycle, and quickly adapt and develop the appropriate process to meet the varying needs of customers.						
Goals and Targets	• Reduce product production costs • Continually improve the number of patents						
Responsibility	Panel Technology Development Division						
Course of Action	• Regular cross-departmental meetings to discuss the direction of process innovation and process machine capabilities • Establish a sustainable design assessment, with each R&D department aligning with the design or reduction assessment goals • Establish a complete trade secret registration system, properly maintain and control confidential information, and implement core technology intellectual property protection						
Tracking action plan approach (performance measurement)	• The quarterly management and decision-making department confirms the development progress of each R&D department • Every quarter, the Sustainable Development Committee tracks process optimization efforts to reduce environmental impact						
Performance Measurement Results	• Chip size reduced by 33% while maintaining brightness, saving raw materials and energy in the end use • In 2022, a total of 113 patents were filed. By the end of 2022, there were 730 patents related to MicroLEDs, with 64% covering major production technologies and 36% related to potential R&D technologies						
Stakeholder Engagement and Grievance Mechanism	• Increase industry and academia cooperation, encourage staff to learn new knowledge at overseas academic conferences, and continue to cultivate R&D talents • Planning and conducting intellectual property application and protection courses for R&D personnel • New product process requirements, ongoing review meetings with suppliers to meet process requirements specifications • Confirm product inspection failures with customers on new product verification results, adjust process equipment parameters to improve product specifications						

Significant Topic Name	Quality Management						
Impact Management Description	**Positive Benefits**	The operation of the ISO quality management system enhances production efficiency, lowers production costs, elevates product quality, and boosts customer satisfaction and trust, thereby facilitating the company's sustained growth.					
	Negative Impact	Failure to maintain quality will reduce customer satisfaction and affect the development of the company.					
Impact Scope	◉	PlayNitride Operations		◉	Client	◉	Suppliers
Impact Oriented	◉	Economy	◉	Environment		People		Human Rights
Impact Time Frame	◉	Has already happened	◉	Within the next year		Within the next 2-3 years		More than 3 years

Policy	• Quality Policy: Listening attentively to customers, pursuing innovation, and surpassing oneself • ISO 9001:2015 Quality Management System
Commitment	Promote quality management activities and enhance employee quality awareness through the ISO quality management system to ensure compliance with laws and regulations, increase production efficiency, reduce production costs, improve product quality, and increase customer satisfaction.
Goals and Targets	• Establish key performance indicators (KPIs) for each quality management process • Continuously improve customer satisfaction
Responsibility	Quality Division
Course of Action	• Establish a computer-integrated manufacturing (CIM) automated production system to track quality and process information of the production process to continuously improve production efficiency and product quality • Planning and implementation of ISO/IATF 16949 quality system in response to the needs of automotive customers
Tracking action plan approach (performance measurement)	• Monthly Key Performance Indicators (KPI) management, reviewed and discussed in management review meetings • Annual internal audit of the management system and external third-party verification audits
Performance Measurement Results	• Implemented the CIM automated production system, which was initiated in December 2022 • Introduced the ISO/IATF 16949 quality system in December 2022 and successfully established procedures for five major tools. ISO 9001 certification is renewed every three years, and in 2022, it passed an external third-party verification audit to maintain the validity of the management system certificate • Customer satisfaction averaged 88.5 points in 2022, marking a 9-point increase from the 79.5 points recorded in 2021
Stakeholder Engagement and Grievance Mechanism	• Monthly Key Performance Indicators (KPI) Management • Annual ISO quality management system internal audit, ISO quality management system management review meeting • Customer Satisfaction Survey Questionnaire

Significant Topic Name	**Talent Attraction and Retention**						
Impact Management Description	**Positive Benefits**	Attract and retain talent with a variety of compensation and benefits programs to create a more competitive organization, ensure continuous innovation, and maintain industry status.					
	Negative Impact	The loss of talented people may affect the smoothness and performance of business development					
Impact Scope	◉	PlayNitride Operations			Client		Suppliers
Impact Oriented	◉	Economy		Environment	◉	People	◉ Human Rights
Impact Time Frame		Has already happened	◉	Within the next year		Within the next 2-3 years	More than 3 years
Policy	Attract high-quality talent and retain key personnel.						
Commitment	Create a friendly work environment, build a comprehensive career path, and receive competitive pay and benefits.						
Goals and Targets	• Annual retention rate of key talent ≧ 75% • Average monthly turnover rate of indirect personnel ≦ 1.5% • Ongoing talent attraction and retention solutions						
Responsibility	Human Resources Office						
Course of Action	• Conduct regular market salary and benefits surveys to ensure compensation and benefits remain competitive in the marketplace • Continue to improve the promotion system and performance advancement system • Promote corporate promotional activities and establish industry-academia relationships to increase corporate market exposure and attractiveness • Establishes various measures to attract and retain talent • Conducting conversations and reasons for the flow of people						
Tracking action plan approach (performance measurement)	• Monthly review of employee retention and hiring status, and quarterly tracking of improvements • Track the progress of various recruitment and talent retention policies						
Performance Measurement Results	• A structured salary adjustment will be implemented in 2022, with an average company-wide salary adjustment of 7% • Continue to improve the performance appraisal and promotion system, with the goal of having 100% of appraised staff on board by 2022 • In 2022, monitor key talent retention and indirect employee turnover quarterly, with an annual average targe						
Stakeholder Engagement and Grievance Mechanism	Employees can provide feedback through multiple communication channels, such as feedback boxes, and policies are communicated through formal meetings and informal communication channels.						

Significant Topic Name	**Occupational Safety and Health**						

Impact Management Description	**Positive Benefits**	Effective Occupational Health and Safety Management System to provide a safe working environment for employees in accordance with government regulations and customer requirements for supplier self-evaluation.
	Negative Impact	Accidents and injuries may affect the employees' physical and mental health, resulting in lost time, penalties, etc.

Impact Scope	◉	PlayNitride Operations			Client	◉	Suppliers
Impact Oriented	◉	Economy		Environment	◉	People	◉ Human Rights
Impact Time Frame	◉	Has already happened	◉	Within the next year		Within the next 2-3 years		More than 3 years

Policy	• Safety, Health and Environmental Management Policy • ISO 45001:2018 Occupational Safety and Health Management System
Commitment	Through the operation of the occupational safety and health management system, to ensure the effective functioning of equipment and facilities, strengthen personnel safety awareness, cultivate a safety culture, and create a zero-workplace-disaster environment.
Goals and Targets	• Zero major accidents • Zero penalty record
Responsibility	Labor Safety Department
Course of Action	• Regular annual audit of occupational safety and health management system • Planning the staging area for the acetone supply system • Planning of waste liquid discharge pipelines
Tracking action plan approach (performance measurement)	• Quarterly Occupational Safety and Health Committee Review • Annual internal audit of the management system and external verification audits
Performance Measurement Results	• In 2022, there were no major incidents, no injuries resulting in disability, and no record of government penalties • Passed external verification audit in 2022 to maintain the validity of management system certificates • The completion of 2 acetone cabinets can safely store acetone, bringing the factory in compliance with regulatory standards and reducing the risk of accidental disasters. Complete waste liquid transport pipeline to reduce operational risk
Stakeholder Engagement and Grievance Mechanism	• Occupational Safety and Health Committee • Establish a Health and Safety Consultation Communication Management Procedure Manual to facilitate communication with internal and external entities • Book occupational accident reporting and investigation management procedures for reporting accidents • Have safety, health and environmental management procedures for contractors, hold contractor work meetings, and communicate with contractors to cooperate on related matters

Significant Topic Name	Climate Strategy					
Impact Management Description	**Positive Benefits**	Under climate change and global net-zero trends, the company's product advantages include high efficiency, energy savings, low carbon emissions, competitive strengths, and voluntary greenhouse gas inventory. Develop long-term strategies and transformational resources to improve business resilience by addressing the physical risks, transformational risks, and opportunities posed by climate change.				
	Negative Impact	Severe climate change could lead to water and power shortages, risk disruptions, stricter government policies and investor focus, and significant capital and resource investment to implement carbon reduction measures. may lead to an increased short-term economic burden on companies currently engaged in R&D.				
Impact Scope	◉	PlayNitride Operations		◉ Client		Suppliers
Impact Oriented	◉	Economy	◉ Environment	◉	People	◉ Human Rights
Impact Time Frame		Has already happened	◉ Within the next year	◉	Within the next 2-3 years	◉ More than 3 years
Policy	• Greenhouse gas inventory in accordance with ISO 14064-1:2018 • Meet the requirements of Climate Change Response Law and Sustainable Development Roadmap for listed firms					
Commitment	Implement phased implementation plans with reference to the climate-related financial disclosure (TCFD) framework, establish carbon reduction targets, and develop solutions to mitigate environmental impact.					
Goals and Targets	• Completion of voluntary greenhouse gas inventory and external verification • Greenhouse gas emissions regulated and committed to reduce annually • Regularly track progress against each ESG management objective					
Responsibility	Sustainable Development Committee					
Course of Action	• Implementation and monitoring of various energy conservation and resource targets in ESG operations • Evaluate TCFD implementation projects					
Tracking action plan approach (performance measurement)	• Quarterly ESG Committee Review • Annual greenhouse gas inventory with external verification					
Performance Measurement Results	• Completed Greenhouse gas inventory and external verification • In 2022, the total greenhouse gas emissions amounted to 5,323.43 tonnes - CO2 equivalent (tonCO2e), marking an increase of 94.89 tonCO2e (+1.81%) compared to 2021. The emission density (tonCO2E/million revenue) was 13.18, representing a decrease of 12.33 from 2021. Greenhouse gas emissions mainly contribute to indirect energy emissions from electricity use, accounting for 66.80% of total emissions					
Stakeholder Engagement and Grievance Mechanism	• Convene the ESG Committee • Collaborate with academic institutions and industry associations to promote energy-saving and low-carbon LED products					

PLAYNITRIDE

Significant Topic Name	Product Liability				
Impact Management Description	**Positive Benefits**	100% compliance with hazardous substance regulations to meet customer expectations from suppliers.			
	Negative Impact	Violations of laws and regulations and customer requirements will damage the corporate brand image.			
Impact Scope	◉	PlayNitride Operations	◉	Client	Suppliers
Impact Oriented	◉	Economy	◉	Environment	People	Human Rights
Impact Time Frame	◉	Has already happened		Within the next year	Within the next 2-3 years	More than 3 years
Policy	Hazardous Substances Environmental Policy				
Commitment	With a commitment to environmental protection, our company uses green materials and fully implements environmentally friendly processes while complying with regulations. The goal is to be recognized as a leading manufacturer of environmentally friendly products.				
Goals and Targets	• 100% compliance with international regulations like RoHS, REACH • Establish a clear mechanism for chemical management				
Responsibility	Quality Division				
Course of Action	• Create a hazardous substance list from suppliers to ensure raw materials meet regulatory requirements for hazardous substances • Update the product's list of banned substances to maintain the effectiveness of the management system • Regular annual audit of the hazardous material management system				
Tracking action plan approach (performance measurement)	• Announcement of the latest list of banned/restricted substances • Internal audits of the product hazardous material management system are conducted annually				
Performance Measurement Results	• Use the company's website to provide information on the list of banned or restricted substances for the product • Passed the internal audits of the product hazardous material management system to maintain the effectiveness of the management system • 100% of the materials used in the product comply with international, regional, national and customer environmental regulations and standards regarding the content of hazardous substances in the product				
Stakeholder Engagement and Grievance Mechanism	• There is a product hazardous substance management procedure, which requires suppliers to carry out the third notary unit of hazardous substance testing of raw materials and products • Provide supplier management procedures to audit the supplier's environmental protection and hazardous material management system • Supplier's Commitment to Prohibited/Restricted Substances and List of Prohibited Substances in Compliance with Relevant Environmental Regulations				

Significant Topic Name	**Information Security**					
Impact Management Description	**Positive Benefits**	Effectively manage information security controls, raise information security awareness among colleagues, create a safe work environment, comply with government regulations, and increase customer confidence.				
	Negative Impact	Security incidents can result in the loss of digital assets and property, diminished customer confidence that impacts profits, government fines, and more.				
Impact Scope	◉	PlayNitride Operations		◉	Client		Suppliers
Impact Oriented	◉	Economy		Environment	◉	People	◉ Human Rights
Impact Time Frame	◉	Has already happened		Within the next year		Within the next 2-3 years	More than 3 years

Impact Scope	◉ PlayNitride Operations		◉ Client		Suppliers
Impact Oriented	◉ Economy	Environment	◉ People	◉ Human Rights	
Impact Time Frame	◉ Has already happened	Within the next year	Within the next 2-3 years	More than 3 years	

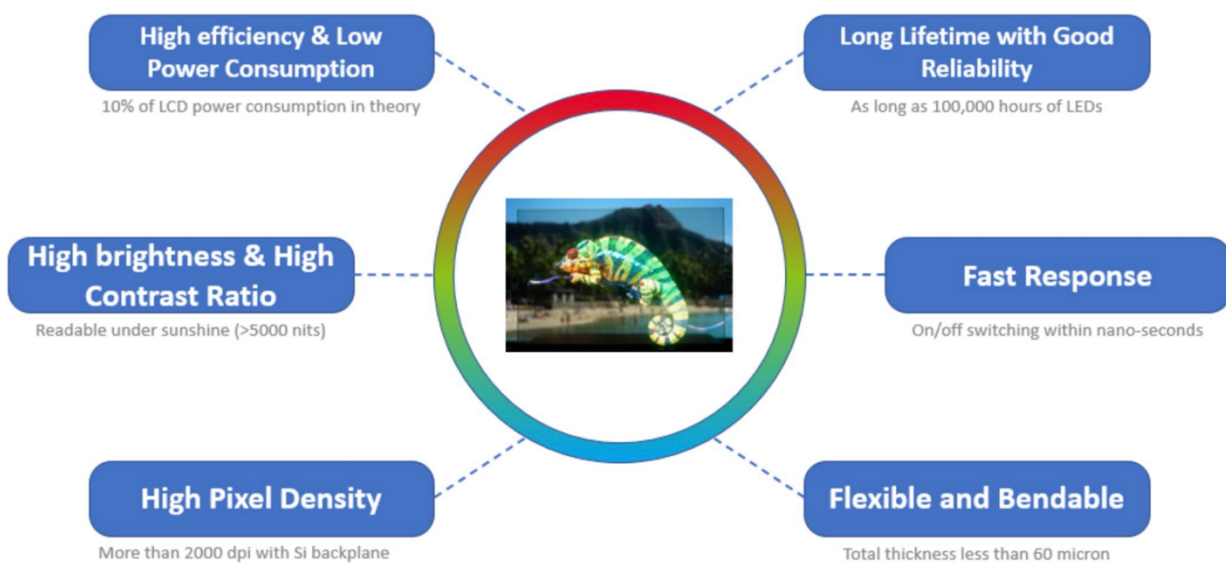| Policy	• Information Security Management Policy • Electronic Computer Batch Processing
Commitment	Following electronic computer batch processing to ensure the effective operation of information systems and networks, enhancing all employees' awareness of information security, and creating a secure information environment
Goals and Targets	• Zero Critical Security Incidents • Zero Information Security Penalty Record
responsibility	IT Department
Course of Action	• Conduct regular information security training for all employees • Annual third-party information security health check • Regular annual audit of the internal control management of the information environment
Tracking action plan approach (performance measurement)	• Irregular Information Security Committee reviews • Annual external certification audit
Performance Measurement Results	• In 2022, the completion rate for information security professionals, information personnel, new personnel, and general users was 88.5% • Improve server architecture to improve server security and manageability • Passed the external audit of internal control special audit in 2022 • No significant information security incidents occurred in 2022, and there were no government penalties
Stakeholder Engagement and Grievance Mechanism	• Convened Information Security Committee • Information security-related training

![PLAYNITRIDE logo]

3. Sustainable Product Innovation

3-1 Product Advantages

Product Advantages

MicroLED is recognized by the industry as the ultimate display technology for the next generation because its technology and specifications are superior to those of other traditional display technologies.

With the rise of emerging fields such as 5G communications, big data, and IoT, new application opportunities are emerging in the MicroLED display market.   This trend enables ubiquitous smart living and interactive display technologies, including ultra-high-resolution integrated virtual ecosystems, smart in-vehicle systems, and LED designs that meet energy-saving and low-carbon requirements.   MicroLED displays have distinct advantages in these areas.

High efficiency & Low Power Consumption
10% of LCD power consumption in theory

Long Lifetime with Good Reliability
As long as 100,000 hours of LEDs

High brightness & High Contrast Ratio
Readable under sunshine (>5000 nits)

Fast Response
On/off switching within nano-seconds

High Pixel Density
More than 2000 dpi with Si backplane

Flexible and Bendable
Total thickness less than 60 micron

Comparison Between MicroLED and Other Displays

MicroLED displays have a screen resolution that cannot be matched by other display technologies due to the miniaturization of the light-emitting components to the micron level. Compared to OLED displays, which are also self-emitting, MicroLED displays have the advantage of using inorganic materials for light emission, eliminating the drawbacks of screen burn-in and color degradation.   They have a longer lifespan and superior response speed and power consumption compared to OLED displays.

FEATURES	LCD	OLED	MicroLED
Self - Emissive	X	✔	✔
Contrast Ratio	5000:1	∞	∞
Life	◎◎◎	◎	◎◎◎◎◎
Response Time	ms	μs	ns
Operating Temperature	❄ -40 ~ 100° C ☀	❄ -30 ~ 85°C ☀	❄ -100 ~ 120°C ☀
Power Consumption	⚡⚡⚡⚡	⚡⚡⚡	⚡
Viewing Angle	Low	Medium	High
Pixel Density	⊹ Up to 1500ppi	⊹ Up to 1000ppi	⊹ Up to 6000ppi

Product Application Performance

Large Displays, Unlimited Production Size for MicroLED Displays

The market demand for home displays (TVs) larger than 75 inches has been increasing annually. Oversized displays are the primary product. Both LCD and OLED technologies have their technical limitations, mainly constrained by the economical cutting size of TFT glass substrates. For LCDs, 75 inches remains the upper limit for economically feasible cutting in 10.5-generation panel factories. However, 125-inch LCDs face production limitations due to frame restrictions, preventing seamless splicing and thus limiting the product size. OLEDs, on the other hand, are currently only produced in 8.5-generation panel factories, making it more challenging to achieve larger sizes.

MicroLED displays are not limited to the above production dimensions. At CES 2023, brand customers showcased a full range of MicroLED home displays from 50 to 140 inches. The focus was on modular displays that are not limited by shape, proportion, or size. MicroLED has set a new standard for image quality, with benefits such as 20-bit color depth and a maximum dynamic refresh rate of 240Hz (variable refresh rates).

MicroLED Display Technology Offers an Interactive Platform for Seamlessly Integrating Virtual and Physical Elements in Electric Vehicles and Smart Transportation

With the rapid development of information and communication technology, countries actively invest in developing smart transport solutions such as self-driving cars and electric vehicles.

Taiwan is actively promoting the transportation industry to install satellite positioning and various advanced driver assistance systems, such as lane departure warning, electronic rearview mirror, dead angle monitoring, internal wheel difference warning, etc., and its electric vehicles and smart transportation require display technology and related applications to enhance traffic information integration. Consider a car's multi-screen system as an example. It can be used to create a transparent display platform that integrates virtual and physical elements for car window applications. This platform utilizes ultra-high brightness transparent MicroLED displays with an interactive system, incorporating real-time virtual reality through bio-sensing, high brightness, and high-speed technology. This system provides the necessary real-time information to enhance the safety of passengers inside and outside the vehicle.
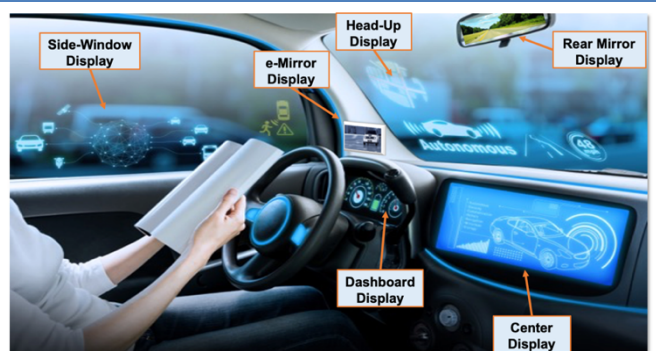
In 2022, the world's first smart cruise ship was launched in Kaohsiung, equipped with the world's first 'AI Smart Window Navigation System'. This system features a 17.3-inch AM MicroLED transparent display panel with high transmittance, resolution, and brightness, designed exclusively for PlayNitride customers.

34

As the Metaverse Evolves, MicroLED Displays are Crucial Display Components

Due to its numerous advantages, MicroLED has gained widespread recognition in the market as the key display technology for developing the next-generation human-machine interface.

The development of AR/VR equipment has attracted significant attention following the publication of the future blueprint for the Metaverse by major foreign social media companies.   Approximately 80% of human sensory input is visual, and in immersive experiences within the virtual world, the display plays a crucial role.   During the era of celluloid film, the film and television industry generally believed in the existence of a phenomenon known as visual persistence, wherein the human brain required at least 1/24 second to process each frame of visual images.   This belief led to the establishment of the film and television standards of the time at 24 frames per second, considering that a higher refresh rate would be useless and a waste of film.   Today's VR helmets, despite variations in visual resolution among different age groups, are still believed by the industry to require displays with a minimum resolution of 8-16K and a refresh rate of over 120 frames per second in order to deliver a truly immersive experience. Otherwise, there is a risk of inducing '3D motion sickness,' a phenomenon caused by errors in the coordination between the eyes and the brain, which can lead to motion-related discomfort and nausea.

Due to the changing technology, this film specification has been updated in recent years. MicroLED has the advantages of high efficiency, low power consumption, and small size.   It can also be integrated with other components (such as sensors) to reduce the overall VR helmet volume and achieve a lighter weight.   And other significant advantages, become the best solution for VR helmets. In addition, if AR glasses are taken as an example, integrating a MicroLED display with an optical system can create a viewable display and make the wearable device lighter.   The crucial factor here is its ultra-high brightness, which helps counteract environmental glare, enabling optical lenses to produce sharp and high-contrast virtual images.   Although the resolution of LCD and OLED is sufficient, it cannot achieve higher brightness.   Therefore, AR glasses applications are currently restricted to indoor scenarios in order to maintain usable display contrast.

MicroLED is the Key Microdisplay for AR Glasses
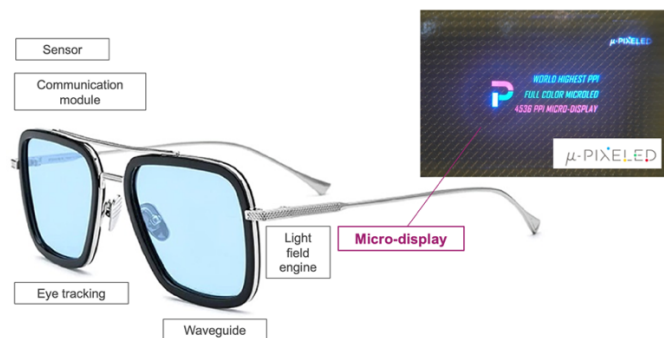
3-2 Technical Advantages

MicroLED is a highly integrated technology that demands precision. PlayNitride's R&D span the entire spectrum, from upstream to downstream, encompassing epitaxial chip development, MicroLED chip design, mass transfer and testing, and module design. In the emerging field of displays, traditional LED and display industry companies may struggle to independently develop MicroLED technology. Therefore, in comparison to existing industry players, PlayNitride, with its high level of technical integration, possesses greater flexibility in research and development and process design.
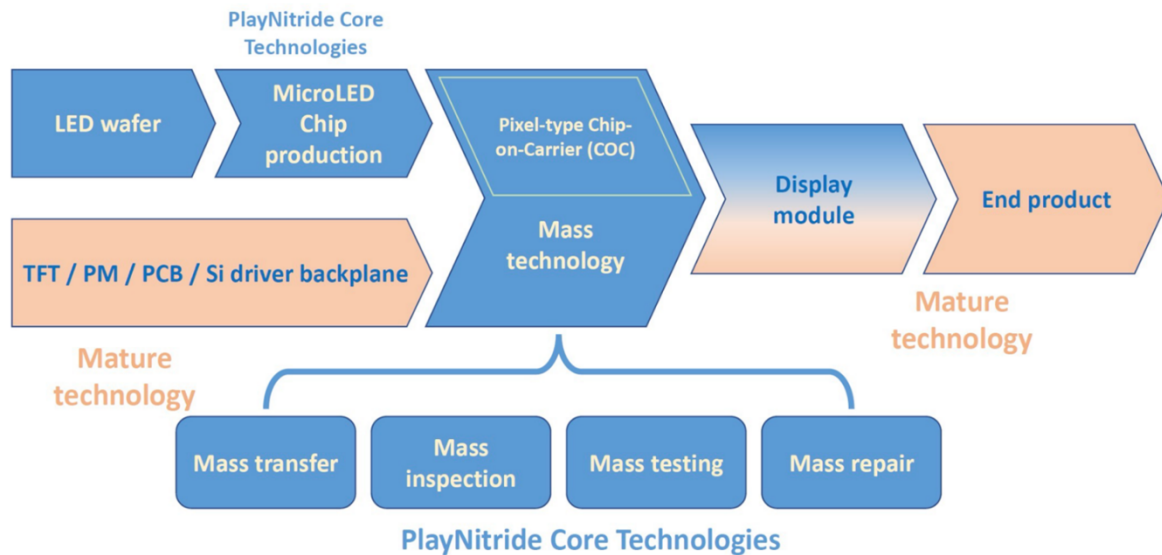
Early Production and Continuous Leadership.

PlayNitride is among the few companies in the industry that has a track record of shipments, offering technical advantages and continuous breakthroughs in all key processes. This positions us to provide customers with a comprehensive MicroLED solution. In 2022, we conducted simulations for RGB wavelength design, customized R&D, and designed chip sizes, while enhancing structural strength. In 2023, our focus will continue to be on developing and innovating chip shrinking technologies to maintain efficiency. Additionally, we will be working on creating transfer equipment, which is currently in short supply in the market. Leveraging our unique chip structure design, we aim to further enhance production rates, chip utilization, and overall competitiveness.
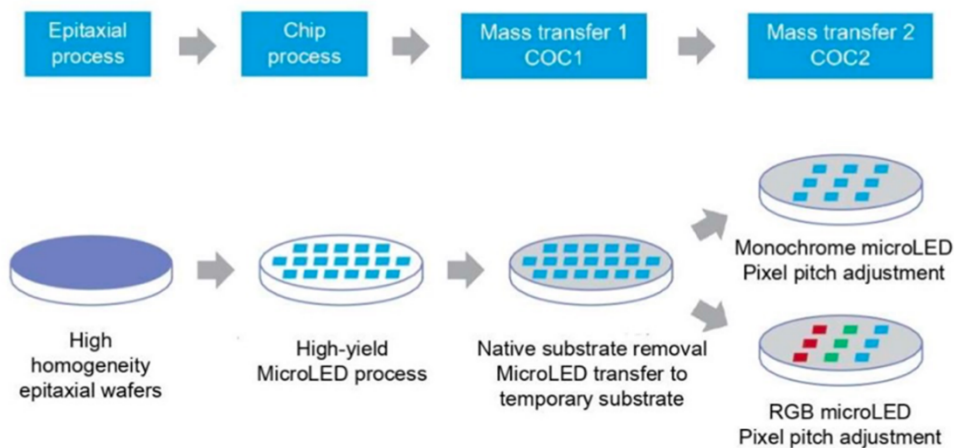
Technical Advantages

High uniformity 6-inch R/G/B LED wafer

- Uniform brightness across wavelengths, no need for binning

High yield R/G/B Micro LED chips

- Chip on wafer yield > 99%
- LED wafer utilization > 80%

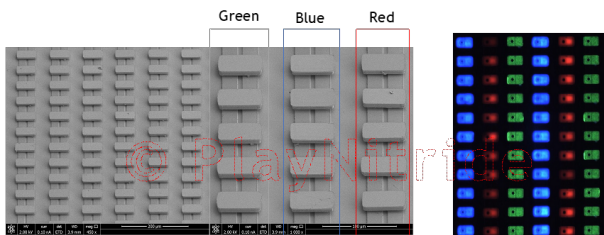**Industry-leading mass transfer, inspection and testing**

- Self-made automatic mass transfer equipment
- Massive addressing repair technology

Self-developed Micro LED one-stop solutions

- Cooperating with industry-leading panel display manufacturers
- Providing various Micro LED chips for various displays including ultra-micro, tiling, highly transparent and flexible Micro LED displays.
- Supporting customers design needs for different applications

Green   Blue   Red

Sustainable Product Design

MicroLED's high efficiency, low power consumption, and long lifespan make it a natural choice as a new generation of low-carbon products. In response to the net-zero and circular economy trends, we will continue to assess how to optimize R&D design across all stages of the product life cycle to minimize environmental impact.

R&D Design Phase	Low Energy Consumption, Material Reduction	Developed to reduce chip size by up to 33%, while keeping the brightness of R, G, and B chips unchanged, not only can it save raw material usage but also make the end product more efficient.
	Optimized Structure	Continuously improve in-plant COC yield through self-developed inspection and repair technology. Additionally, the Company's layout design, combined with back-end migration technology, assists in enhancing client yield and efficiency during the migration to the driver backplane
Production and Manufacturing Stage	Waste Reduction	Enhanced the photoresist process, resulting in a 13.3% reduction in the use of organic solvents for photoresist removal.
	Water Resource Reduction	Improve the chip cleaning process, reducing water usage by up to 96.9% in a single process.
	Circular Economy	80% of precious metals can be recycled and purified in the coating process.

3-3 Intellectual Property Protection and Trade Secret Management

Since its establishment, PlayNitride has been a technology-oriented Company. Its outstanding research and development as well as innovative capabilities have been the primary driving forces behind the Company's continuous growth. Through the combination of self-developed process technology and the protection of patent rights and trade secrets, our Company maintains its leading position in the industry.
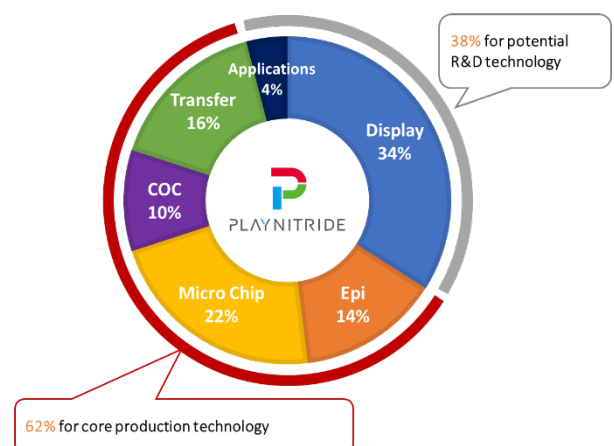
Management Mechanism

The responsible unit for intellectual property protection and management is the "Intellectual Property Legal Affairs Office". They have established related intellectual property assurance operations to regulate and facilitate the effective implementation of R&D operations. Every new technology or improvement program is either patented or designated as a trade secret to safeguard intellectual property. At present, there are corresponding patent applications for each core project, spanning from the development of epitaxial materials and structures, grain structure design, mass transfer and detection technology, to machinery equipment transformation technology. For critical R&D results that are not suitable for external patent applications, PlayNitride also established a comprehensive trade secret registration system in 2022 to effectively preserve and control confidential information. This enables us to fully implement intellectual property protection for core technologies, allowing the Company to concentrate on its business and long-term development.

To safeguard the intellectual property rights of R&D results and technologies, all stages of research and development documents undergo robust authorization management. Patent protection is granted to processes and R&D outcomes related to new technologies, with research and development teams receiving patent bonuses. In 2022, this award was presented to 66 of our Company's R&D colleagues in recognition of their successful patent applications in multiple countries. The use of personal storage devices, as well as photography and recording devices, is strictly prohibited within the factory area. Through the aforementioned information protection and physical control measures, PlayNitride ensures the integrity of its intellectual property and mitigates the risk of information leakage. Additionally, every time the Company engage in customer cooperation, we sign a 'NDA' (Non-Disclosure Agreement) with the customer to safeguard negotiation information and fully implement the protection of core technologies.

Patent Application

By the end of 2022, there were 730 patents related to MicroLED, with 64% covering major production technologies and 36% related to potential R&D technologies. The patent distribution encompasses various application types for panel products, enabling the Company's production line to simultaneously manufacture a variety of large-size commercial, automotive, borderless, ultra-high brightness wearable, and ultra-thin flexible panel products. This extensive product range serves a wide range of final applications and establishes a comprehensive patent landscape, building a robust patent technology stronghold.

38% for potential R&D technology

Applications 4%
Transfer 16%
Display 34%
COC 10%
Micro Chip 22%
Epi 14%

62% for core production technology

The MicroLED market is expected to experience rapid growth, with applications extending to various countries and regions.　In our patent applications, we will expand beyond the United States, China, and Taiwan to include other regions such as Europe and Asia.　We will also assess the possibility of establishing standard patents or patent licensing agreements to generate additional revenue.

Historical Number of Patent Applications
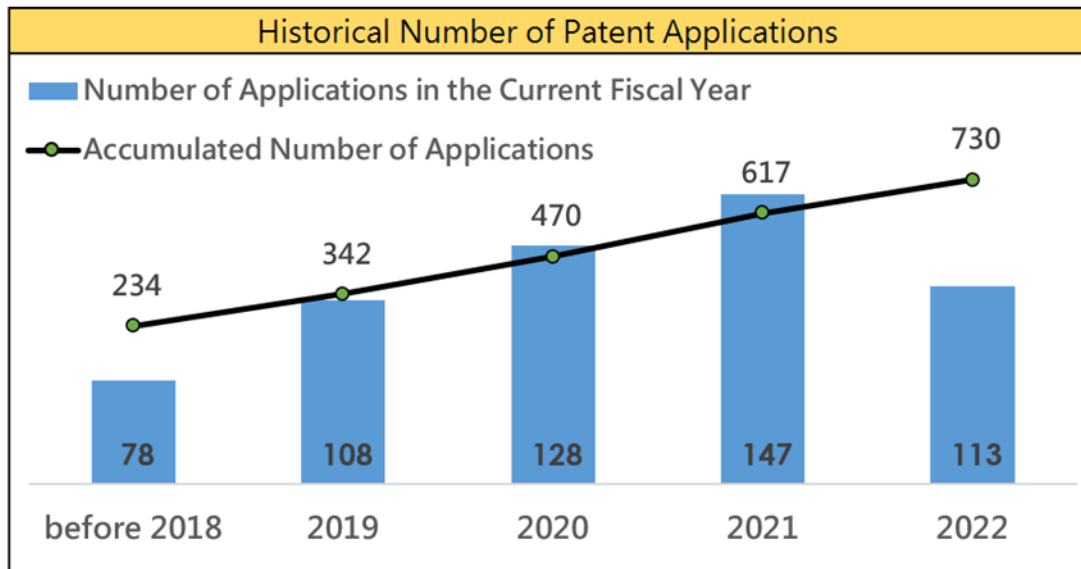
Education and Training

Through training planning and implementation, R&D personnel gain a deeper understanding of the intellectual property application and protection system, aiming to achieve a balance between patent quality and quantity while enhancing their awareness of trade secret protection.

Training Categories	Course	Trainees	Training Sessions	Number of Trainees	Total Training Hours
Intellectual Property Application Process	Patent Overview	R&D Engineer	1	100	1.5 Hours
Intellectual Property Protection Knowledge	Legal Classroom: Understanding Confidentiality Agreements and Copyright	R&D Engineer	1	100	1.5 Hours
Intellectual Property Application Process	PlayNitride's 'Trade Secret Protection and Incentive Program' Awareness Course	R&D Engineer	1	60	1 Hour
Intellectual Property Protection Knowledge	Introduction to Trade Secrets	Manufacturing Center Engineer	1	100	1.5 Hours

3-4 Product Lifecycle Management

In response to international environmental trends and customer requirements, we have implemented a green product management mechanism for raw materials and logistics. We will continuously monitor product safety information to ensure that the materials used in our products comply with international, regional, national, and environmental regulations regarding substances and hazardous materials. This ensures that we meet the quantity standards and uphold our commitment to product safety. Currently, PlayNitride complies with the management requirements of RoHS, REACH, and Taiwan CNS for hazardous substances in EU products. Our hazardous substances management policy extends throughout the entire product life cycle, from planning and development to production, to safeguard the environment and protect human health.

Hazardous Substance Management Policy
• **Compliance with Regulations, Prevent Pollution**
• **Continuous Improvement, Sustainable Operation**

Product Management Items

Material Acknowledgement	Maintain the management list of environmentally related substances and hazardous substances in compliance with the standards. The R&D department compiles the required safety data sheets (SDS) from suppliers and third-party notarized unit test reports under 'Material Recognition' to ensure compliance with control standards during subsequent purchases. Identify product disclosure requirements for hazardous substances, including lead-free, halogen-free, RoHS, and REACH, as well as potential customer requirements related to hazardous substances like RoHS and REACH.
Supplier Management	When suppliers meet the environmental related substances and hazardous substances control standards, suppliers can pass the green product scoring items that create supplier management standards, and be included in the list of qualified suppliers when other evaluation standards are met, and then according to the supplier management methods. Conduct regular supplier audits to ensure the effectiveness of their management.
Procurement Management	Provide suppliers with the 'Hazardous Substances Management Procedures,' which mandate the submission of SDS and a commitment "Not to Use Prohibited or Restricted Substances in Accordance with Relevant Environmental Regulations", along with RoHS test reports.
Quality Assurance Inspection	Materials from suppliers must undergo XRF (X-Ray Fluorescence Spectrometer) outsourced testing, and the supplier is required to submit an ICP (Spectral Analysis) test report within a year. If the report is overdue by a year, the supplier must resubmit a third-party notarized unit test report, or the material will be returned. Raw materials that do not qualify for a hazardous substances report must be immediately labeled for the finished product, moved to a designated control isolation area, and should not be used in production.
Education and Training	Arrange colleagues to receive training on environmental protection, product-related professional knowledge, and operational procedures. Regularly disseminate updates on the latest international regulations and customer standards regarding hazardous substances.

3-5   Procurement of Raw Material

Supplier Management

Supplier management encompasses four stages: the selection and evaluation of new suppliers, the assessment of key suppliers, audit verification, and counseling for improvement.   These stages ensure that suppliers meet the requirements for social and environmental responsibility, including the creation of green product systems, environmental safety and health systems, and human rights.

Since 2022, we integrated the identification and classification management system into its supplier management process.   We conduct regular monthly assessments and annual audits for all direct materials and outsourcing suppliers to comprehensively understand supplier status and minimize purchasing risks. Offer improvement requirements or counseling based on the areas where regular assessment and audit results indicate non-compliance to help suppliers enhance their social and environmental performance.   In 2022, new requirements for supplier environmental safety systems, human rights, and chemicals are expected to be formulated based on the Responsible Business Alliance (RBA) Code of Conduct, with implementation planned for 2023.   This initiative aims to further enhance the supplier sustainability management mechanism.

In 2022, the monthly supplier's assessment scores for delivery, service, process, and quality reached 98 points out of a possible 100 (with an 80-point qualification criteria), achieving a 100% assessment rate. Annual audits were conducted according to the scheduled plan, resulting in an average audit score of 99.93 points, with an average of 7.5 missing items.   Additionally, there is a monitoring mechanism for critical characteristics of raw materials.   In case of any abnormalities, we assisted a supplier in process improvement by 2022, successfully reducing the occurrence of abnormal values by 70.20%.

New Supplier Evaluation

- **Perform an Assessment on the New Supplier:**
  Written Review/ Field Review/ Sample Evaluation
- **Supplier Hazardous Materials Registration and Management**
- **Create/Approve New Material (Qualified Supplier Login)**

Supplier Assessment

- **Month/Annual Assessment for Major Raw Material Suppliers and Outsourcing Process Manufacturers**
- **Assessment Items:**
  Delivery/Service/Process/Quality
- **The Assessment Failed to Meet the Improvement Requirements:**
  Provide vendors with clear improvements to the project/timeline and goals, request appropriate improvement proposals, and disqualify them if they still do not meet the requirements.

Supplier Annual Audit

- **Audit Target:** Execute according to annual plan for the main raw material suppliers and production process outsourcing manufacturers.
- **The audit project includes 5 aspects:**
  Quality System/Green Product System (2022 New) Environmental Safety and Health System & Human Rights-related & Chemical Requirements
- **Not Meeting the Assessment Improvement Requirements:**
  Provide vendors with clear improvements to the project/timeline and goals, request appropriate improvement proposals, and disqualify them if they still do not meet the requirements.

Supplier Counseling and Requirements

- **Major raw materials manufacturers need to obtain international certifications, such as ISO-related management systems, and those that do not must provide implementation plans**
- **Target of Counseling:**
  If key raw material characteristics exceed specifications, discuss improvement actions and confirm their effectiveness with the manufacturer (e-platform: 8D/IQC statistical analysis).

Onboarding of New Suppliers

PlayNitride refers to the eco-partner specification for sustainable supply chain management of international manufacturers. The onboarding unit must adhere to our internal material recognition operation guidelines, and direct material and packaging material manufacturers are required to provide the following documents:

New Supplier Introduction Qualification.
• Pledge Not to Use Prohibited or Restricted Substances in Environmental Regulations (Including REACH Specification Substances) • RoHS test reports reported within one year • SDS (Safety Data Sheet) • Conflict Minerals Reporting Template (CMRT)

Conflict Minerals Management

PlayNitride commits to not using conflict minerals and continues to conduct due diligence on new and existing suppliers. We require that materials, equipment components/materials, and other items provided by suppliers do not contain conflict minerals from the Democratic Republic of Congo and its neighboring countries and regions, such as gold (Au), tantalum (Ta), tin (Sn), tungsten (W), cobalt (Co), and their derivatives.

Every year, a report must be completed and submitted to PlayNitride by a specific raw material supplier, following the Conflict Minerals Reporting Template (CMRT) format. The 2022 survey of selected suppliers has been completed, and we will continue to enhance our practices in the future to ensure that conflict minerals are not used.

3-6 Quality Management

Quality Management

PlayNitride obtained ISO 9001:2015 quality management system certification (initially verified in 2019). This certification is based on international standards and aims to establish and implement effective quality management practices to enhance customer satisfaction. Recertification is conducted every three years. The most recent recertification took place in November 2022, where German TUV verified the Company's audit results, finding no defects and offering a total of 11 recommendations. All of these recommendations were successfully addressed and implemented in December 2022.

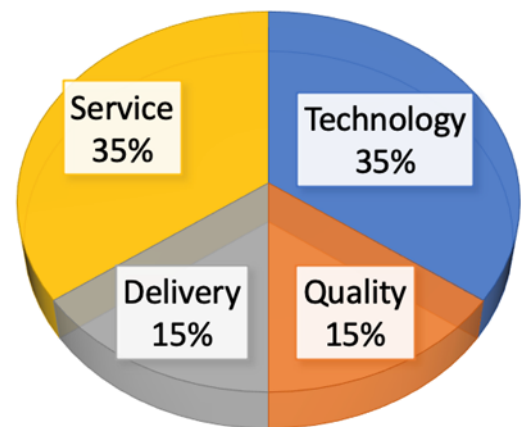| Quality Policy |
| --- |
| • **Listen Attentively, Customer's Voice**
• **Pursuit of Innovation, Surpassing Oneself** |

Furthermore, in response to the demands of the Company's automotive customers, the Company planned and implemented the ISO/IATF 16949 quality system. The process books for the five tools (APQP/CP/PPAP/FMEA/SPC/MSA) were established in December 2022, and the actual output report for these five major tools is expected to be completed by June 2023.

Customer Relationship Management

Customer data protection management systems and policies protect customer privacy, and maintain strict control of customers' confidential information through internal audits, external validation and training. With regard to customer service, our dedicated product managers proactively verify and ensure the implementation of customer service policies, handle customer complaints, assist business colleagues in managing customer cases, and securely protect customer rights.

Distribution of Four Major Aspects in Customer Satisfaction Survey Questionnaire

Service 35%
Technology 35%
Delivery 15%
Quality 15%

To gain insights into customer feedback and product/service requirements, we utilize the 'Customer Satisfaction Survey Form' to assess customer ratings in technology, quality, delivery, and service among its trading partners. In 2022, a survey was conducted targeting the Company's major customers, representing over 90% of the total revenue. The overall satisfaction rating averaged 88.5 points, a significant improvement from 79.5 points in 2021. The results of the customer satisfaction survey will serve as valuable references for the Company's future strategic planning and enhancement efforts.

4. Corporate Governance

4-1 Corporate Governance

Vision and Policies

Through PlayNitride's vision, mission, and values, our Company will strive to achieve breakthroughs and applications in MicroLED technology, providing new visual experiences for people, advancing technology, valuing sustainability, and creating a better future.

Vision

- To become the world's leading supplier of MicroLED technology and products, leading the global transformation of technology and display technology. Driven by technological innovation, the Company aim to develop and apply the most advanced, high-quality MicroLED display solutions across a wide range of fields, including consumer electronics, commercial, and industrial applications.

Mission

- Delivering superior MicroLED products and services to customers worldwide through innovation and advanced technology. PlayNitride is committed to advancing breakthroughs in display technology, offering people superior visual experiences and comprehensive solutions.

Corporate Governance Structure

The Board of Directors is the highest governing body of the Company, responsible for overseeing the Company's operations in accordance with laws and regulations. It ensures compliance with various laws, regulations, and shareholder resolutions, while also providing professional strategies and advice to the management team. This is aimed at creating greater benefits for shareholders and safeguarding the rights and interests of all stakeholders. Under the Board of Directors, there are two functional committees: the "Compensation Committee" and the "Audit Committee," aimed at enhancing the oversight and management functions of the Board of Directors.

PlayNitride is currently chaired by its founder, Mr. Li, Yun-Li, who also serves as the CEO. This arrangement is primarily due to the fact that the Company was founded less than 10 years ago, and to simplify the management structure during the early stages of development. The Board of Directors has the authority to elect the Chairman and appoint and remove the CEO so that the Company can exercise checks and balances and perform its oversight function promptly. Due to regulatory requirements that the Chairman also serves as CEO, we plan to appoint an independent director in 2023 to fulfill the supervisory role. Establish a Sustainable Development Committee under the chairman and CEO's office, responsible for implementing sustainability policies and objectives. The management team regularly reports to the Board of Directors. Upon receiving these reports, the Board of Directors promptly provides recommendations regarding the economic, environmental, and population impacts related to sustainable development matters involving both the board and the business team. For more details, please refer to Section 2-1 on Sustainability Policy and Operations.

- **Company Organizational Chart**
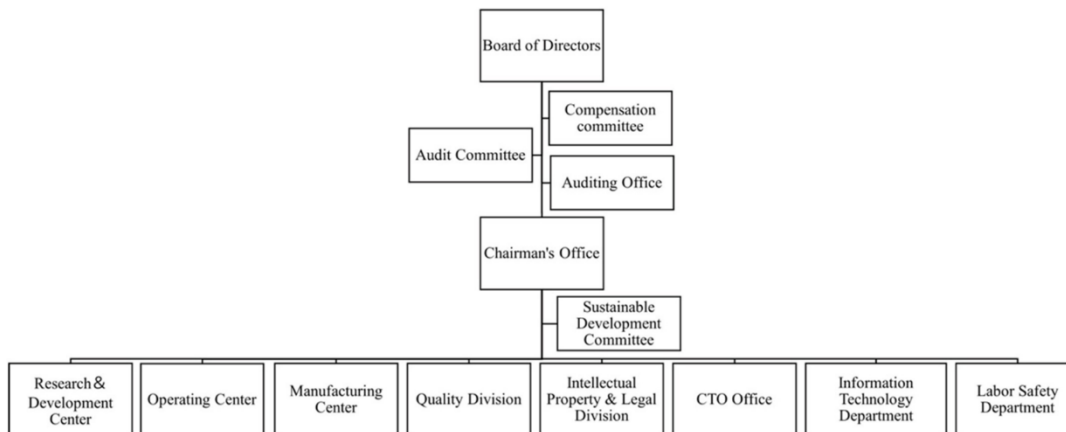
**Composition of the Board of Directors**

- **Board of Directors Appointment**

The Board of Directors' appointment shall be conducted in accordance with the 'Directors' Election Measures,' unless otherwise stipulated by laws or bylaws. The Candidate Nomination System for Director Elections and the Diversity Policy for Board of Directors Members are established in accordance with Corporate Governance Best Principles. To ensure a well-rounded board composition with diverse members, nomination and assessment criteria for candidates should be developed in alignment with the Company's operations, business type, and developmental requirements. The policy encompasses fundamental qualifications and values, as well as expertise and skills, aiming to enhance the Board of Directors' composition with professionals from diverse backgrounds, including gender, age, nationality, and culture.
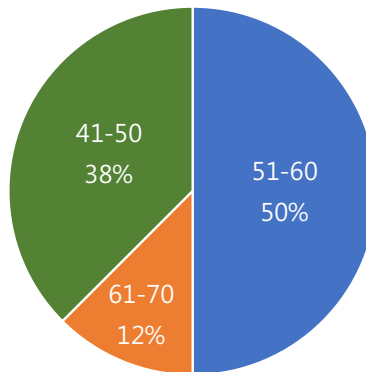
- **Board of Directors Diversity Status**

On December 24, 2021, the Board of Directors appointed eight directors, of which three (37.50%) are independent directors, serving a three-year term. All three independent directors meet the criteria for professionalism, work experience, independence, and the required number of independent directors as stipulated in the 'Regulations Governing the Appointment of Independent Directors and Compliance Matters for Public Companies,' as well as other eligibility conditions. There are 8 directors, comprising 7 men and 1 woman, aged between 41 and 70. Seven of them are from Taiwan, and one is from South Korea. They possess professional backgrounds in various fields, including technology, advanced industry, management, and finance, ensuring diversity in professional qualifications, experience, gender, age, nationality, and culture To further enhance the functions of directors, the average training hours in 2022 amounted to 9 hours. This training encompassed the latest corporate governance and sustainable development-related regulations, institutional development, and policies Please refer to the Company's annual report for a comprehensive introduction to Board of Directors members, training, and other Company positions.
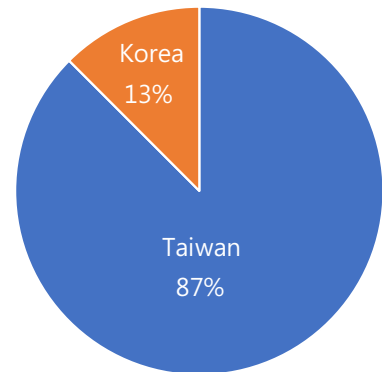
Gender Diversity
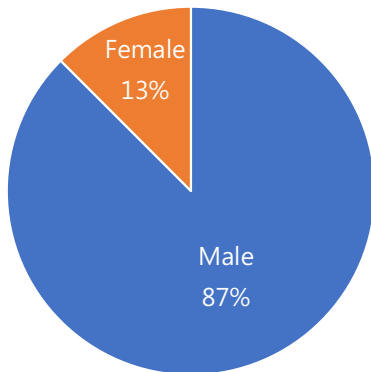
Age Diversity

Nationality Diversity

- **Board of Directors Members**

| Name | Title | Age | Gender | Nationality | Field of Professional Knowledge and Skills | | | | | Functional Committee | |
					Business Management	Leadership Decision-Making	Industry Knowledge	Financial Accounting	Audits	Compensation
Mr. Li, Yun-Li	Chairman	41-50	Male	Republic of China	V	V	V	V		
Kim Jong-Ho	Director	41-50	Male	Republic of Korea	V	V	V			
Hung, Li-Chen	Director	41-50	Female	Republic of China	V	V	V			
Liao, Wei-Lun	Director	51-60	Male	Republic of China	V	V	V			
Liao, Shou-Yen	Director	51-60	Male	Republic of China	V	V	V			
Liu, Yi-Cheng	Independent Director	51-60	Male	Republic of China	V	V	V	V	V	V
Gan, Feng-Yuan	Independent Director	51-60	Male	Republic of China	V	V	V	V	V	V
Wang, Wei	Independent Director	61-70	Male	Republic of China	V	V	V	V	V	V

Board of Directors Operations

The Board of Directors convenes meetings at least once every quarter as required, to discuss various operational matters of the Company, and resolutions are announced in accordance with the law. If a motion involves a conflict of interest with a director or their representative legal entity, the internal conflict of interest avoidance system, in accordance with the board's procedural rules, prohibits them from participating in the discussion and voting. In 2022, the Board of Directors (Note) met six times. The proceedings of the relevant meetings and the avoidance of interest motions have been published in the Company's annual report.

Title	Name	Actual Occurence (Listing) Situation			Note
		Actual	Commission	Attendance Rate	
Chairman	Mr. Li, Yun-Li	7	-	100%	
Institutional Director	SVIC No. 32 New Technology Business Investment L.L.P.	7	-	100%	Legal representative: Kim Jong Ho
Institutional Director	Epistar Corp.	7	-	100%	Legal Representative: Hung, Li-Chen
Institutional Director	Kangli Investment Co., Ltd.	7	-	100%	Legal Representative: Liao, Wei-Lun
Institutional Director	Lite-On Technology Corp.	6	-	86%	Legal Representative: Liao, Shou-Yen
Independent Director	Liu, Yi-Cheng	7	-	100%	
Independent Director	Gan, Feng-Yuan	7	-	100%	
Independent Director	Wang, Wei	7	-	100%	
Note: The timeframe for this data disclosure is in line with the annual report as of March 2023, occurring 7 times in total, with 6 instances in 2022					

Strategies and practices to address the impact of major sustainability issues

In the process of policy formulation, planning, and implementation across various operational issues, it is imperative to regularly or irregularly report or discuss relevant procedures with the Board of Directors. This includes references to Article 3 of the 'Procedure for Board of Directors Meetings of Public Companies,' Article 25, and Rule 35 of the Corporate Governance Best Practice Principles, among others, which specify the types of motions and resolutions passed. Furthermore, in accordance with Article 9 of the Sustainable Development Best Practice Principles, there should be regular reporting to the Board of Directors regarding proposals, implementations of sustainability policies, systems, related management approaches, and specific promotion plans. According to the requirements of the 'Integrity Management Best Practice' and the 'Procedures for Ethical Management and Guidelines for Conduct,' the development of integrity-based business policies and prevention programs, as well as the reporting of major violations and significant losses resulting from investigations, is mandatory for submission to the Board of Directors. Each proposal needs to be approved by the Board of Directors as a discussion item in accordance with relevant laws or internal procedures. If a proposal does not require board approval, it is presented as a report item. After being approved by senior management, the relevant proposals are included in the agenda of the most recent board meeting by the secretariat. The Board of Directors will make decisions on the discussion items and may raise questions or provide suggestions regarding the report items.

Starting in 2022, greenhouse gas inventory and sustainability reports will also be included in the regular reporting to the Board of Directors. Additionally, climate-related financial disclosure (TCFD) projects will be planned to enhance climate strategy and risk management and will be incorporated into the regular Board of Directors' proposals. Major resolutions of the Board of Directors for 2022 have been published in the Company's annual report.

Function Committee Operation

Audit Committee	Compensation Committee
• **Composed of 3 independent directors** • **Established since 2021** • **In 2022, 7 meetings were held, and the attendance rate was 100%. For detailed implementation, please refer to the annual report.** **Annual Work Highlights:** - We review the financial statements and regularly communicate with certified public accountants regarding the results of the audit or review of the financial statements and any related regulatory changes. - Evaluate the effectiveness of internal control systems and formulate annual audit plans. - Regularly communicate with the chief internal auditor to report the results in accordance with the annual audit plan and provide suggestions for improvement. - Review the capital budgets and important investment proposals of each subsidiary. - Deliberate on significant assets, derivatives, loans to others, endorsements, guarantees, and review relevant regulation. - Review the hiring or dismissal of certified public accountants and their compensation, and evaluate their state of independence. - Regulatory compliance.	• **Composed of 3 independent directors** • **Established since 2021** • **In 2022, 4 meetings were held, and the attendance rate was 100%. For detailed implementation, please refer to the annual report.** **Annual Work Highlights:** - To establish and periodically review the performance evaluation criteria for the Company's directors and managers - Assist the Board of Directors in implementing and evaluating the Company's overall compensation and benefits policies, including the remuneration of directors and managers. **Directors and Manager Compensation**: - The compensation for directors, the general manager, and deputy general managers is distributed in accordance with the "Director and Manager Compensation and Remuneration Regulations" approved by the Compensation Committee and the Board of Directors. For details of the implementation, please refer to the annual report.

Board of Directors and Functional Committee Performance Evaluation

To implement corporate governance and improve the functionality of the Board of Directors, we will set performance targets to improve their efficiency, establish the 'Rules for the Performance Evaluation of the Board of Directors,' and conduct annual self-evaluations of the Board of Directors and Functional Committees.   In 2022, the overall self-evaluation of the Board of Directors and the Functional Committees (including the Audit Committee and Remuneration Committee) and the self-assessment of individual Board of Directors members were conducted.   The assessment results were deemed 'excellent,' and the Board of Directors reported the assessment results in March 2023 For details regarding the performance evaluation cycle, evaluation period, evaluation scope, evaluation method, and evaluation content, please refer to our annual report

Besides the annual self-evaluation, an external professional body is expected to conduct a Board of Directors evaluation once every three years.

Internal Audit

PlayNitride has established an internal control system in accordance with the 'Regulations Governing Establishment of Internal Control Systems by Public Companies' and relevant laws and regulations.   An independent audit office has been established under the Board of Directors to assist in reviewing and identifying deficiencies within the internal control system.   This forms the foundation for evaluating and enhancing our internal control system to ensure operational effectiveness, efficiency, reliable reporting, timeliness, transparency, and compliance with relevant regulations.   In doing so, we promote the sound operation of the company.

The internal auditor formulates an annual audit plan based on the results of risk assessments and regularly or irregularly reports to the Board of Directors for routine and project audits.   The Company's internal auditor conducts audits in accordance with the annual audit plan.   After the audit results are approved by the chairman, each independent director receives monthly updates, and a summary audit report is submitted to the audit committee on a quarterly basis.   The audit committee also regularly assesses the internal control system, internal audit staff, and their work to ensure the effectiveness of the internal control system.   If the internal auditor identifies a major violation or significant damage to the company, they will promptly report it to the Board of Directors and the Audit Committee.   In 2022, there were no significant deficiencies reported.

4-2 Integrity Management

Integrity Management

Guided by the core values of integrity, innovation, and the pursuit of excellence, PlayNitride upholds the spirit of integrity management and are progressively implementing rules, educational advocacy, and a complaint mechanism.

In 2022, the Board of Directors and management referenced Taiwan Stock Exchange's 'Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies' and 'Guidelines for the Adoption of Codes of Ethical Conduct for TWSE/GTSM Listed Companies' to formulate Procedures for Ethical Management, Guidelines for Conduct, Code of Ethics, and Ethical Code of Conduct. These documents encompass relevant regulations that are enforced in internal management and external business activities. Specialized units have been designated to provide regular reports to the Board of Directors on matters related to ethical compliance.

Integrity management principles encompass various aspects, including anti-corruption and anti-bribery measures, conflict of interest policies, fair dealing, insider trading prevention, respect for intellectual property, legal compliance, responsible operations, violation reporting systems, and whistleblowing privacy protection mechanisms. The Board of Directors adopted and implemented the relevant code of conduct in 2022. All employees have completed the necessary education and training, including new initiatives. Additionally, we have disseminated information through the company's internal system announcements and official communications to ensure that all employees understand the company's commitment to integrity management, prevention programs, and the consequences of violating integrity standards. Starting in 2023, we are launching online training and testing to further enhance our integrity management efforts and continually improve the relevant management mechanisms. The Company's business partners have successfully completed the Company's 'Supplier Management Procedures' audit, and the relevant integrity management clauses are outlined in the contract.

There is a dedicated staff member responsible for receiving complaints, and no integrity violations were reported in 2022.

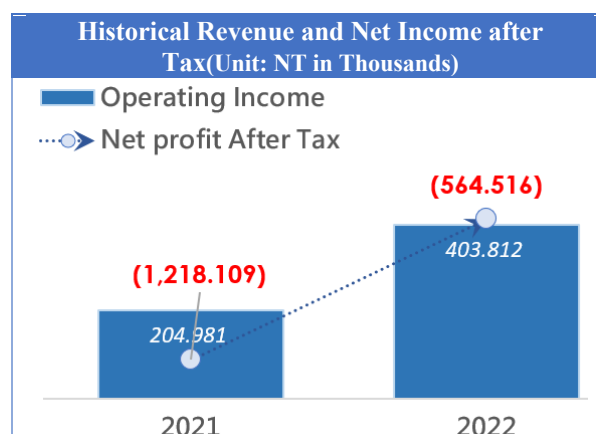> * Appeal channel: Whistleblower@Playnitride.com

Legal Compliance (Legal Affairs)

In the operation of PlayNitride, we adhere to legal compliance in various aspects including corporate governance, economics, environment, and society. All departmental communications sent to regulatory authorities are subject to review by legal personnel to ensure compliance with domestic and international regulations and guidelines. Furthermore, the Legal Office regularly collects the latest legal compliance requirements, providing relevant department supervisors with confirmation of the compliance of their operational processes. This ensures that all employees uphold business ethics, demonstrate professionalism, and, after reviewing relevant operational outcomes, there were no government penalty incidents in 2022.

4-3　Operational Performance

PlayNitride is currently in the R&D innovation stage and requires significant investments in capital and R&D expenses, which is why it is still operating at a loss In 2022, operating revenue reached NT$403,812,000, marking a significant increase of 97.00% compared to 2021.　This growth can be primarily attributed to the successful development of several key products, resulting in increased revenue and reduced post-tax losses.

R&D expenses decreased by 24.28% in 2022 compared to 2021, primarily due to the recognition of remuneration expenses paid to employees in 2021.　R&D expenses continue to be the most significant operating expenses.

Historical Revenue and Net Income after Tax(Unit: NT in Thousands)

■ Operating Income
⋯◆➤ Net profit After Tax

(564.516)

(1,218.109)

403.812

204.981

2021　　2022

In 2023, we will continue to drive market growth and expand the distribution of MicroLED displays.　By offering an innovative Turn-Key Solution business model, we will collaborate with partners to expand their capacity, catering to a wide range of customer needs. Additionally, we will persist in scaling MicroLED chip sizes and enhancing efficiency to reduce costs while maintaining display performance.　In addition to meeting product application specifications, MicroLED can also serve as a significant factor in achieving energy savings for end products, offering an opportunity for operational growth in the context of addressing climate change.

Unit: NT in Thousands

Items	2021	2022
Operating Income	204,981	403,812
Cost of Revenue	389,047	441,269
Gross Profit	(184,066)	(37,457)
Sales Expenses	33,699	30,769
Management Expenses	248,442	136,127
Research and Development Expenses	747,997	566,398
Operating Expenses	1,030,138	733,294
Operating Net Loss	(1,214,204)	(770,751)
Non-operating Revenue (Expenditures)	(3,905)	206,235
Current Period Net Profit	(1,218,109)	(564,516)
Net Amount of Other Comprehensive Income After Tax	(18,830)	(20,064)
Comprehensive Income	(1,236,939)	(584,580)
Earnings per Share	(14.14)	(5.47)
GRI Related Disclosure Information		
DisclosureItems	2021	2022
Employee Salary and Benefits	780,818	404,212
Interest and Dividend Expenses	3,492	878
Investment Grants, R&D Grants	5,056	10,500
R&D Expenses as a Percentage of Revenue	364.91%	140.26%

4-4 Tax Management

Tax Policy

The financial accounting office is the tax management unit, responsible for related tax operations and tax risk management, etc. Regularly report tax management practices and results to management. In response to the international trend of tax governance, we have implemented the following tax policies to ensure effective tax management and the smooth operation of our tax processes.

Tax Policy

- •1. Comply with tax regulations and their legislative spirit, report and pay tax liabilities according to the law, and fulfill our responsibilities as taxpayers.
- •2. In our daily business activities and major business decisions, we consider tax risks and tax implications.
- •3. Maintain open and honest communication with tax authorities and establish effective channels of communication to ensure efficient cooperation between both parties.
- •4. The disclosure of tax information for financial reporting is subject to relevant regulations and guidelines.

Tax Risk Mechanism

- •1. Proactively communicate with tax authorities
- •2. Outsourcing or consulting external professional advisors when necessary to ensure proper compliance with tax regulations and reporting obligations.
- •3. Continue to cultivate tax talents and strengthen tax professional capabilities.
- •4. Report tax management practices and results to management so that the management team can fully grasp the implementation of the Company's tax policies.

Tax Status

Our company is incorporated in the Cayman Islands, and local companies are not subject to for-profit income tax. In addition, the corporate income tax rate for branches and subsidiaries in Taiwan was 20% in both 2022 and 2021. However, in 2022, the pre-tax surplus resulted in a net loss, and no taxes were required to be paid due to the absence of a taxable amount.

4-5 Information Security

Cybersecurity Policy

To ensure information security and the continuous operation of information systems, PlayNitride has established an information security management policy. To ensure the continuous operation of critical information systems during critical crises or disasters, we are continuously improving our information architecture and implementing a mobile operations management platform for real-time monitoring. We are also implementing an information security system and strengthening the information security protection structure. Through the development and integration of information systems, we establish an effective management system to ensure the accuracy of financial accounting and the delivery and transaction history of production processes. Major systems are subjected to regular disaster recovery drills every year to improve the skills of our information personnel.

|	
Compliance with Laws and Regulations	Establish a system in compliance with international cybersecurity and overseas regulatory requirements in English.
Technology Application	Build information monitoring systems and information protection systems, and implement measures for information security management.
Information Security Governance	Build a multi-layered security framework and refine management with automation.

Adopt a systematic approach to determine risk in response to vulnerabilities or threats to information assets, implement countermeasures or controls based on the assessment results to reduce the risk of damage to information assets, and develop risk assessment practices to ensure effective implementation of information security management policies.

In addition to regular internal reviews, we also conduct security ratings and vulnerability scans by third parties from time to time to assess network assets, network applications, and human risk factors and promptly address information risks. Furthermore, we provide information security training to all colleagues to enhance information security awareness and mitigate potential risks

Information Security Management Organization

A management meeting is held at least once a year, and temporary meetings may be held if necessary. In December 2022, a meeting was held to review the annual information security implementation results and the next annual plan.

1. Information Security Management Organizational Structure

PLAYNITRIDE
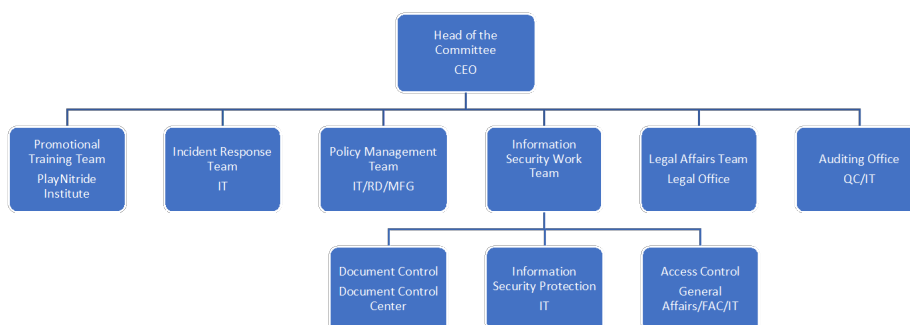
Information Security Committee Member Responsibilities

Director Member

- The CEO is currently responsible for making decisions on key issues related to information security management, including changes to information security organizations, major strategic changes in information security management, information security critical personnel changes, and recognition of acceptable risk levels.

Information Security Standing Committee

- The committee members are appointed by the management meeting supervisor and the IT department supervisor. They are directly accountable to the Information Security Officer and carry out tasks delegated by the Information Security Officer. They are also responsible for command and coordination during disaster events.

Various Task Groups

- According to the division of professional responsibilities within each committee, each group is responsible for the security tasks assigned to them, as illustrated in the organization chart on the preceding page.

Information Security Management Items

Information Security Management Items	Implementation Measures
Entity Management	• Access control management for the company's main entrance, production line, machine room, warehouse, etc. • Unauthorized devices are prohibited from entering the FAB. • Control access to devices such as computer cameras, USB ports, network ports, and more.
System Management	• Plan different network segments by floor and purpose, and strictly control the data exchange of each network segment. • Strictly control system permissions, apply via electronic form.
Software Protection	• Install antivirus software and run scheduled scans daily. • Cross-network virus scanning and intrusion detection via firewall. • Perform regular system vulnerability scans.
Hardware Protection	• Establish an environmental detection system to detect disasters promptly and prevent the expansion of disasters. • Establish a system remote backup mechanism.

Specific Management Plan

Information security management includes regular internal reviews as well as periodic third-party information security health checks to adjust and enhance security-related management programs. At this stage, our primary goal is to enhance the Company's information structure and security-related regulations, conducting regular security assessments and risk scanning. Moving forward, we will further reinforce our security mechanisms. Furthermore, given that security insurance is still an emerging form of insurance, which involves security testing levels, claims forensics agencies, non-claims conditions, and other related supporting considerations, the decision to purchase security insurance is still under assessment. In 2022, there were no cybersecurity attacks that impacted the company's operations.
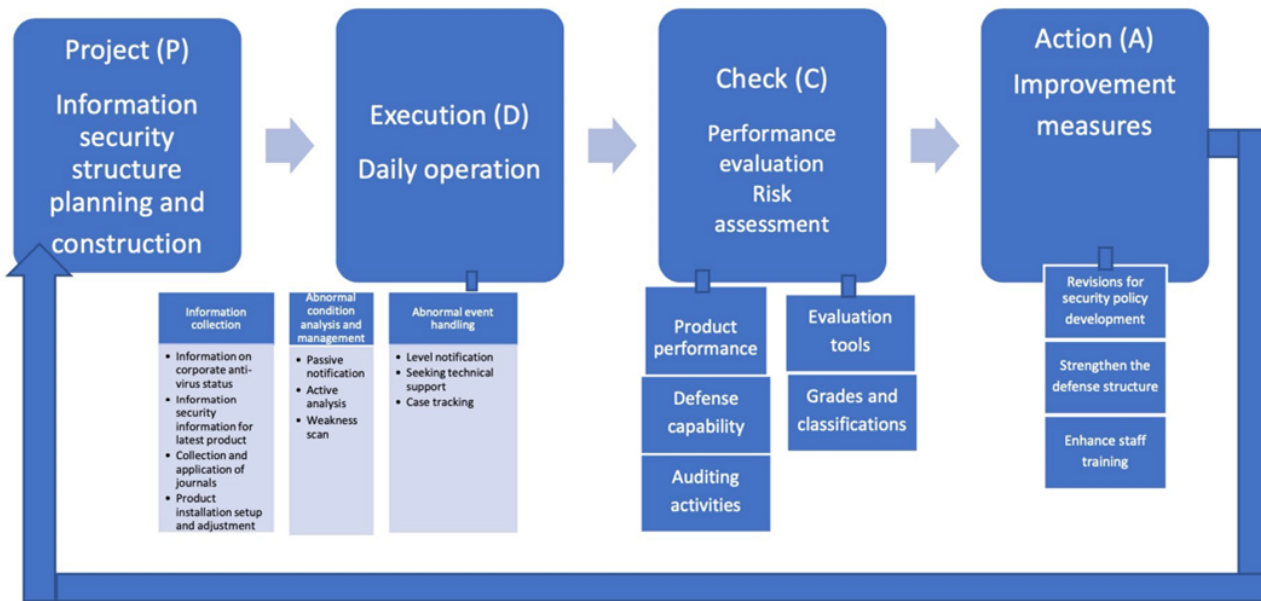
Cybersecurity Education and Training

To enhance the information security awareness of all colleagues, we will organize information security regulations courses for new staff every six months and provide information security education courses for all employees. Additionally, we will periodically conduct information security promotions to continually update and reinforce the security awareness of all employees. Additionally, supervisors and personnel responsible for information security will receive annual professional training in information security.

Category	Training Content	2022 Implementation Status
Information Security Specialist	Information security professional course training or information security competency training	1 person should receive training with a completion rate of 100%.
Information personnel other than dedicated personnel	Information security professional course training	2 people should receive training with a completion rate of 100%.
New Staff	Information security standards	73 people should receive training with a completion rate of 100%.
General Users (Including Supervisors)	Strengthen Security Awareness	139 people were supposed to receive training, with a completion rate of 88.5%
	Irregular Security Bulletins	Promoting the identification and prevention of common phishing attacks

4-6 Climate-related Financial Disclosure

Climate change has emerged as one of the most pressing global challenges. Every industry must confront the risks and opportunities it presents. By analyzing physical risks, transformational risks, and opportunities associated with climate change, we can formulate long-term strategies and allocate resources for a transition into a low-carbon economy. PlayNitride has completed its 2022 greenhouse gas inventory, which has been third-party verified. In 2023, we plan to reference the framework of the Task Force on Climate-Related Financial Disclosures (TCFD). Under the supervision and with input from the Board of Directors and senior management, we identify and manage climate-related risks, formulate short-term, medium-term, and long-term strategies, and gradually implement these climate strategies through goal and target management to enhance corporate resilience.

Certificate of Greenhouse Gas Emissions Verification	
Chinese Version	**English Version**

5. Environmental Sustainability

5-1 Greenhouse Gas Emissions Management

Greenhouse Gas Management

Climate change is a common challenge for global enterprises striving for sustainable development. PlayNitride actively implements energy-saving, carbon reduction, and environmental protection measures in its operations to minimize its environmental impact.

Since 2021, we have followed the ISO 14064-1:2018 standard for greenhouse gas inventory operations. We have also introduced internal employee training courses, conducted extensive analysis of significant indirect emissions, developed coefficients for relevant emission sources, collected activity data, carried out internal verification processes, documented the greenhouse gas inventory procedures, and established a comprehensive mechanism for greenhouse gas inventory, including a total emission inventory and greenhouse gas inventory report.　The Greenhouse Gas Inventory Report 2022 was completed in May 2023 and the external verification by a third-party notary unit was completed in June.　As PlayNitride is in its growth stage, with expanding business and production each year, we will continue to be assessed to ensure compliance with the reduction intensity targets set for the base year of 2022 or 2023.

Greenhouse Gas Emissions Data

In 2022, the total greenhouse gas emissions (Scope 1,2,3) amounted to 5,323.43 tonnes - CO_2 equivalent (tonnes CO_2e), an increase of 94.89 tonnes CO_2e (+1.81%) compared to 2021.　The emission density (tonnes CO_2e /million revenue) was 13.18, a decrease of 12.33 compared to 2021.　Greenhouse gas emissions mainly result from indirect energy emissions due to electricity use, accounting for 66.80% of the total emissions.

Direct greenhouse gas emissions in 2022 (Scope 1; Category 1) totaled 972.28 tonnes CO_2e, which increased by 65.50 tonnes CO_2e (+7.2%) compared to 2021.　The key difference lies in process emissions, which increased by 221.00 tonnes CO_2e from 2021 due to changes in the product process, resulting in an approximate 30% increase in organic solvent consumption.　In 2023, we plan to optimize related processes to evaluate source reduction of organic solvents to reduce consumption and meet emission reduction targets.

Greenhouse Gas Emissions (by scope) (unit: tonnes CO_2e)

Historical Greenhouse Gas (GHG) Emissions Intensity (tonnes CO_2e per sales) - GHG Protocol

Due to the fact that the primary source of greenhouse gas emissions for PlayNitride comes from electricity usage, we have been continuously promoting related energy-saving and carbon reduction initiatives.　In 2022, the indirect greenhouse gas emissions from imported energy sources (Scope 2; Category 2) amounted to 3,556.31 tonnes CO_2e, showing a slight increase of 13.47 tonnes CO_2e (+0.38%) compared to 2021.　This increase, in contrast to the substantial growth in revenue, highlights the carbon reduction benefits achieved through our energy-saving solutions.
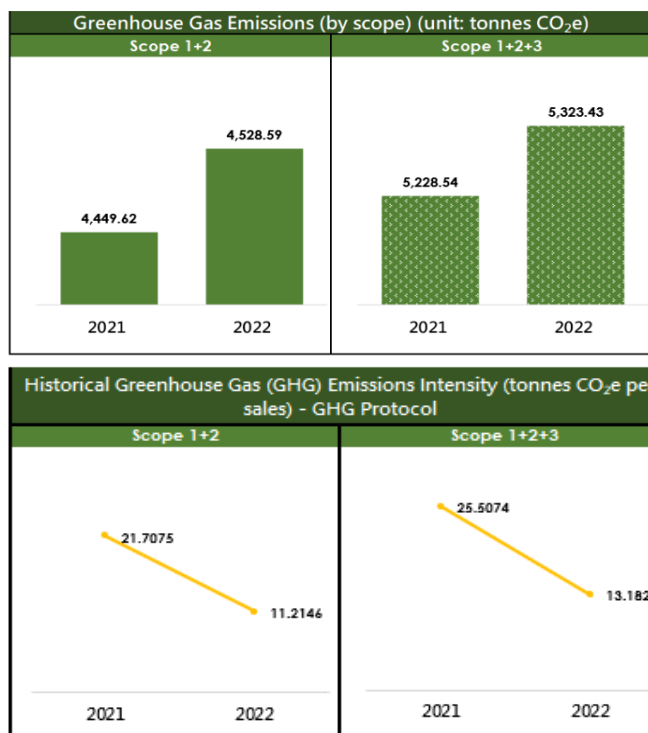
2022 Greenhouse Gas Emissions

Categories of Greenhouse Gas	ISO 14064 Classification	tonnes CO_2e	Proportion	Emission Sources
Scope 1 Direct Greenhouse Gas Emissions	Category 1	972.28	18.27%	It is mainly derived from process emissions, wherein the emission items are PFCs, which is 492.00 tonnes CO_2e. Other non-process emissions include emergency generators, natural gas combustion equipment, fuels such as gasoline and diesel, and septic tanks and firefighting equipment.
Scope 2 Energy Input Indirect Greenhouse Gas Emissions	Category 2	3,556.31	66.80%	Indirect emissions from energy use.
Scope 3 Other Indirect Emissions	Category 4	794.84	14.93%	All are Category 4: Greenhouse gas emissions from the products used. Note: Since categories 3, 5, 6 are not identified as significant indirect greenhouse gas emissions, there is currently no quantization of its emissions information.
Total		5,323.43	100.00%	

Note 1. The scope of the investigation uses operational control law, including the boundary of PlayNitride Inc.'s Zhunan Plant and Taipei Xindian, Taipei Zhonghe, Tai Yuen, Tainan Office, and other five locations.

Note 2. Greenhouse gas inventory is conducted using ISO 14064-1:2018 version

Note 3. The emission factor for electricity uses the emissions factor published by the Bureau of Energy. For the year 2022, the emissions factor is 0.495 tonnes CO_2e/kWh, as announced by the Bureau of Energy on June 21, 2023.

Note 4. Scope 1 - Emission factor source is based on EPD's Greenhouse Gas Emission Factor Management Table 6.0.4

Note 5. The Global Warming Potential (GWP) value of each greenhouse gas is based on the IPCC's 6th Assessment Report (AR6), published in 2021.

Direct Greenhouse Gas Emissions

Direct Greenhouse Gas Emissions (GHG emissions by type) (Unit: tons CO_2e)
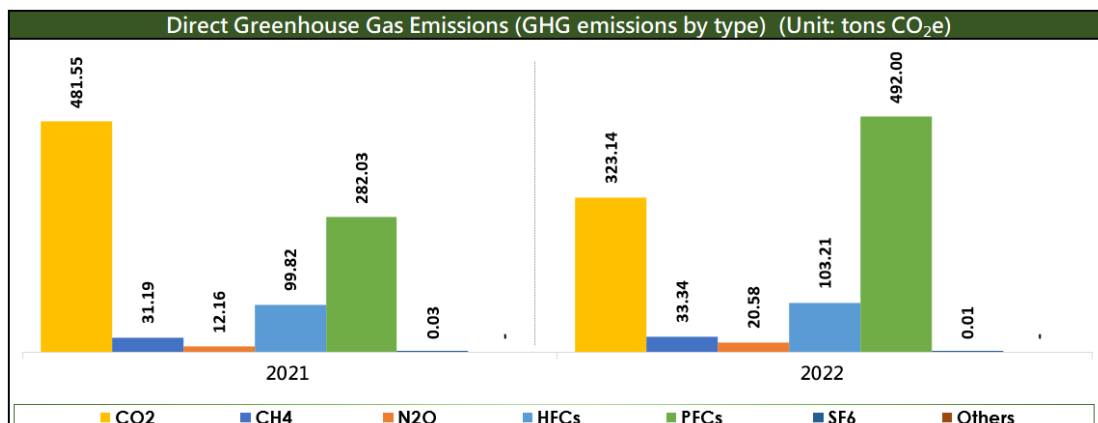
Scope 1, Scope 2 and Scope 3 Greenhouse Gas Emissions and Intensity

Greenhouse Gas Emissions (GHG emissions by scope) (Unit: tons CO$_2$e)

Scope 1	Scope 2	Scope 3
2021: 906.78	2021: 3,542.84	2021: 778.92
2022: 972.28	2022: 3,556.31	2022: 794.84

Historical Greenhouse Gas (GHG) Emissions Intensity (tonnes CO$_2$e per sales) - GHG Protocol

Scope 1	Scope 2	Scope 3
2021: 4.4237	2021: 17.2837	2021: 3.8000
2022: 2.4078	2022: 8.8068	2022: 1.9683
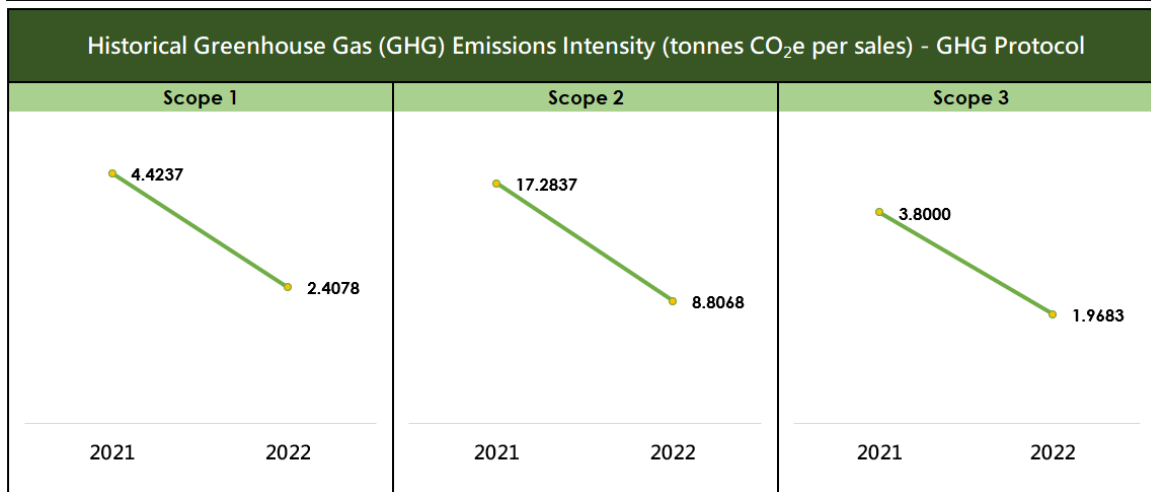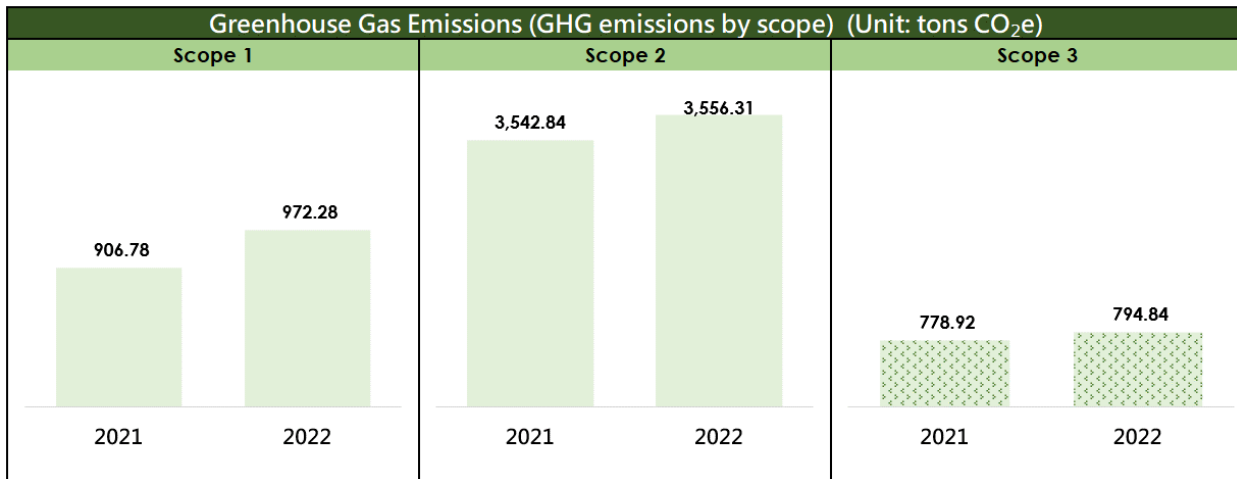
5-2 Energy Management

Energy Policy

PlayNitride's energy consumption is mainly from purchased electricity, accounting for 80.25%, followed by 18.84% from natural gas.   Therefore the energy efficiency of electricity and natural gas is a priority.

PlayNitride's plant in Zhunan Science Park is leased to Epistar, and all building infrastructure is managed and provided by Epistar.   The primary energy consumption is electricity used in production lines, warehouses, offices and other spaces.   Natural gas is used primarily for VOCs combustion equipment and the remainder, such as emergency generator equipment, is owned by Epistar.   In addition, in response to reducing carbon emissions and air pollution, all PlayNitride's public vehicles are electric.

Total Energy Consumption

Total energy consumption in 2022 was 32,227.88 GJ, a decrease of 7.92% from 2021, and energy intensity (GJ/million revenue) was 79.81, a decrease of 53.26% from the previous year.

Total Energy Consumption (Unit: GJ)			Energy Consumption Intensity		
Year	2021	2022	Year	2021	2022
Total	35,000.50	32,227.88	Total	170.7500	79.8091
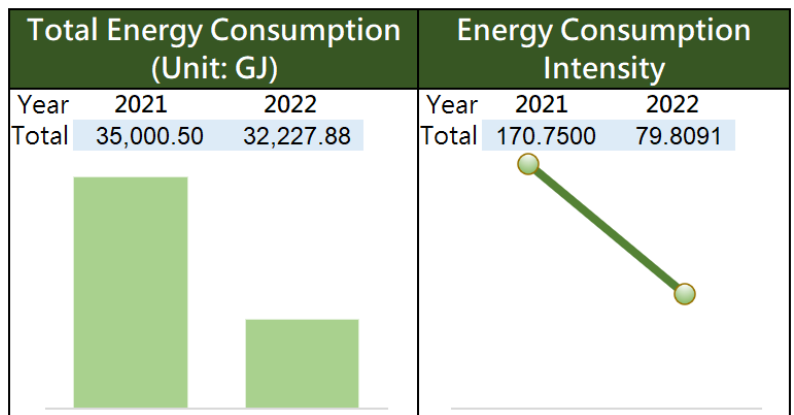
Total Energy Consumption (Unit: GJ)		
Energy Use Items	**2021**	**2022**
Liquefied Natural Gas (LNG)	9,441.51	6,070.14
Automotive Gasoline	152.45	293.98
Purchased Electricity	25,406.54	25,863.76
Total	__35,000.50__	__32,227.88__

Note 1.   Unit conversion 1 kWh (degrees) = 860 Kcal, 1 Kcal = 4.186798 J, hence 1 kWh (degrees) = 3.6×10^{-3} GJ.

Note 2.   Power consumption information is derived from the installed meter statistics for Epistar's power transfer

Note 3.   Energy Intensity = Total Energy Consumption (GJ) /Million-dollar Revenue

Total Energy Consumption (Raw Data)			
Energy Use Items	**Unit**	**2021**	**2022**
Liquefied Natural Gas (LNG)	m^3	250,610.67	161,122.91
Automotive Gasoline	L	4,669.00	9,003.70
Purchased Electricity	kWh (Degrees)	7,057,451.50	7,184,456.60

Note: All PlayNitride's public cars are electric vehicles; gasoline is provided through private car public subsidies.

Energy Management

We prioritize energy efficiency in our operations. In 2021, we implemented a system to calculate and provide accurate consumption data for high-energy-consuming systems, such as ice water chillers and compressed air machines (Compression Air Dryer, CDA) within our factory. This led to significant improvements in electricity consumption in the latter half of 2022. We continue to monitor and analyze energy usage and promote energy-saving solutions. These measures include setting the appropriate temperature for office air conditioning, conducting regular maintenance on air conditioning equipment to ensure high efficiency, and replacing traditional lamps with LED lighting, among others. The total power consumption of the original set was reduced by 20% in 2022 due to a significant increase in revenue and an increase in new equipment. As a result, the power consumption of 7,184,456.60 degrees was increased by 1.80% from 2021.

Because it is currently a leased plant, there is no space to install renewable energy devices. To improve the power infrastructure, we need to continue to discuss and plan with Epistar. In the future, we will plan to purchase renewable energy or build renewable energy generation devices depending on the development strategy of the operation. We are also actively working on improving the energy efficiency of high-energy consumption systems (chilled water, CDA).

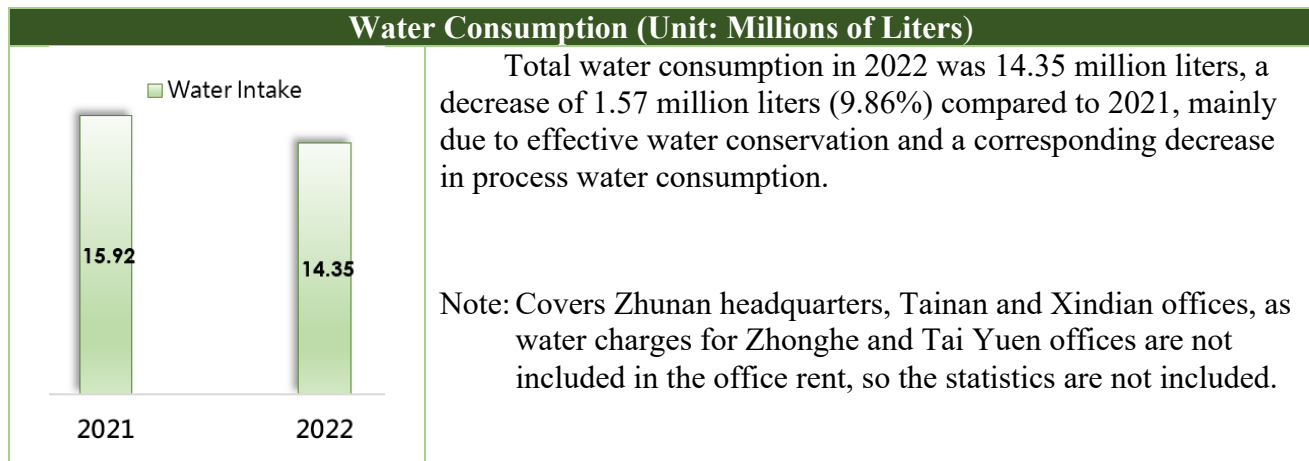| Energy Saving Items	Energy Consumption (kWh)	Energy Saving (GJ)
The office air conditioning temperature has been adjusted to 26 degrees	**2,265.20**	**8.15**
Change to T8 LED lights for office lighting	130	0.05

5-3 Water Resource Management

Water Resource Management

The main production facilities for PlayNitride are located in Zhunan Science Park, which is not a high or very high risk area according to the WRI water pressure assessment map.   PlayNitride's plant is leased to Epistar, and all building infrastructure (Such as electricity, water resources) is managed and provided by Epistar.   In recent years, Taiwan's drought intervals have shortened, and in the future, we will also modify the production line equipment and process parameters to enhance process water efficiency and conserve water resources.

PlayNitride sources its water supply from tap water, and water resource usage is primarily divided into process water and domestic water, with a ratio of approximately 8:2.   The primary water source for our manufacturing process is purified water.   We employ a purified water system to treat tap water and produce purified water, which is used to clean residual chemicals from chip surfaces.   In 2022, our goal was to reduce pure water consumption during the process.   We successfully decreased water consumption per COC from 1.87 tons in 2021 to 1.40 tons, demonstrating the effectiveness of our water conservation efforts.

Water Consumption (Unit: Millions of Liters)	
□ Water Intake 15.92 14.35 2021 2022	Total water consumption in 2022 was 14.35 million liters, a decrease of 1.57 million liters (9.86%) compared to 2021, mainly due to effective water conservation and a corresponding decrease in process water consumption. Note: Covers Zhunan headquarters, Tainan and Xindian offices, as water charges for Zhonghe and Tai Yuen offices are not included in the office rent, so the statistics are not included.

Process Water Reduction Measures

Optimized Chip Cleaning Process	
Improvement Method	The original cleaning process for the chips involved soaking them in batch tanks, which required a large amount of purified water and frequent replacements to achieve the desired cleaning effect. After an evaluation, it was decided to replace the soaking process with a high-pressure cleaning machine, which has been proven to deliver superior cleaning results.
Effectiveness	After testing the cleaning process for a single batch of chips, the optimized process can reduce the original water usage by 96.9%.

Improvements to Wastewater Treatment

The plant's wastewater treatment and recycling system is managed by Epistar to ensure that the wastewater discharge meets the standards and increases the number of water recycling.   Recycled water is mainly used for cooling towers and toilets' secondary water.   We are committed to enhancing source wastewater management to minimize our environmental impact.   In 2022, we will install an abnormal conductivity warning system in the wastewater discharge pipeline.   If the conductivity of the wastewater discharge is higher than the set value, the monitoring system will promptly alert our staff to take necessary action.

5-4 Waste Management

Waste Management (Workplace Safety)

We are committed to protecting the environment by focusing on process improvement, reducing raw material use, and promoting waste recycling.   In compliance with waste cleaning regulations, our waste management practices have obtained ISO 14001:2015 certification and continue to operate in accordance with the management system.   In addition to the waste cleaning plan approved by the competent authority, related businesses also report the quantity of waste output, storage, removal, and disposal online in accordance with waste cleaning regulations and EPA regulations.

Total Waste Reduction

In 2022, the total weight of waste output was 112.5 tonnes, of which 87.62 tonnes of hazardous waste and 24.88 tonnes of non-hazardous waste.

Of the 87.62 tonnes of hazardous waste, 84.16 tonnes (96.05%) is non-recyclable waste and the remaining 3.46 tonnes (3.95%) is recyclable waste. The disposal of hazardous industrial waste, including general liquid waste, empty barrels/bottles, substrate scraps, etc., is entrusted to manufacturers qualified by the EPD to remove and manage the waste in accordance with the waste cleaning plan.   To sustain our efforts in reducing waste production through process improvements, PlayNitride has established unit waste reduction targets for 2022.   These targets include a unit product waste generation of 21.44 kilograms, a unit product waste solvent generation of 13.20 kilograms, actual achievement of unit product waste generation at 19.67 kilograms, and a unit product waste solvent generation of 13.85 kilograms.   We will continue to work towards waste reduction and resource conservation in the future.   By analyzing unit waste and solvent generation, we assess and develop feasible reduction plans to minimize waste generation and alleviate environmental impact.

Amount of Waste Generated (by Disposal Method) (Unit: tonnes)			
Recovery/Disposal	Method	2021	2022
Hazardous Waste			
Recycling and Reuse	Recycling	6.66	3.46
Direct Disposal	Incineration (including energy recovery)	55.98	84.16
Total Amount		62.64	87.62
Non-hazardous Waste			
Recycling and Reuse	Other Recycling Operations	6.31	6.88
Direct Disposal	Incineration (including energy recovery)	18	18
Total Amount		24.31	24.88

Hazardous Industrial Waste Generation in 2022		
Unit: Tonnes	2021	2022
Solvent Waste	53.66	79.17
Empty Bottle Waste	6.66	3.46
Other Type of Waste	2.32	4.99

Waste Reduction Measures

Organic Solvent Reduction	To improve process efficiency and reduce the usage of organic solvents (photoresist stripper), we have initially eliminated one step in the photoresist removal process station. Furthermore, for the remaining thin photoresist on the chip surface after the lift-off process, we have switched to dry removal, which has been validated to achieve the same removal effectiveness while reducing the usage of photoresist stripper by 13.3%

5-5 Air Pollution Management

Air Pollution Management

PlayNitride has obtained ISO 14001:2015 environmental management system certification.   We adhere to the management system to enforce operational norms for preventing air pollutants, oversee the management and control equipment disposal, and consistently operate in accordance with the management system.   Related businesses are also reported quarterly through the network system according to EPD's air pollution control law and fixed source operating license.

Types of Exhaust Emissions and Prevention Measures

Exhaust gases from our operations can be broadly categorized into two types: general exhaust gas and organic exhaust gas.   General exhaust gas is primarily generated by the heat produced by our machinery and is released directly into the atmosphere, potentially contributing to air pollution.   On the other hand, organic exhaust gas consists mainly of volatile organic compounds (VOCs) generated by the use of organic solvents in our machining processes.   To control VOCs emissions, we utilize a zeolite rotor system for adsorption combustion or an activated carbon adsorption system with a fluidized bed.   Any remaining gases are then reintroduced into the atmosphere.   Our processes and emissions are conducted in strict compliance with the requirements outlined in the operating permit for stationary sources.

In addition, as our production capacity increases, we are continuously optimizing the treatment of the associated exhaust gases from our processes.   For example, we are addressing high concentrations of VOCs at acetone sites, and in 2023 we will evaluate feasible source reduction methods at these sites to achieve emission reductions through process improvement standards.

Emissions Statistics

The permitted annual emission of VOCs is 1.69944 tons/year according to the stationary source operating permit, and the total emissions for the calendar year are reported regularly.

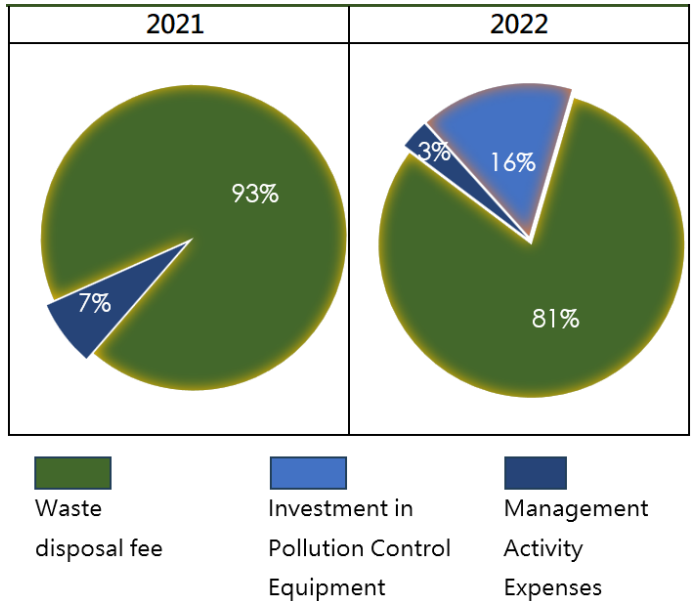| Unit: Tonnes	2021	2022
VOCs	0.44	0.771
Particulate Pollutants	0.093	0.202
Sulfur Oxides	1.333	2.933
Nitrogen Oxides	1.233	2.624

Source: Estimation of Emission Factor Reporting Based on Air Pollution Control Fees

## 5-6 Environmental Management

Environmental Management Investment

In 2022, the total investment in environmental management reached $5.86 million, representing a 1.27-fold increase compared to the previous year's $2.57 million, mainly attributable to revenue growth in 2022. As a result, waste disposal fees increased, and substantial investments were made in pollution prevention equipment, specifically aimed at improving the unloading process. This included enhancements in the treatment of BOE waste liquid (hydrofluoric acid wastewater), with a focus on enhancing personnel safety during the lifting and unloading process. Additionally, the waste liquid tank now features a conductivity alarm mechanism, enabling real-time monitoring of water quality and reducing the risk of excessive discharge, thereby minimizing environmental impact.

2021	2022
93% / 7%	3% / 16% / 81%

- Waste disposal fee
- Investment in Pollution Control Equipment
- Management Activity Expenses

Investment in Pollution Prevention Equipment — Hydrofluoric Acid Waste Liquid Treatment	
Before Improvement	Hydrofluoric acid is commonly used in cleaning and etching processes. Previously, the waste liquid was shipped to qualified manufacturers.
After Improvement	After transitioning to the waste liquid tank system in 2022, the drainage line can be directly connected to the chemical tank truck after clearing, resulting in a reduction in chemical waste in tonne barrels and a decrease in personnel operating frequency.

Historical Environmental Investment Costs (Unit: New Taiwan Dollars)

Year	Amount
2022	5,855,566
2021	2,574,959
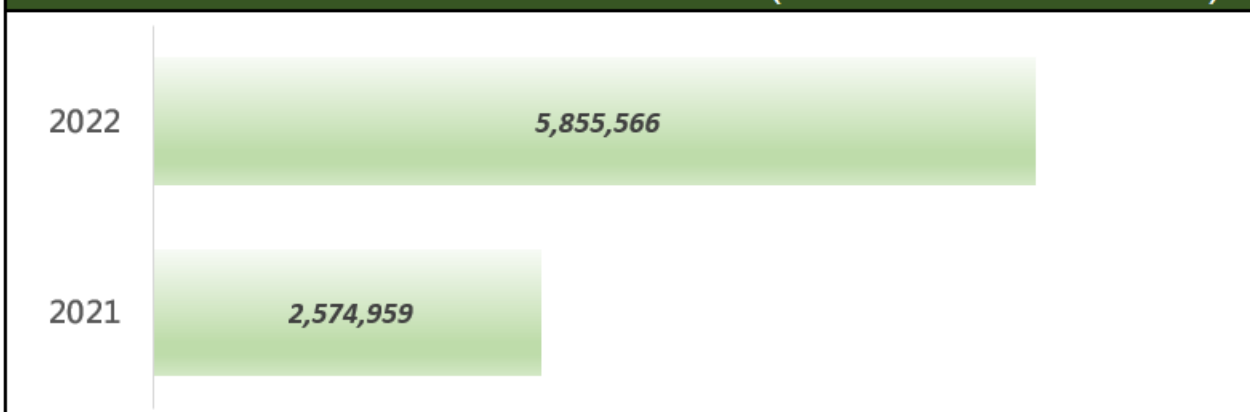
6. A Friendly Workplace

6-1 Talent Attraction and Retention
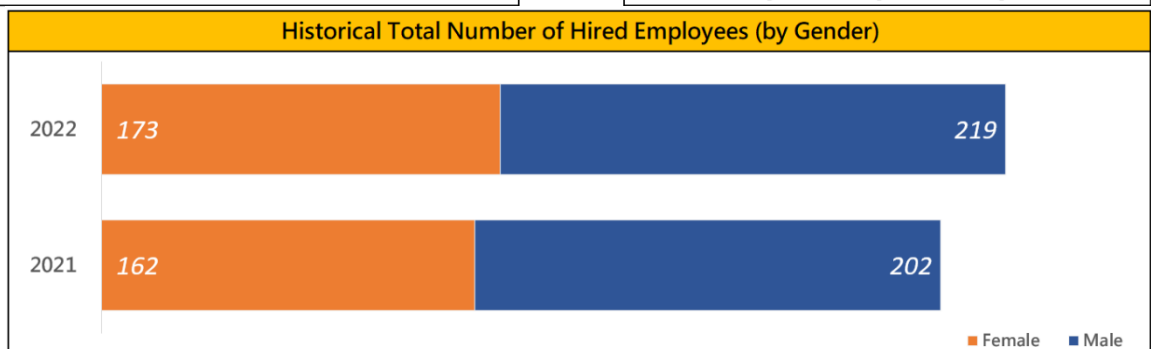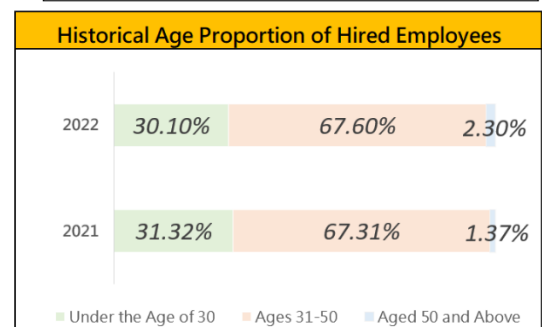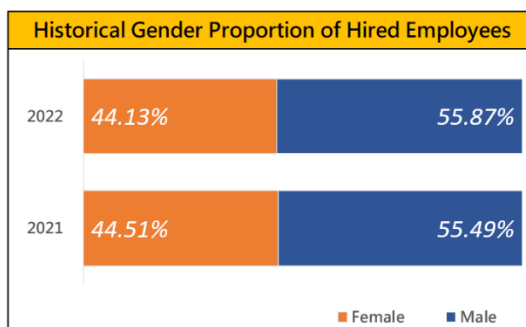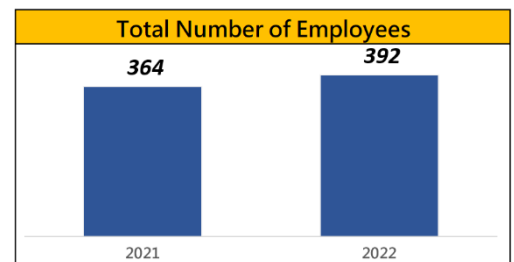
Talent Recruitment

PlayNitride's business philosophy is based on people.　As the company's technology and production capacity grow, we continue to recruit like-minded partners to join the company's ranks of integrity, innovation, and pursuit of excellence and pursue sustainable operations and growth.

In addition to using job boards and employee referrals to recruit employees, we also participate in campus recruiting and industry-academic collaborations at various schools to attract top students or recent graduates.　In accordance with laws and regulations and the policy of respecting human rights, we are committed to providing a diverse, equal, and non-discriminatory safe work environment, as well as diverse compensation and benefits and a humane system.　We look forward to talented people from all backgrounds joining us to pursue the dream of changing the world together.

In response to the demand for diversified talents and specialized professionals, four foreign nationals were hired by the end of 2022, all of whom are researchers.　The recruitment process for foreign employees is identical to that for local employees.　After being hired through this process, they are required to adhere to and sign relevant codes of conduct and confidentiality agreements.　They receive the same internal training as their local colleagues in similar positions and are provided with equal opportunities for learning and advancement

Human Resources Structure

At the end of 2022, the total number of employees at PlayNitride was 392, an increase of 28 people (7.69% growth) compared to the previous year.　The percentage of female employees is 44.13%.　The age distribution of employees is mainly between 31-50 years old, accounting for 67.60%.

Total Number of Employees

	2021	2022
	364	392

Historical Gender Proportion of Hired Employees

	Female	Male
2022	44.13%	55.87%
2021	44.51%	55.49%

Historical Age Proportion of Hired Employees

	Under the Age of 30	Ages 31-50	Aged 50 and Above
2022	30.10%	67.60%	2.30%
2021	31.32%	67.31%	1.37%

Historical Total Number of Hired Employees (by Gender)

	Female	Male
2022	173	219
2021	162	202

Historical Total Number of Hired Employees (by Age)

Year	Under the Age of 30	Ages 31-50	
2022	118	265	9
2021	114	245	5

Legend: ▢ Under the Age of 30 ▢ Ages 31-50

Historical Employee Job Category Statistics (by Gender)

Legend: ▢ 2021 ■ 2022

	Female	Male
Senior Supervisor	2 / 2	15 / 16
Supervisory Staff	5 / 5	51 / 55
Engineering Staff	42 / 44	85 / 92
Operational Staff	37 / 45	8 / 6
Direct Staff	76 / 77	43 / 50

Historical Employee Job Category Statistics (by Age)

Legend: ▢ 2021 ■ 2022

	Under the Age of 30	Ages 31-50	Aged 50 and Above
Senior Supervisor	- / -	15 / 15	2 / 3
Supervisory Staff	4 / 3	50 / 54	2 / 3
Engineering Staff	52 / 53	74 / 81	1 / 2
Operational Staff	17 / 18	28 / 33	- / -
Direct Staff	41 / 44	78 / 82	- / 1

1. Senior supervisors: Supervisors at or above the department level.
2. Supervisory personnel: Supervisors at the division level or above.
3. Engineering personnel: All engineering personnel involved in technical research and development and mass production engineering.
4. Operations personnel: All employees involved in operations management.
5. Direct personnel: personnel directly involved in production, machine operation, and related tasks.

The employment relationship with employees is mainly based on permanent employment (indefinite contract), with only 2 employees being temporary employees (fixed-term contract) in 2022. All employees are full-time; there are no part-time (hourly) or employees without guaranteed hours. The work locations are all in Taiwan, including Zhunan Science Park, Taipei office, and Tainan office. There are currently no employees assigned overseas.

There is a total of 15 non-employee workers, consisting of 1 dispatched employee from a manpower intermediary and 14 dispatched service personnel from contractors responsible for cleaning, security, or partial equipment maintenance within the factory premise (11 for cleaning and 3 for security).

Historical Number of Hired Employees (by Employment contract)

Year	Permanent Employees (Irregular)(Female)	Permanent Employees (Irregular)(Male)	Temporary Employees (Fixed-term Contracts) (Female)	Temporary Employees (Fixed-term Contracts) (Male)
2022	173	217	-	2
2021	161	201	1	1

Historical Proportion of Hired Employees by Employment Contract Type

Year	Permanent Employees (Irregular)(Female)	Permanent Employees (Irregular)(Male)	Temporary Employees (Fixed-term Contracts) (Female)	Temporary Employees (Fixed-term Contracts) (Male)
2022	44.13%	55.36%	0.00%	0.51%
2021	44.23%	55.22%	0.27%	0.27%

Compensation and Benefits

PlayNitride actively recruits talent from various fields to enhance the company's competitiveness, offering salaries and benefits that are above the Labor Standards Act and competitive. We design various incentive systems to reward research and development and innovative energy. Salary standards are determined on the basis of various job attributes and educational backgrounds, with no differences based on gender, nationality, or race.

Gender Pay Gap in 2022		Male	Female
Job Category		**Male**	**Female**
Indirect	Supervisory Position	1.23	1
	Non-Supervisory Position	1.18	1
Direct		1	1

Note 1: Compared to female employees, the ratio is set at 1 as the baseline.
2: The statistics include only standard salaries (regular monthly salaries that are fixed and paid). Other forms of compensation are not included.
3: Due to the different proportions of job attributes and seniority between the genders, there may be slight differences in pay ratios.

Currently, employee salaries are reviewed based on industry salary surveys and the average level of some peer companies and are adjusted according to performance evaluations. To maintain overall salary competitiveness, regular salary adjustments are made based on market salary levels, economic trends and individual performance. In 2022, there will be a structural salary adjustment with an average salary increase of 7% across the company.

In addition to fixed salaries, we also provide job allowances (including shift allowances, location allowances, welfare allowances, etc.) based on the nature of various positions. We also provide performance bonuses, outstanding employee nomination bonuses, patent bonuses, and the PlayNitride Star Competition Prize every quarter as incentives. Every year, we distribute holiday bonuses based on the operational situation to recognize the contributions of colleagues in their work.

Focusing on the needs of different positions and colleagues, regularly discussing the company's welfare policies, providing flexible welfare programs that meet the needs of different jobs and roles, providing a safe work environment and a continuously evolving welfare system, and creating the greatest sense of happiness among colleagues.

PlayNitride Full-Time Employee Benefits Package	
Bonus	· Performance bonus and holiday bonus · Patent bonus · Outstanding employee nomination bonus · PlayNitride Star Competition Prize
Work Allowance	· Shift allowance, location allowance, welfare allowance.
Insurance	· Labor health insurance/labor pension · Employee group insurance (covering medical, accident, and cancer). · Covid-19 prevention insurance
Leave System Superior to Legal Requirements	· Flexible 1 hour commute, remote work. · The government adjusts make-up workdays to be exempt from make-up work due to flexible holidays. · 2 hours of 'activity leave' per week · 3 days of 'benefit leave' per year · December 25th is a 'company holiday' with one day off every year
Health Benefits	· Annual sports subsidy of $6,000 · Recreational club subsidy · Annual health check-ups that exceed legal requirements.
Other	· New employee orientation ceremony, Labor Day gifts/cash · Marriage, maternity subsidies, funeral condolences · Educational subsidies, language learning bonuses · Monthly birthday celebration event · Irregular recreational activities, volunteer activities · Mid-Autumn Festival barbecue, Christmas activities, year-end banquet · Space with unlimited snacks and beverages · Darts machine, massage chair, exercise bike, private karaoke room

Performance Evaluation

The performance evaluation system created by PlayNitride is currently being continuously optimized according to the needs of the organization.   It undergoes rolling adjustments on an annual basis, and the evaluation methods also vary according to different job types.   By 2022, all employees below the manager level who have been employed for at least 3 months should undergo evaluation and have already completed the assessment with a 100% participation rate.

Continuously adjusting promotion standards in accordance with the company's growth and improving the promotion system.   The annual job promotions were successfully completed in August 2022.

Insurance, Retirement Security.

In accordance with local laws and regulations, PlayNitride provides insurance coverage for employees, such as employment insurance and medical insurance.   Additionally, it offers private group insurance coverage for employees' medical care, accidents, cancer, and other diseases.   During the Covid-19 pandemic, it also provided corresponding vaccine insurance and epidemic prevention insurance.

The retirement pension method is established in accordance with the Labor Standards Act and relevant regulations for implementing a retirement pension system.   All employees adopt the new retirement pension system, and in accordance with the provisions of the Labor Pension Act, 6% of the total salary is allocated and deposited into the employee's personal account at the Labor Insurance Bureau on a monthly basis.   Additionally, employees have the option to allocate retirement savings ranging from 0% to 6% into their personal retirement pension account based on their individual preferences.

Leave System Superior to Legal Requirements

PlayNitride provides flexible work schedules and remote work options for employees.   In addition to the statutory holidays defined by the Labor Standards Act, in 2022, we also introduced paid leave for COVID-19 vaccination and family care leave in response to the pandemic.   Furthermore, we offer various types of leave beyond legal requirements to accommodate employees with different needs.   These types of leave include: when the government adjusts the holiday schedule and mandates make-up work on regular workdays, employees are not required to make up the work and are granted leave; the company observes a one-day closure on December 25th; an additional 3 days of welfare leave are allocated each year to encourage employees to plan trips; and 2 hours of activity leave are provided every week to encourage employees to participate in sports or clubs.   These diverse types of leave promote a healthy work-life balance for our employees

Employee Welfare Committee

According to the regulations, a certain portion of the monthly sales is allocated to the Employee Welfare Committee as an employee welfare fund.   The committee, composed of welfare members, holds regular meetings to promote various welfare systems, including the provision of Labor Day bonuses, birthday bonuses, and subsidies for recreational clubs.

Other Benefits

Commemorative Gift

New Employee Welcome Box

Heartwarming Festive Gifts

Monthly Birthday Party

Specialty Cuisine

Heartwarming Birthday Celebrations

Joyful Birthday Gathering
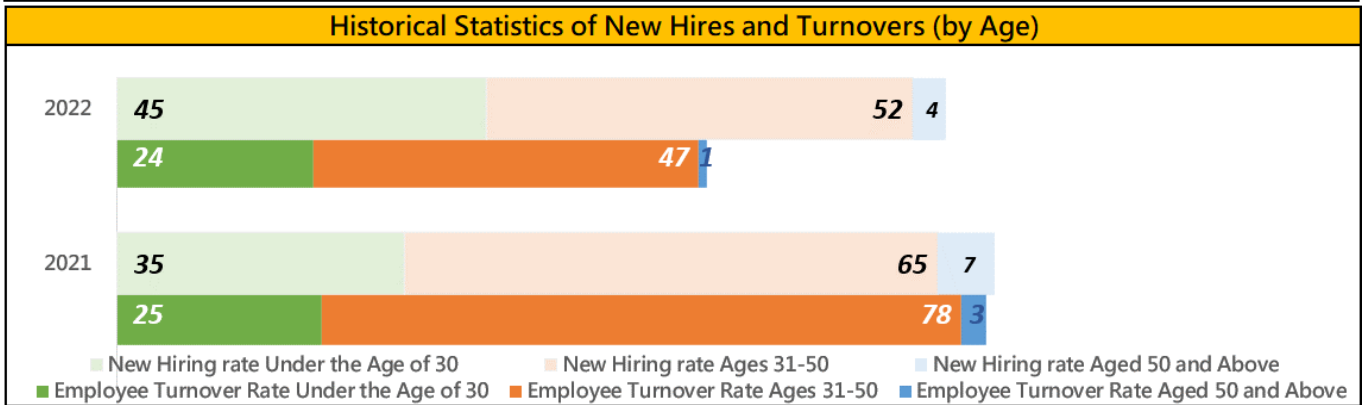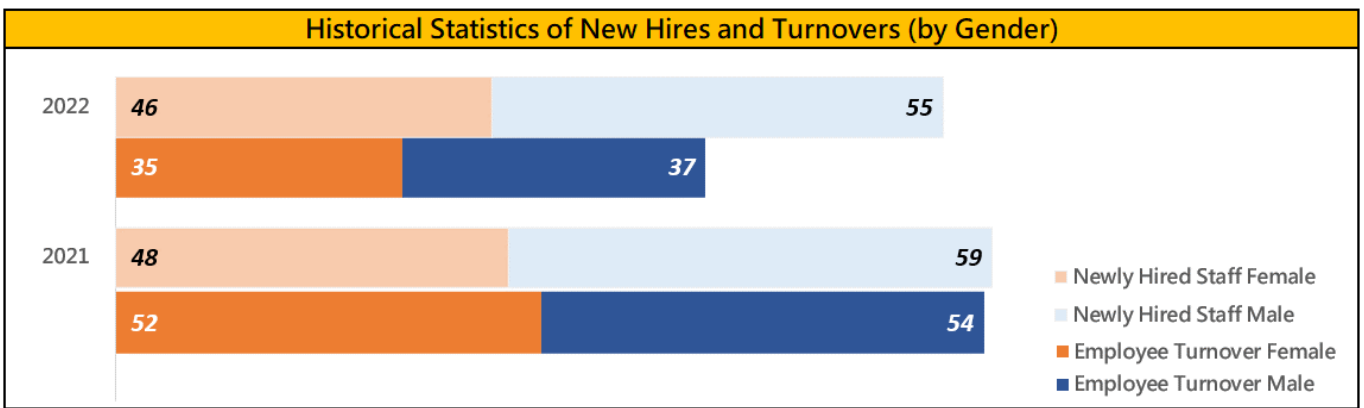

Festive Dinner

In response to different festivals, we organize dining events: Mid-Autumn Festival dinners, year-end banquets, and more.
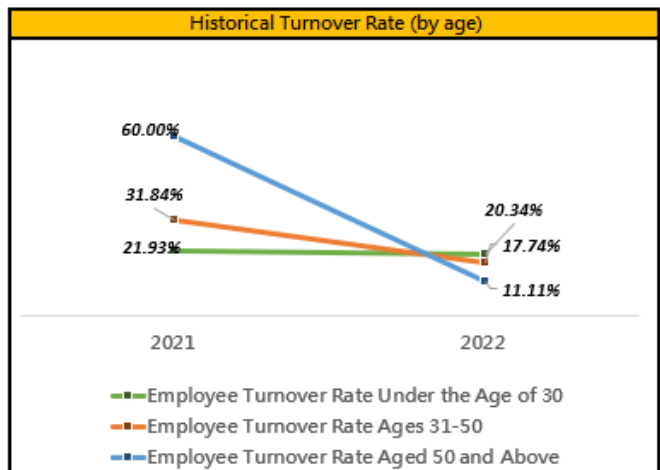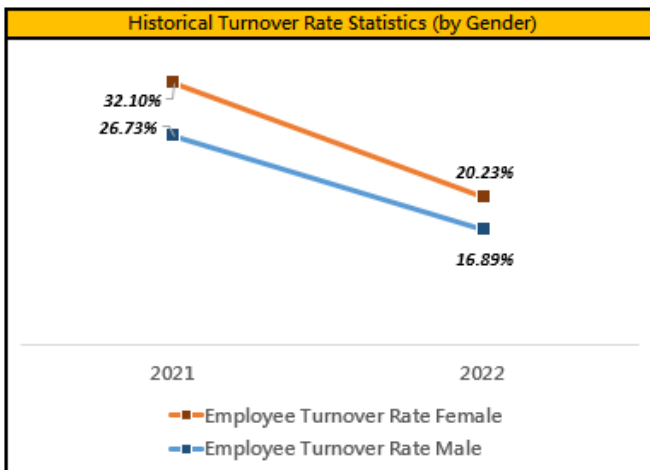
Employee Onboarding and Offboarding

In 2022, a total of 101 new employees were hired (a new hire rate of 25.77%), and a total of 72 employees left (an annual turnover rate of 18.37%), both of which were down from the previous year. To assist new colleagues in quickly integrating into the work environment and leveraging their strengths, after their arrival, supervisors will be arranged to conduct interviews to help them adapt to the organization. Additionally, appropriate tasks will be assigned based on individual backgrounds, abilities, and expectations, with regular reviews and feedback. Training courses will be designed to cover company organization, values, and system operations. Furthermore, corresponding on-the-job training and development plans will be provided based on different positions and career stages.

To emphasize talent retention, besides regularly analyzing retention rates, we also conduct exit interviews to understand why employees leave and to facilitate the continuous improvement of the company's systems for retaining top talent.

Historical Statistics of New Hires and Turnovers (by Gender)

Historical Statistics of New Hires and Turnovers (by Age)

New Hire and Turnover Rate

Historical New Hiring Rate (by gender)

29.63% · 29.21% · 26.59% · 25.11%
2021 · 2022
— New Hiring rate Female — New Hiring rate Male

Historical New Hiring Rate (by age)

140.00% · 30.70% · 26.53% · 44.44% · 38.14% · 19.62%
2021 · 2022
— New Hiring rate Under the Age of 30
— New Hiring rate Ages 31-50
— New Hiring rate Aged 50 and Above

Historical Turnover Rate Statistics (by Gender)

32.10% · 26.73% · 20.23% · 16.89%
2021 · 2022
— Employee Turnover Rate Female
— Employee Turnover Rate Male

Historical Turnover Rate (by age)

60.00% · 31.84% · 21.93% · 20.34% · 17.74% · 11.11%
2021 · 2022
— Employee Turnover Rate Under the Age of 30
— Employee Turnover Rate Ages 31-50
— Employee Turnover Rate Aged 50 and Above

Note: New hire rate = number of new employees of that gender (age group) in the current year ÷ total number of employees of that gender (age group) at the end of the current year.

Note: Turnover rate = number of departing employees of that gender (age group) in the current year ÷ total number of employees of that gender (age group) at the end of the current year.

Smooth Communication Channel

PlayNitride values employee opinions and regularly engages in two-way and open communication through channels such as labor-management meetings, Occupational Safety and Health Committees, and Employee Welfare Committees.   Additionally, measures such as Employee Suggestion Boxes, Sexual Harassment/Bullying Complaint Boxes, and Mental and Physical Health Care/Employee Counseling Services are in place to ensure that employee opinions are properly heard and addressed.

6-2 Talent Development

Nurturing and Development Plan

Talent is a critical element for PlayNitride to sustain innovation and maintain its position in the industry. PlayNitride expects innovative thinking and initiative from its employees. With the belief in cultivating talents and caring for employees, we have established the PlayNitride Academy to create an excellent training mechanism and provide open and diverse learning opportunities. Through training and development, PlayNitride aims to add value to its talents. Covering on-the-job professional training, external training, master lectures, and various macro-level programs, we create a learning environment for supervisors and peers to learn and grow together. Through diverse and comprehensive educational training, we ensure that employees can develop and enhance their professional abilities, improve team performance, and achieve common company goals.

New Employee Training	On-the-job Training	External Training	Master Lecture
• New employees receive general and specialized training to help them quickly integrate into the PlayNitride work environment.	• Strengthen employees' key technical skills in research and development, production, manufacturing, quality, and workplace management.	• Training and language learning across various certification categories cultivate professional talents and enable employees to engage in self-learning and development.	• Invite outstanding individuals from industry, government, and academia to speak, inspiring employees to innovate and learn from different perspectives.

PlayNitride Training Framework

PlayNitride provides diverse training opportunities to enhance employee's professional skills in the workplace. In addition to providing comprehensive education and on-the-job training (OJT), we also encourage colleagues to participate in external corporate training. From the moment of joining the company, we allocate sufficient resources to colleagues in different positions and ranks and implement different training plans at each stage to facilitate systematic learning and development.

PlayNitride's education and training program includes new employee training, general MicroLED courses, professional courses, and management courses for supervisors. These professional courses are divided into different areas such as engineering, quality and leadership. In addition to hiring external project lecturers, we also actively cultivate internal lecturers to carry out the inheritance of key technologies within the company. To cultivate the ability to develop, produce, manufacture, assure quality, and manage across different fields, in order to respond to the future wave of intelligence and integrate talents from various disciplines.

Education and Training Results

Category	Course	Total Participants
New Employee Orientation and Training	New employee training and education (including review of work rules), general occupational safety and health training, hazardous chemical labeling and general rules, information security training, and education.	292
General Education Training	Information security education and training, social engineering cybersecurity promotion, ISO14064 greenhouse gas inventory, SASB standard education and training, important practical concepts of personal information protection law.	188
Basic MicroLED Knowledge	Grain Processing: From blue/green to red - InGaN or InGaP - Display Week 2022 Sharing Session.	172
Engineering Management	APC: Advanced Process Control and JMP research data analysis	95
Quality Management	Hazardous material flow management, electrostatic discharge prevention	134
Leadership Development	Supervisory business thinking, everyday labor law practical analysis, new generation leadership and employee development courses, and partnering with employees.	207

Master Lecture

　　To enhance the personal qualities and self-growth of our colleagues, PlayNitride has organized a series of master lectures.　We have invited outstanding individuals from various fields to deliver speeches at the factory, sharing their experiences with our colleagues.　The objective is to deepen our colleagues' understanding of industry development trends, leadership thinking, innovative approaches, and skills.　We anticipate that this initiative will inspire personal and professional growth among our colleagues and encourage them to pursue the advancement of the MicroLED industry.　Over the years, many lectures have been held (note), however, in 2022, such large-scale events have been temporarily postponed due to epidemic prevention considerations.

Note:　The Master Lecture Series has invited many guest speakers over the years.　In 2019, we were honored to host Dr. Shuji Nakamura, the Nobel laureate in physics renowned as the pioneer of blue light technology.　In 2020, we had the privilege of welcoming Mr. Wu Tsung-Hsin, Director of the National Space Agency, Ms. Hsieh Hsin-Hui, Managing Director of Taiwan Ogilvy Group, Mr. Sheng Chih-Jen, General Manager of Yunlang Tourism Group, Mr. Tao Yun-Chih, Founder and Chairman of Pocket Securities, and Mr. Huang Chin-Yung, Founder of DIGITIMES.　In 2021, we were delighted to host Commissioner Tang Feng and Mr. Lo Hsiang-An, the visionary founder of Giant Bicycles.

For more information about the training seminars offered by PlayNitride Education, please refer to the following link
https://www.playnitride.com/corpesg/

6-3　Human Rights Management

Human Rights Management

PlayNitride values its employees and their rights. It complies with applicable labor laws and is committed to providing a humane, dignified, and equal work environment. Furthermore, the company adheres to internationally recognized human rights standards, including the United Nations Universal Declaration of Human Rights, the United Nations Global Compact, the United Nations Guiding Principles on Business and Human Rights, and the International Labour Organization. PlayNitride explicitly outlines procedures and channels for reporting sexual harassment in the workplace in its Work Rules and Measures for the Prevention, Complaint, Investigation, and Handling of Sexual Harassment. This commitment ensures gender equality and a harassment-free workplace. We are pleased to report that there were no such incidents in 2022.

Human Rights Management Approach

- Provide a safe and healthy working environment free from harassment
- Eliminate illegal discrimination and ensure equality of working opportunities
- Ban on child labor
- Ban on forced labor
- Foster an environment that encourages communication and set up an open management model
- Support and assist employees with maintaining their physical/mental well-being and work-life balance
- Regularly inspect and evaluate related schemes and practices

In 2022, we formulated human rights policies and integrated them into our new employee training and promotion processes. We are committed to continually implementing these policies through established mechanisms to ensure that all our colleagues are treated with dignity and respect. We plan to conduct investigations on human rights risks and collaborate with employees to create a sustainable and harmonious workplace, characterized by zero harassment, zero discrimination, and open communication. Upholding the human rights of all our employees and workers, we will also include the protection of human rights as a requirement for our suppliers.

6-4　Employee Health and Safety

Occupational Safety and Health Management System

PlayNitride is committed to the core concept of "Disaster Prevention and Mitigation" and invests resources in occupational safety and health issues at the factory premises.　By establishing an occupational safety culture and proposing effective measures, we strengthen operators' safety awareness and safety management, thus creating a zero-accident environment.

PlayNitride obtained ISO 45001:2018 certification for its occupational safety and health management system in 2020.　The company implements safety and health management procedures for activities, products, services, and stakeholders through the operational framework of the occupational safety management system.　This ensures effective control of negative impacts and regulatory compliance related to safety and health while maintaining a commitment to regular performance reviews and continuous improvement.

Occupational Health and Safety Policy

- **Compliance and Pollution Prevention**
- **Safe Behavior, Energy Conservation and Carbon Reduction**
- **Health Promotion and Continuous Improvement**
- **Total Engagement and Sustainable Development**

From identifying and assessing risks, planning and executing management strategies, to conducting both regular and irregular safety inspections and implementing change management, mechanisms for continuous improvement are in place to mitigate the risk of employees being exposed to hazardous environments.　In the context of managing occupational safety, health, and environmental protection, we establish improvement goals.　Our short-term goal is to 'control pollution, manage occupational safety and health risks, and maintain legal compliance as responsible corporate citizens.' Our medium to long-term goal is to prevent pollution, reduce occupational safety and health risks, prevent occupational diseases, and cultivate a green and secure corporate image.　In 2022, there were no incidents related to employee health and safety that resulted in violations of relevant regulations and subsequent penalties from supervisory authorities.

The management system covers all 392 employees, including 15 non-employee workers, ensuring 100% coverage.　Non-employee workers in the factory area primarily consist of contractors, including security personnel, cleaning personnel, on-site vendor personnel, as well as maintenance and construction vendors.

The verification expires in May 2023, and a three-year renewal plan is in place to maintain the effectiveness of the occupational safety and health management system.

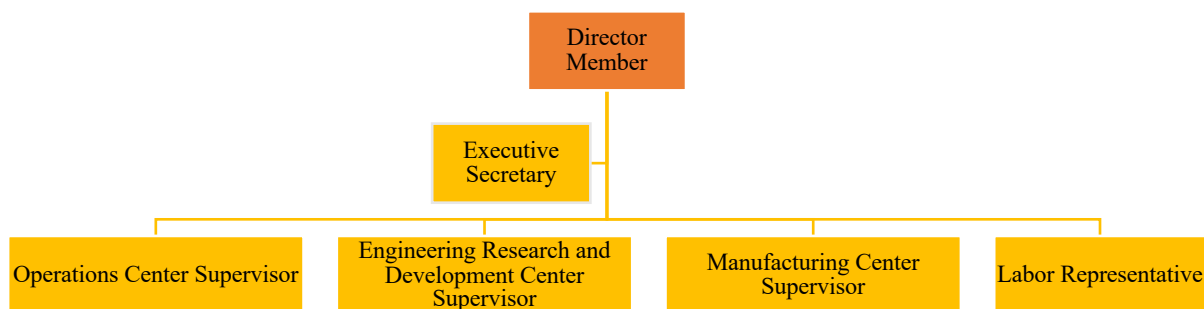| Operating Location	The Number of Workers by the End of 2022.		The Number of Individuals Covered by the Occupational Safety and Health Management System	Incorporate Internal Audit Number of Individuals Covered	Incorporate External Verification Number of Individuals Covered
	Employee	Non-employee			
Taiwan Headquarters	392	15	407	407	407
Coverage Rate			100%	100%	100%

77

Operational Status of the Occupational Safety and Health Committee

Regular Occupational Safety and Health Committee meetings are conducted quarterly to review the results of risk identification, plan and execute supervision and management programs, and assess and enhance performance indicators, ensuring the effective implementation of safety and health policies.

The Occupational Safety and Health Committee is chaired by the CEO, with one member serving as the Executive Secretary.   The implementation committee comprises eight members, including five representatives from the labor force, (which constitutes more than one-third of the total committee members).

We have established an Environmental Health and Safety Consultation and Communication Management Procedure, allowing employees to provide feedback on occupational safety and health matters and engage in communication and consultation through channels such as phone and email.   They can also approach labor representatives, department supervisors, or safety officers within their respective units. Labor representatives can raise issues for discussion during Occupational Safety and Health Committee meetings, and incident investigations require their co-signature for closure.   Employees can access the announcement section on the employee website to inquire about relevant laws and regulations concerning environmental health and safety.   Additionally, electronic signage are placed in public areas and workspaces to promote environmental safety regulations, ensuring that employees have a comprehensive understanding of environmental safety information and channels for providing feedback.   This collective effort aims to enhance the safety of the work environment.

Committee Organizational Chart

Director Member
Executive Secretary

Operations Center Supervisor	Engineering Research and Development Center Supervisor	Manufacturing Center Supervisor	Labor Representative

Operational Environment Risk Identification and Prevention Measures

The Hazard Identification and Risk Assessment Management Procedures are established to identify potential hazards and their severity in the work environment.   Each department ensures that its employees receive education and training on hazard identification and risk assessment.   Every year in November or before the installation of new machinery and equipment, the activities, processes, scope, machinery and equipment, and work tasks of each department are examined.   The possible categories of hazards, such as physical, chemical, biological, human factors, engineering, and social, are evaluated to estimate their likelihood and severity.   Hazard identification and risk assessment tools are used to analyze and evaluate potential risks that could cause harm.   Control and preventive measures are taken for high-risk projects, and each high-risk project and its control process is managed as a project to eliminate or minimize risk.

In 2022, we completed 430 hazard identifications, resulting in two necessary improvement projects. Both of these projects have been incorporated into the occupational safety and health management system as part of the environmental safety and health management plan.

The company has a workplace safety inspection plan.   The Industrial Safety Department conducts weekly inspections of the factory and requests each department to provide improvement measures and completion dates for areas needing improvement.   The Industrial Safety Department reviews and accepts these measures and discusses any deficiencies during quarterly Occupational Safety and Health Committee meetings.

Work Environmental Monitoring

In order to understand the possible impact of the working environment on the health of employees and as a basis for improving the control of occupational hazards, a qualified occupational environment monitoring agency is commissioned to conduct regular monitoring of the working environment every six months. The monitoring includes the detection of chemical and physical hazards and covers areas such as offices, clean rooms and public areas. The monitoring results are also published to ensure that all employees are aware of them. If there are exposure values that exceed the limits established by regulations, a hazard control and improvement plan should be developed, and regular updates on the improvement progress should be provided to the Occupational Safety and Health Committee. In 2022, inspections were conducted in various work areas, including offices and clean rooms, and all test results were all in compliance with regulatory standards.

Handling Measures and Management for Hazardous Chemicals

All hazardous chemicals used in various process machinery and equipment are stored appropriately in designated locations and explosion-proof cabinets, with necessary control measures in place. The necessary labeling management is carried out in accordance with the 'Regulations for the Labeling and Hazard Communication of Hazardous Chemicals and General Rules' and the 'GHS' (Globally Harmonized System of Classification and Labeling of Chemicals) in storage locations and storage containers. New or existing on-site staff who perform related operations receive regular training, and safety data sheets are prominently placed near the entrances and exits of the work area for immediate access by personnel. This ensures that relevant emergency response measures can be promptly implemented in case of an emergency.

Emergency Response Measures and Management

Establish the "Emergency Response Management Measures" and have an emergency response plan that includes mechanisms for various unexpected events such as fire, chemical spills, typhoons, earthquakes, power outages, and accidents. In addition, establish an emergency response organization to respond to various emergency situations. Every six months, emergency response training and drills are conducted to familiarize all employees with the response process and to minimize disaster losses. To ensure the safety of employees and prevent potential harm, new employees are mandated to undergo occupational safety education and training upon entering the factory. They are informed that in life-threatening situations, they can take proactive measures to avoid danger without facing any penalties.

In 2022, the entire factory conducted a total of 2 emergency response drills, addressing fire, earthquake, and gas leakage scenarios. The drills had 587 participants.

Implementing Safety Education and Training

PlayNitride is committed to ensuring that employees are protected to the greatest extent possible in the workplace.　We provide comprehensive safety education and training, and occupational safety and health personnel receive regular training in accordance with the law to help employees understand and prevent potential occupational hazards.　Our goal is to increase everyone's safety awareness and create a safer work environment:

Occupational Safety and Health Management Personnel Training Hours			
Types of Occupational Safety and Health Certificates	Anticipated Number of Trainees	Total Training Hours	Training Completion Rate
Class A Occupational Safety and Health Affairs Supervisor	2	Every two years, 6 hours	100%
Class A Occupational Safety Manager	1	Every two years, 12 hours	100%
Class B Occupational Safety and Health Manager	1	Every two years, 12 hours	100%

- **Occupational Safety and Health Training**: Provide comprehensive occupational safety and health training to every new employee to help them understand how to prevent and manage potential occupational hazards in the workplace.　Relevant training materials are placed in the company's resource sharing area so that employees can access relevant information at any time.
- **Hazardous Chemical Education and Training**: Hazardous chemicals pose potential dangers.　We provide comprehensive hazardous chemical education and training to all new employees.　This training includes instructions on avoiding contact with hazardous chemicals, proper use of personal protective equipment, and the emergency measures to be taken in the event of a chemical accident.
- **Emergency Response Training and Drills**: We conduct regular annual emergency response training and drills to familiarize employees with procedures and skills for handling emergencies, enhance their response capabilities, ensure personal safety, and minimize losses in case of accidents and disasters.
- **Promotion of Relevant Regulations**: Periodically, through announcements, electronic signage, and cooperation with local fire brigades, relevant regulations will be promoted to all employees to ensure the implementation of the company's safety policies and regulations.　In addition, we offer safety, earthquake, and fire prevention courses in response to demand and current events, enabling employees to acquire the latest safety knowledge and skills.

Employee Safety Education and Training Hours

Training Categories	Course	Training Sessions	Number of Trainees	Total Training Hours (hours)
Safety Awareness Category	General Occupational Safety and Health Education and Training	25	76	228
	Chemical and Related Labeling Rules Explanation Session	1	15	22.5
	Defensive Driving Course	1	29	43.5
Hazardous Operation Category	Hazardous Chemical Education and Training	25	76	228
Emergency Response Category	Fire Survival Workplace Safety Training	1	39	58.5
	Emergency Evacuation Education and Training	2	27	54
	CPR+AED First Aid Education and Training Course	1	37	55.5

Disability Injury Incident

In 2022, there were no incidents of disability or injury among PlayNitride employees. There was only one incident of a non-damaging injury in which a chemical came into contact with an employee's clothing and skin during an operation. As a precaution, the employee went to the hospital for an examination and confirmation of no harm. The next day, they returned to their workstation. Subsequently, the operation method was improved to reduce the possibility of contact. There were three false alarm incidents, and the operation processes and environment have been improved to prevent recurrence.

To further reduce the likelihood of accidents and prevent their recurrence by identifying the causes stemming from past incidents, we have established Management Procedures for Abnormal Correction and Environmental Safety and Health Prevention Measures, as well as Management Procedures for Occupational Accident Reporting and Investigation. These procedures involve conducting cause investigation analyses and tracking improvements for incidents.

All Employees	2021	2022
Annual Working Hours	668,571	771,408
Occupational Injury Death Toll	0	0
Number of Severe Occupational Injuries	0	0
Number of Occupational Injury Cases Resulting in Loss of Working Hours	0	0
Number of Employees without Work Loss but with Restricted Work Activities or Temporarily Reassigned	0	0
Number of Injury Cases with no Work Loss and Unrestricted Work Activities	0	1
The Number of Near Miss Events	1	3
Number of Lost Workdays	0	0
Number of Recordable Occupational Injury Count	0	0
Work-Related Fatality Rate	0	0
Severe Occupational Injury Rate	0	0
Total Recordable Incident Rate (TRIR)	0	0
Rates of Work-related Injuries Resulting in Days Away from Work or Restricted Work Activities (DART)	0	0
Near Miss Frequency Rate (NMFR)	0.30	0.78
Lost Workdays Ratio	0	0

Note :
1. The statistical method for 'total annual working hours' involves the number of people from January to December x number of working days in the current month x daily working hours.
2. The calculation method of the indicator does not include traffic injury incidents.
3. The 'work-related fatality rate' = work-related fatality×200,000 ÷ total annual working hours.
4. The 'occupational injury death rate' = number of occupational injury deaths × 200,000 ÷ total annual working hours.
5. 'Total recordable incident rate (TRIR)' = recordable occupational injuries x 200,000÷ total annual working hours
6. 'Days Away/Restricted or Transfer Rate (DART)' = (Number of occupational injury cases resulting in loss of working hours + Number of employees without work loss but with restricted work activities or temporarily reassigned) × 200,000 ÷ total annual work hours
7. 'Near miss frequency rate (NMFR)' = Number of near-miss injuries × 200,000 ÷ total annual working hours
8. 'Lost workdays' refer to the number of days during which the injured party is temporarily (or permanently) unable to return to work. This does not include the day of the injury or the day of returning to work. However, it should include any days in between (including Sundays, holidays, or days when the business unit is not operating) and any days after returning to work during which the individual is unable to work due to the disaster.
9. 'Recordable occupational injuries,' which can be recorded, refer to the number of individuals covered by the aforementioned injured parties (those who have lost more than 8 hours of work time)
10. 'Number of occupational injury deaths' refers to injuries from which the victims cannot recover (such as amputations) or those who cannot return to their pre-injury work status within six months.

Contractor Safety and Health Management

In 2022, there were no incidents of disability or injury involving non-employees. To ensure the safety and health of non-employees and contractors, PlayNitride has established Contractor Safety, Health, and Environmental Management Procedures in accordance with the ISO 45001 management system and regulatory requirements. Contractors are obligated to provide safety and health education and training to their employees in compliance with regulations. Furthermore, contractors' employees must be thoroughly familiar with and adhere to the company's safety and health training materials, assessments, and hazard notifications before entering the premises. The internal department responsible for contracting operations must submit engineering applications, construction applications, high-risk operation control plans, and construction protection plans before commencing construction. Additionally, it requires contractors to conduct toolbox meetings on the day of construction to provide pre-work education and perform job hazard analysis. Throughout the construction process, both internal department representatives and contractor supervisors must inspect the site to ensure workplace safety. This program is used to manage the occupational safety and health of contractors during construction in the factory, ensuring the rights and interests of contractors and the Company. The contractor should not only adhere to the contractual provisions during the project period but also comply with the Occupational Safety and Health Act and its related regulations.

6-5 Health Promotion

Occupational Health Services

PlayNitride places a strong emphasis on employee autonomy, physical and mental well-being, and work-life balance.　We provide sports facilities and sports incentive programs to make exercise a part of our employees' daily health routines.　Additionally, we have dedicated occupational health care professionals to promote occupational disease prevention and health promotion.　We regularly schedule on-site physician consultations and offer professional health management.　We are committed to providing our employees with a safe, healthy and friendly work environment that promotes physical and mental well-being.

Health Check-ups Exceeding Regulatory Requirements

Category	Execution Results
Annual Health Check-ups	• **In 2022, a total of 279 people underwent health checks at the factory, achieving a 100% compliance rate as required by law.** • Exceeding regulatory requirements, we conduct annual health examinations for all employees.　The factory nurse classifies and manages abnormal findings based on the examination results.　Additionally, in accordance with employees' health conditions and needs, we arrange on-site occupational physicians to conduct interviews, providing health guidance and management. The 2022 health examination program has added cardiovascular diseases and risk factor indexes, expanding the protection of employees' health. • Abnormal management or tracking after health check: Arrange on-site doctors for monthly health consultation and health education. • Encourage employees to manage their own health and provide blood pressure monitors in the factory for regular measurement and monitoring of blood pressure to prevent cardiovascular disease.　Also, plan various health promotion education or activities to promote the physical and mental health of colleagues as well as work-life balance.
Special Hazard Operation Health Examination	• **In 2022, a total of 49 people in the factory underwent health examinations, achieving a 100% participation rate** • In compliance with regulations, special occupational health examinations and related assessment operations are conducted to assess hazards, implement control measures, and grade health management.　This helps improve the work environment, prevent hazards, and maintain the health of colleagues. • Following health checks, abnormal management and tracking include arranging on-site doctors for monthly health consultations and health education.

Four Major Plans for Worker Health Protection

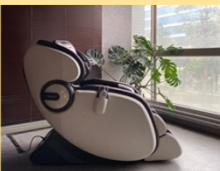| Category	Execution Results
Human Factor Sexual Harm Prevention Program	• Assessment of chemical, biological, physical, and human factors that pose health hazards in the workplace, as well as prevention plans for issues such as repetitive tasks that can lead to musculoskeletal disorders. • In 2022, in collaboration with internal health checks and investigations into musculoskeletal symptoms, 12 individuals were suspected of being at risk. Following individual care, they were scheduled for a doctor's interview and provided with recommendations for improving their lifestyle and exercise habits.
Maternal Health Protection Program	• To respect individual privacy, pregnant colleagues initiate the announcement and reporting process through relevant forms, or department windows notify on behalf of the factory nurse to conduct assessments, care, and protection of pregnancy and postpartum health. • In 2022, eight individuals were assessed by on-site physicians to evaluate the suitability of the work environment and tasks.
Disease Prevention Plan for Abnormal Workload	• In 2022, in coordination with internal health checks and questionnaire surveys, employees with high health risks or excessive workloads will be identified. Interviews with local doctors will be arranged, and work adjustments will be discussed with their department managers as necessary.
Prevention Plan for Preventing Unlawful Incidents During Duty Execution	• Written statement declaring the elimination of workplace violence and announcing the complaint channels, with no related incidents reported until 2022.

Other Health Protection Measures

Category	Execution Results
Covid-19 Prevention Measures	• Since the outbreak of the epidemic in 2020, maintaining continuous operations and safeguarding the health and safety of employees have been the top priorities for PlayNitride. The epidemic prevention team regularly conducts discussions and updates on epidemic prevention measures through preventive management, defense management, and contingency management. These measures include implementing flexible work arrangements like working from home or shift work, restricting visitors, and providing employee vaccine insurance. For more details, please refer to the provided link. • https://www.playnitride.com/corpesg/
Health Education Courses or Seminars	• In 2022, due to the impact of the epidemic, the number of relevant lectures has decreased • May 31, 2022 Sleepless Achievement Class: Voluntary registration, with a total of 38 participants.

Promote Physical and Mental Health.

We encourage colleagues to develop healthier lifestyle habits and cultivate or continue personal interests and hobbies by joining the PlayNitride program. We also encourage individuals to engage in physical fitness activities and participate in various recreational and sports clubs and annual group competitions organized by the company.

Cozy Relaxation Space

- Establish a 'people-oriented' perfect rest space, set up diverse welfare facilities, and provide colleagues with various stress relief channels to promote the well-being of body and mind.
- There are flywheel and table tennis facilities in the area to encourage colleagues to engage in more physical activity. Additionally, there are entertainment facilities for darts that promote communication and interaction among colleagues in a relaxed manner. Massage chairs are provided for relaxation and to alleviate emotional stress. Furthermore, a complimentary snack and beverage area is available to provide a continuous source of energy.

Flywheel	Table Tennis	Dart Machine	Massage Chair	Snacks and Beverages

Fitness and Exercise Incentive Program

- We value our colleagues' leisure time after work and encourage them to establish regular exercise habits. We provide an annual sports subsidy of NT$6,000 for each colleague.
- Sports categories eligible for subsidy application based on personal preferences: running, cycling, fitness, yoga, aerobic exercise, dance, baseball, softball, basketball, table tennis, volleyball, badminton, tennis, soccer, golf, swimming, ice skating, rollerblading, taekwondo, karate, judo.
- A total of 158 people applied in 2022.

A Variety of Clubs and Competition Events

- Various clubs, including the eSports Club, the Board Game Club, the Singing Club, the Basketball Club, and the Badminton Club, have been established to promote emotional communication among departments and cultivate personal interests. These clubs receive a fixed subsidy from the Employee Welfare Association. Every year, various clubs organize comprehensive sports and fun competitions, which help build team spirit, alleviate work pressure, and foster a sense of personal achievement through both team collaborations and individual competitions.
- In 2022, the 'PlayNitride BINGO' All-around Challenge and the 'King of Flywheel' Challenge were held, attracting a total of 732 participants.

A Variety of Internal Fun Competition Activities

Caption: Employee activity announcement

7. Corporate Citizenship

7-1 Public Welfare Activities

MicroLED Knowledge Promotion

PlayNitride's R&D team boldly challenges itself, continuously providing products and solutions with diverse applications through technological innovation.   They also strive to promote related knowledge in the field of MicroLED, with the aim of accelerating the integration of MicroLED into everyday living environments.

PlayNitride not only participates in corporate seminars and industry sharing organized by the Photonics Industry & Technology Development Association (PIDA), but also collaborates with various universities' departments of physics, optoelectronics, and electrical engineering.   This collaboration takes the form of campus presentations or corporate visits, focusing on specialized courses and sharing sessions related to MicroLED technology and its applications.   In addition to enhancing students' professional technical knowledge, it broadens their perspective on industry trends and new technologies.   In 2022, we have conducted over 20 collaborative sessions with universities.   Furthermore, many relevant departments from universities have visited our facility for corporate tours.   During these visits, in addition to technical presentations, we use product showcases and environmental introductions to provide students with a deeper understanding of PlayNitride's corporate culture, work environment, company development, as well as the current status and applications of MicroLED technology.

To learn more about PlayNitride's Education's promotional achievements, please refer to the following link

https://www.playnitride.com/corpesg/

Public Welfare Participation

     In response to the Ukraine aid in 2022, the company has launched a fundraising campaign within the company to encourage colleagues to donate together.   The funds will be donated exclusively to 'Doctors Without Borders' and 'World Vision'.

Caption: Certificate of appreciation for donations

Environmental Conservation

After experiencing the two-year-long pandemic, PlayNitride once again invited colleagues to participate in the Hsinchu City 2022 Salute to the Sea - Autumn Beach Cleanup Activity. Colleagues and their families enthusiastically joined, regardless of age, and contributed their efforts to clean up the beach. This not only provided them with a profound understanding of the importance of environmental protection and marine sustainability but also inspired those around them to join in caring for the ocean, making our Earth's living environment even better. PlayNitride is 'clean' and powerful, let's protect and love this Earth together!

Appendix: GRI Standards Index

Statement of Use	PlayNitride Inc. has followed the GRI guidelines and reported the information listed in the GRI Content Index for the period from January 1, 2022, to December 31, 2022.
GRI 1 Used	GRI 1: Fundamentals 2021

GRI 2: General Disclosure 2021

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
The Organization and its Reporting Practices					
2-1	Organizational Detailed Information	1-1	Company profile	5	
2-2	Entities Included in the Sustainability Report.	About this Report		4	
2-3	Reporting Period, Frequency, and Contact Person	About this Report		4	
2-4	Information Recompilation	First-time Implementation of GRI Guidelines Compilation		-	
2-5	Externally Guaranteed/Assured	Not Externally Guaranteed		-	
Activities and Workers					
2-6	Activities, Value Chains, and Other Business Relationships	1-3	Value Chain	10	
2-7	Employee	6-1	Talent Attraction and Retention	69	
2-8	Non-employee Worker	6-1	Talent Attraction and Retention	69	
Governance					
2-9	Governance Structure and Composition	4-1	Corporate Governance	47	
2-10	Nomination and Selection of the Highest Governing Body	4-1	Corporate Governance	47	
2-11	Chairperson of the Highest Governing Body	4-1	Corporate Governance	47	
2-12	The Highest Governing Body Oversees the Role of Impact Management	4-1	Corporate Governance	47	
2-13	Person Responsible for Impact Management	2-1 2-7	Sustainability Policy and Operations Major Sustainability Issue Management Policy	14 27-35	
2-14	The Role of the Highest Governing Body in Sustainability Reporting	4-1	Corporate Governance	47	
2-15	Conflict of Interest	4-1	Corporate Governance	47	
2-16	Communication of Key Significant Events	4-1	Corporate Governance	47	
2-17	Collective Intelligence of the Highest Governing Body	4-1	Corporate Governance	47	

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
2-18	Performance Assessment of the Highest Governing Body	4-1	Corporate Governance	47	

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
2-19	Compensation Policy	4-1	Corporate Governance	47	
2-20	Compensation Determination Process	4-1	Corporate Governance	47	
2-21	Annual Total Compensation Ratio	Due to salary confidentiality regulations, we are temporarily withholding disclosure		-	
Strategy, Policy and Practices					
2-22	Statement of Sustainable Development strategy		Chairman's words	1	
2-23	Policy Commitment	4-1 4-2 6-3 6-4	Corporate Governance Integrity Management Human Rights Management Employee Health and Safety	47 53 79 80	
2-24	Incorporate Policy Commitments	4-1 4-2 6-3 6-4	Corporate Governance Integrity Management Human Rights Management Employee Health and Safety	47 53 79 80	
2-25	Remediation Procedures for Negative Impacts	2-7	Major Sustainability Issue Management Policy	27-35	
2-26	Mechanism for Seeking Advice and Raising Concerns	2-7	Major Sustainability Issue Management Policy	27-35	
2-27	Regulatory Compliance.	4-2	Integrity Management	53	
2-28	Public Association Membership Criteria	1-4	Involvement of Public Association	11	
Stakeholder Engagement					
2-29	Stakeholder Engagement Policy	2-3	Identify Key Stakeholders	19	
2-30	Collective Agreement	Unsigned collective agreement		-	

GRI 3: Major Themes 2021

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
3-1	The Process of Determining Major Themes	2-5	Identification of Major Sustainability Issues	23	
3-2	Revised Text: List of Major Themes	2-6	Corresponding Key Performance Indicators for Significant Sustainability Issue Disclosure	24	
3-3	Management of Major Themes	2-7	Major Sustainability Issue Management Policy	27-35	
GRI 202: Market Presence 2016					
202-1	The Ratio of Standard Salaries for Grassroots Personnel of Different Genders to the Local Minimum Wage	Male: 1.13, Female: 1.13 (calculated based on the minimum wage of NT$25,250 in 2022 according to the Labor Standards Act).		-	
202-2	The Proportion of Local Residents Employed as Senior Management	100%		-	
GRI 205: Anti-Corruption 2016					
205-2	Communication and Training on Anti-corruption Policies and Procedures	4-2	Integrity Management	53	
GRI 305: Emissions 2016					
305-1	Direct (scope one) Greenhouse Gas Emissions	5-1	Greenhouse Gas Emissions Management	60	
305-2	Indirect Energy (scope two) Greenhouse Gas Emissions	5-1	Greenhouse Gas Emissions Management	60	
305-4	Greenhouse Gas Emissions Intensity	5-1	Greenhouse Gas Emissions Management	60	
305-7	Nitrogen Oxides, Sulfur Oxides, and Other Significant Gas Emissions	5-5	Air Pollution Management	67	
GRI 401 Employers-employee Relations 2016					
401-1	New Employees and Departing Employees	6-1	Talent Attraction and Retention	69	
401-2	Benefits Available Only to Full-time Employees (not temporary or part-time)	6-1	Talent Attraction and Retention	69	
GRI 402 : Labor Relations 2016					
402-1	Minimum Notice Period for Operational Changes	All major operational changes in this company will be notified in accordance with local laws and regulations		-	
GRI 403 : Occupational Health and Safety 2018					
403-1	Occupational Safety and Health Management System	6-4	Employee Health and Safety	80	
403-2	Hazard Identification, Risk Assessment, and Incident Investigation	6-4	Employee Health and Safety	80	
403-3	Occupational Health Services	6-4	Employee Health and Safety	80	

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
403-4	Involvement, Consultation, and Communication of Occupational Safety and Health Workers	6-4	Employee Health and Safety	80	
403-5	Training for Occupational Safety and Health Workers	6-4	Employee Health and Safety	80	
403-6	Worker Health Promotion	6-5	Health Promotion	85	
403-7	Prevent and Mitigate the Impact of Occupational Safety and Health Issues Directly Related to Business Relationships	6-4	Employee Health and Safety	80	
403-8	Workers Covered by the Occupational Safety and Health Management System	6-4	Employee Health and Safety	80	
403-9	Occupational Injury	6-4	Employee Health and Safety	80	
GRI 406: Non-Discrimination 2016					
406-1	Discrimination Incidents and Improvement Actions Taken by the Organization	No relevant incidents occurred in 2022		-	
GRI 416 Customer Health and Safety 2016					
416-2	Incidents That Violate Health and Safety Regulations Regarding Products and Services	No relevant incidents occurred in 2022		-	
GRI 417: Marketing and Labeling 2016					
417-1	Requirements for Product and Service Information and Labeling	No relevant incidents occurred in 2022		-	

Voluntary Disclosure of GRI Themes and Indicators

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
GRI 201 : Economic Performance 2016					
201-1	Direct Economic Value Generated and Distributed by the Organization	4-3	Operational Performance	54	
GRI 302: Energy 2016					
302-1	Internal Energy Consumption of the Organization	5-2	Energy Management	63	
302-3	Energy Intensity	5-2	Energy Management	63	
302-4	Reduce Energy Consumption	5-2	Energy Management	63	
GRI 303: Water and Effluents 2018					
303-3	Water Intake	5-3	Water Resource Management	65	
GRI 306: Waste 2020					
306-3	Generation of Waste	5-4	Waste Management	66	
306-4	Disposal and Transfer of Waste	5-4	Waste Management	66	

Indicator	Disclosure Item	Corresponding Chapters in the Report		Page Number	Description
306-5	Direct Disposal of Waste	5-4	Waste Management	66	
GRI 405: Diversity and Equal Opportunity for Employees 2016					
405-1	Diversity of Governance Units and Employees	4-1 6-1	Corporate Governance Talent Attraction and Retention	47 69	
405-2	Ratio of Women's to Men's Basic Salary and Pay Increases	6-1	Talent Attraction and Retention	69	

Appendix: SASB Standards Index

Industry	Technology and Communication
Industry	Semiconductor

Disclosure Theme	Indicator number	Accounting Indicators	Disclosure Content	Corresponding Sections
Greenhouse Gas Emissions	**TC-SC-110a.1**	Disclose the following greenhouse gas emissions information: (1) Global greenhouse gas emissions (scope 1) (2) The total emissions from perfluorinated compounds (PFCs)	(1) 972.28 tonnes CO_2e (2) 492.00 tonnes CO_2e	5-1 Greenhouse Gas Emissions
	TC-SC-110a.2	Discuss the short-, medium-, and long-term strategies or plans, reduction targets, and performance analysis of emissions in the management area	Please refer to 5-1 greenhouse gas emissions	
Process Energy Management	**TC-SC-130a.1**	Disclose the following energy consumption information: (1) Total energy consumption (including fuel and electricity) (2) Percentage of total energy consumption from the grid (3) Percentage of total energy consumption from renewable sources	(1) 32,227.88 GJ (2) 80.25% (3) 0%	5-2 Energy Management
Water Resource Management	**TC-SC-140a.1**	Disclose the following water resource extraction information: (1) The percentage of water intake from areas under high or extremely high water resource pressure in relation to the total water intake (2) The percentage of consumptive use from areas under high or extremely high water resource pressure in relation to the total consumptive use	The main production facilities for PlayNitride are located in Zhunan Science Park, which is not a high or very high risk area according to the WRI water pressure assessment map. (1) Total water intake: 14,354 thousand cubic meters (m³), water resource pressure zone 0%. (2) Total water consumption: Water consumption unrelated to evaporation, evapotranspiration, or consumption in the process.	5-3 Water Resource Management
Waste Management	**TC-SC-150a.1**	Disclose the weight of hazardous waste generated during the manufacturing process, along with its recycling percentage.	(1) Weight of hazardous waste: 87.62 tonnes (2) Percentage of hazardous waste recycled: 3.95%	5-4 Waste Management

Disclosure Theme	Indicator Number	Accounting Indicators	Disclosure Content	Corresponding Sections
Employee Health and Safety	TC-SC-320a.1	Methods and results of evaluating, monitoring, and reducing employee exposure to harmful environments	In accordance with the operational mechanism of ISO 45001:2018 Occupational Health and Safety Management System, PlayNitride reduces the risks of employees' exposure to hazardous environments through risk identification and assessment, planning, and execution of management plans, and by conducting regular and ad-hoc safety inspections and change management.　This mechanism is aimed at continuous improvement.	6-4 Employee Health and Safety
	TC-SC-320a.2	The total losses due to incidents related to employee health and safety violations	In 2022, there were no incidents resulting in violations of relevant regulations and subsequent penalties related to employee health and safety.	
Recruitment and Management of Global Professional Talent	TC-SC-330a.1	Explanation (1) Percentage of foreign employees (2) Percentage of expatriate employees	(1) There are 4 foreign employees, representing 1.04% of the total employees as of the end of 2022. (2) Percentage of expatriate employees: 0% (Currently, employees primarily operate from the Zhunan Science Park, Taipei office, and Tainan office, with no overseas expatriate employees).	6-1 Talent Attraction and Retention
Product Lifecycle Management	TC-SC-410a.1	The percentage of product sales containing IEC 62474 declared substances	0%	3-4 Product Lifecycle Management
	TC-SC-410a.2	In terms of energy efficiency at the processor system level: (1) Server, (2) Desktop computer, (3) Laptop computer	PlayNitride is a manufacturer and distributor involved in researching, developing, manufacturing, and selling nitride semiconductor materials and related applications.　However, it is not applicable to the product categories covered by this indicator.	
Procurement of Raw Material	TC-SC-440a.1	Describe the company's risk management of key raw material usage	PlayNitride regularly evaluates key suppliers and conducts annual audits to fully understand their current situation and mitigate procurement-related risks. Definition of key supplier: All direct materials suppliers and vendors for outsourced processing are categorized as key suppliers.	3-5 Procurement of Raw Material
Intellectual Property Rights Protection and Competitive Conduct	TC-SC-520a.1	Total amount of losses incurred due to violations of relevant regulations resulting from anti-competitive behavior	In 2022, PlayNitride did not experience any related incidents violating intellectual property protection and competitive behavior.	Intellectual Property Protection and Trade Secrets

Indicator Number	Activity Indicators	Disclosure Content	Corresponding Sections
TC-SC-000.A	Total production quantity	Pixel type chip carrier board COC: 8,162 pcs.	3-1 Products and Services
TC-SC-000.B	The percentage of production from our own factory facilities	100%	

Appendix: Taiwan Stock Exchange Sustainable Disclosure Indicators - Semiconductor Industry.

Number	Indicator	Types of Indicators	Annual Disclosure Status	Unit	Note
I	(1) Total Energy Consumption (2) Percentage of outsourced electricity (3) Renewable energy utilization rate	Quantification	(1) 32,227.88 GJ (2) 80.25% (3) 0%	One billion joules (GJ), percentage (%)	
II	(1) Total water intake (2) Total water consumption	Quantification	(1) Total water intake: 14,354 thousand cubic meters (m³) (2) Total water consumption: Water consumption unrelated to evaporation, evapotranspiration, or consumption in the process	Thousand cubic meters (m³)	
III	(1) Weight of hazardous waste generated and (2) Percentage of recycling	Quantification	(1) Weight of hazardous waste: 87.62 tonnes (2) Percentage of hazardous waste recycled: 3.95%	tonnes (t), percentage (%)	
IV	Explain the category, number, and ratio of occupational accidents	Quantification	0. In 2022, PlayNitride had no disabling injury incidents.	Ratio (%), quantity	
V	Disclosure of Product lifecycle management: including the (1) weight of scrapped products and electronic waste, and (2) the percentage of recycling (Note: Including sales of scrap materials or other recycling processes, relevant explanations should be provided)	Quantification	Not applicable as we are not a manufacturer of finished products	tonnes (t), percentage (%)	
VI	Description of Risk Management Related to the Use of Key Materials	Qualitative Description	PlayNitride regularly evaluates key suppliers and conducts annual audits to fully understand their current situation and mitigate procurement-related risks. Definition of key supplier: All direct materials suppliers and vendors for outsourced processing are categorized as key suppliers.	Not applicable	
VII	Total monetary losses incurred due to legal litigation related to anti-competitive practices legislation	Quantification	In 2022, PlayNitride did not experience any related incidents violating intellectual property protection and competitive behavior.	Reporting currency	
VIII	Production volume by main product category	Quantification	Pixel type chip carrier board COC: 8,162 pcs.	Varies by product type	

Appendix: Greenhouse Gas Inventory and Assurance Status

The company falls under the 'Capital less than 5 billion dollars' category. According to the Sustainable Development Roadmap regulations for listed companies, it has not yet reached the mandatory investigation schedule and is considered voluntary disclosure.

The greenhouse gas emission information in this report is investigated in accordance with ISO 14064-1:2018. The investigation report boundary includes scope one, scope two, and some categories of scope three emissions (Categories 1 and 2, and Categories 3 to 6). The organizational boundary of the investigation and the assurance scope are consistent with the disclosure scope of this report.

Greenhouse Gas Emissions (Scope One and Scope Two; Category 1 and Category 2)

Scope One (Category 1)				
Emission Scope	**Total Emissions** (tonnes CO_2e)	**Intensity** (tonnes of CO_2e/million dollars)	**Assurance Organization**	**Assurance Status Explanation**
Taiwan	972.28	2.4078	Note 1	Verification opinion as attached
Scope Two (Category 2)				
Emission Scope	**Total Emissions** (tonnes CO_2e)	**Intensity** (tonnes of CO_2e/million dollars)	**Assurance Organization**	**Assurance Status Explanation**
Taiwan	3,556.31	8.8068	Note 1	Verification opinion as attached

Greenhouse Gas Emissions (Scope Three; Category 3-6)

Scope Three (Category 3~6)			
Emission Scope	**Total Emissions** (tonnes CO_2e)	**Assurance Organization**	**Assurance Status Explanation**
Scope Three Total			
3-1 Purchased goods and services (category 4.1)	722.73	Note 1	Verification opinion as attached
3-2 Capital goods (category 4.2)			
3-3 Fuel and energy-related activities not in scope one or two (category 4.1)			
3-4 Transportation and distribution upstream (category 3.1)			
3-5 Waste generated during operation (category 4.3)	72.11	Note 1	Verification opinion as attached
3-6 Business travel (category 3.5)			
3-7 Employee commute (category 3.3)			
3-8 Upstream lease production (category 4.4)			
3-9 Downstream transportation and distribution (category 3.2)			

Note 1: The greenhouse gas emissions verification organization is the Industrial Technology Research Institute Measurement Technology Development Center

Appendix: United Nations Sustainable Development Goals (SDGs)

SDGs Goals		Corresponding Sections
Goal 3. Health and Well-being	3.4) By 2030, we aim to reduce the mortality rate of non-communicable diseases and promote mental health through prevention. 3.7) By 2030, ensure universal and accessible sexual and reproductive health services, including family planning, information, and education.	**A Friendly Workplace** 6-4 Employee Health and Safety 6-5 Health Promotion
Goal 4. Educational Quality	4.4) By 2030, significantly increase the number of young and adult individuals with technical and vocational skills to meet employment, formal job, and entrepreneurship demands. 4.7) By 2030, promote the acquisition of knowledge and skills necessary for sustainable development among students. This includes education on sustainable development, sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, awareness of global citizenship, respect for cultural diversity, and the contribution of culture to sustainable development.	**A Friendly Workplace** 6-2 Talent Development 7-1 Public Welfare Activities
Goal 5. Gender Equality	5.1) Eliminate all forms of discrimination against women. 5.5) Ensure women's full and effective participation in political, economic, and public decision-making, as well as equal opportunities for leadership at all levels of organizations.	**A Friendly Workplace** 6-1 Talent Attraction and Retention 6-3 Human Rights Management
Goal 8. Employment and Economic Growth	8.2) Achieve higher economic productivity levels through diversification, technological upgrading, and innovation, with a focus on high-value-added industries. 8.5) By 2030, ensure that every adult has access to suitable employment, including young people and individuals with disabilities, and achieve full and productive employment with equal pay for equal work. 8.8) Protect workers' rights and ensure a safe working environment for all, especially women and those in hazardous occupations.	**Sustainable Product Innovation** 3-1 Product Advantages 3-2 Technical Advantages **A Friendly Workplace** 6-1 Talent Attraction and Retention 6-4 Employee Health and Safety
Goal 12. Responsible Consumption and Production	12.5) By 2030, significantly reduce waste generation through prevention, reduction, recycling, and reuse. 12.6) Integrate sustainable development information into the company's operational plans to incorporate sustainable practices.	**Sustainable Product Innovation** 3-2 Technical Advantages **Environmental Sustainability** 5-3 Water Resource Management 5-4 Waste Management
Goal 13. Climate Action	13.2) Integrate climate change measures into overall decision-making, strategies and planning. 13.3) Enhance education, awareness, and the capacity of individuals and organizations to mitigate, adapt to, and reduce the effects of climate change, including early warning systems.	**Corporate Governance** 4-6 Climate-related Financial Disclosures **Environmental Sustainability** 5-1 Greenhouse Gas Emissions Management

PLAYNITRIDE