



2021 CORPORATE SUSTAINABILITY REPORT



About this report

Editing Principles

This is the corporate sustainability report published by E Ink Holdings, Inc. (hereinafter referred to as E Ink). Currently, it is published in Traditional Chinese and English. This report can also be downloaded electronically from the corporate sustainability section of E Ink's website. The scope of this report mainly covers the important operating locations of E Ink, including the Hsinchu and Linkou sites in Taiwan, the Yangzhou site in China and the USA sites. However, not all data from each site is available, so only the available data is disclosed and the source site of each data is indicated. With this corporate sustainability report, we hope to disclose the practices and results in the facets of corporate governance, product sustainability, green production, sustainable supply chain, enterprise care and project and stakeholders for the public to better understand E Ink and its products. We also hope that the public could feedback us so that E Ink could develop sustainably and become a world-class enterprise. All amounts mentioned in this report are calculated in New Taiwan Dollar (NT\$). Amounts expressed in other currencies will be remarked separately.

Reporting Period

This report discloses the information regarding our corporate sustainability management approaches, material issues, responses, actions and performance in the fiscal year 2021 (January 1 to December 31). For readers to better understand relevant information, some contents have been traced back to 2017.

Reporting cycle

E Ink publishes its corporate sustainability report on an annual basis. The previous year's report (2020) was published and released in June 2021 and the English version was published and released in October 2021. The current year's report (2021) was published and released in June 2022 and the English version will be published and released in October 2022. The next year's report (2022) is scheduled to be published and released in June 2023 and the English version will be published and released in October 2023.

Report Editing Guidelines

This report is based on the Global Reporting Initiative (GRI) GRI Standards for Sustainability Reporting and adopts the Core disclosure principles.

Report Information Editing Process

The information in this report is collected by each department, reviewed by the department head and then sent to the Corporate Sustainability Committee of E Ink for consolidation, editing and internal auditing. The completed report is sent to the chairman for review and confirmation before publication.

Report Assurance

The financial information referred to in this report is consistent with the consolidated financial statements of E Ink as of and for the year ended December 31, 2021, and has been audited and attested by Deloitte, which conducted a limited assurance in accordance with the Standards on Assurance Engagements No. 1, "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" issued by the Accounting Research and Development Foundation of the ROC (established with reference to the revised International Standards on Assurance Engagements (ISAE) 3000) and confirmed that it complies with the core option disclosure principles of the GRI Standards. Please refer to the Appendix to this report for the CPA's independent assurance report.

Contact us

Should you have any questions regarding this report, please contact us.

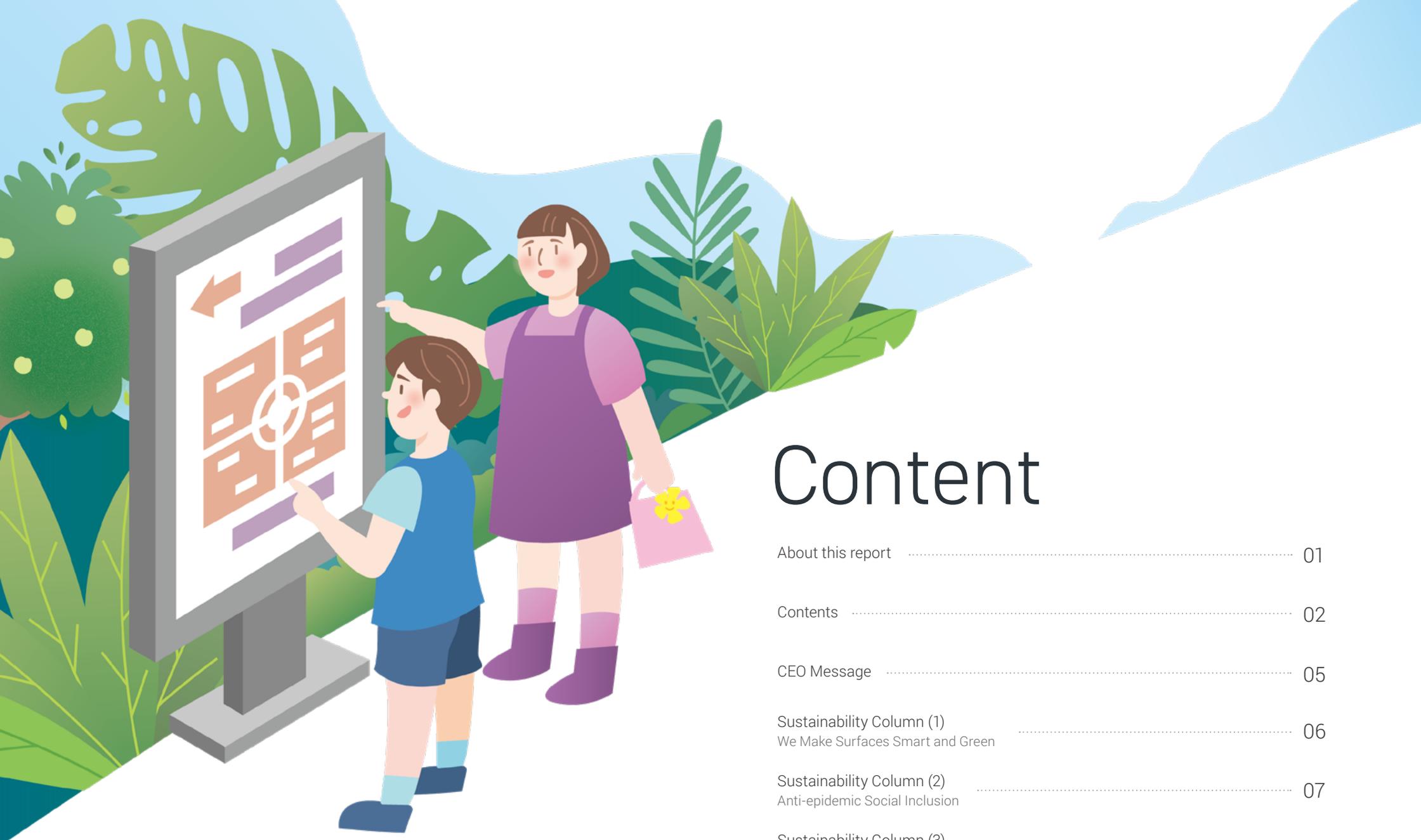
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E Ink Corporate Website



Report Download Website



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CEO Messages

The impact of the global COVID-19 pandemic on the economy and society in the recent years and the fiercer climate change that caused increased deterioration to the environment have brought about great challenges and threats to the people all over the world. As a leading company in the field of green display products, we have the responsibility to take proactive actions for zero carbon emissions. At the end of 2021, we officially announced the goal of net zero carbon emissions to be achieved by 2040. For this, we plan to accomplish three milestones in the coming years by using 10% green power at the end of 2022 (RE10), using 40% renewable energy by 2025 (RE40) and achieving the goal of RE100 by 2030 when 100% of green renewable energy will be used at our sites all over the world.

PESG - Sustainability Enabled by Green Technology

The ePaper technology, equips with the features of ultra-lower power consumption and low carbon emissions. The ePaper display can be used as a substitute for the one-off paper and it is key factor that makes E Ink a leading company in the green display technology. According to the Energy Management Efficiency IT Process analysis based on the FTSE Russell's Green Revenue 2.0 Data Model, 99.93% of our operating revenue in 2020 was composed by green revenue. This contributed positive effects to the environment and brought great environmental benefits.

As a result, We added Product as the key facet besides Environmental, Social, and Governance, thus formed E Ink's PESG facets. We improve and develop the ePaper technology from product design perspective to form new technologies that need less power and material, which generates less emissions and consumes less power with more environment-friendly advantages.

Low-carbon ePaper Applications in Sustainable Digital Products

We are dedicated to designing sustainable digital products and promoting low-carbon ePaper applications to smart cities, smart stores and personal digital readers.

In the past five years, 130 million eReaders have been in use globally, replacing the purchase of paper editions of books. It is estimated that paper books and LCD device would emit more than 100,000 and 50 times CO₂ vs. eReaders respectively throughout that time.

Over the past seven years, 600 million ESLs of around three inches in size have been installed worldwide. If we assume that the price and information changes four times a day, single-use paper price tags would create 32,000 times CO₂ versus ESLs. Electronic Shelf Labels can not only reduce the consumption of environmental resources but can also help significantly reduce CO₂ emissions versus traditional signage, contributing to more environmental sustainability.

In a comparison of the electricity consumed by 30 million 10-inch ePaper signage and 30 million 10-inch LCD signage used worldwide for continuous use over five years, the ePaper signage can reduce CO₂ by 12,000 times compared to LCD signage. In printed paper, ePaper signage can reduce CO₂ emissions by 60,000 times compared with printed paper.

E Ink's low power ePaper enables solar-powered ePaper signage and bus stops around the world to be net-zero devices, using 100 percent renewable energy.

In the last 5 years, 900k digital signs have been deployed; those using LCD displays emit 20 times the level of CO₂ vs. digital signage using E Ink displays.

Support and Implementation of the Sustainability Initiatives

We continue improving technologies and design of products to achieve the goal of net zero carbon emissions and developing low-carbon sustainable green products. We also support and implement various sustainability initiatives. Not only joining the Climate Group and RE100, the global corporate renewable energy initiative led by CDP Worldwide, but also becoming the first display manufacturer in Taiwan committed to accomplishing RE100 by 2030. We are also the first company in Taiwan that signed The Climate Pledge (TCP) and a member of the Science Based Targets Initiative (SBTi). We accept independent assessment and verification based on the carbon reduction goals.

Creation of Friendly Workplaces and Communication of More Social Care

As for the society, we offer competitive wages to the employees continuously, train talents proactively, and build friendly and happy workplaces by planning different welfare measures and activities. We received the award of "Best Companies to Work for in Asia 2021" for these achievements.

The "eRead for the Future" has been organized for its 5th year. In 2021, we invited our partners in the ePaper ecosystem for social welfare activities, including Rakuten Kobo, Netronix, Fitipower, Uniflex, Global Lighting, Henghao and Innolux. The partners and we donated 370 sets of Kobo Forma eReader devices and 19,240 ebooks. The total donation value was up to NT\$37.74 million with the book value calculated based on the licensing model of public libraries. Under the "eRead for the Future" project, donations were made to 98 schools and 19 libraries with 1,986 eReaders and nearly 160 thousand ebooks in favor of more than 30 thousand students. The total donation value was up to NT\$173.34 million.

Pursuit of Steady Profit and Commitment to Sustainable Environment

This year is the 30th anniversary of E Ink. We operated the business very carefully in the business cycle over the past years. Fortunately, our management team led the transformation of the Company in the changing environment of the industry. Our business in 2021 was very positive thanks to the endeavor of the employees. The annual operating profit reached a record high in the past ten years. The net profit and EPS were at the second highest in the history. The ROE grew by two times in comparison with the level in 2017, creating the maximized profit for the shareholders.

We take environmental sustainability as an important mission while pursuing steady profit. In addition to contributing to the employees and shareholders with our profit, we are dedicated to reducing the carbon emissions from the smart displays in the digital era by developing and promoting power-saving and carbon-reducing ePaper applications. We will invest in our business continuously and make effort for the sustainable development and global environmental sustainability in the next thirty years.

CEO

李政昊



Sustainability **01** Column

We Make Surfaces Smart and Green

In response to the 17 Sustainable Development Goals (SDGs) announced by the UN, we established our sustainability goals for our core technologies and products in 2016 with reference to six SDGs. With the improvement of the ePaper technology, diversification of the products, and the extended ecosystem of the industry, the bi-stability and low-power consumption features of the ePaper have helped in the development of low-carbon environment-friendly smart IoT devices and the promotion of sustainable smart cities.



Compared with other display technologies, our ePaper display (EPD) uses the full reflective display technology, contains no backlight and blue light to irritate and harm the human eyes. As a user-friendly display technology, the ePaper can be also used in the healthcare field, such as smart bedside cards, drug labels, outpatient signage, digital tablets, ePaper diagnosis and medical records, etc.



The eReader is recognized as the best paper-like display technology so far. The paper-like texture of ePaper is easy to write on and its soft and eye-friendly features gradually promote it being widely used in the next generation of educational solutions. Color eBook readers and color ePaper notebooks help users read and write digitally while being comfortable for the eyes and not limited by color, and are a great tool for remote education applications in times of the epidemic.



ePaper is characterized by its extraordinary low power consumption. When displaying information for similar purposes, EPD can significantly reduce energy consumption and carbon emissions.



Based on innovation and sustainability, we persistently develop EPD products to be applied in various applications. By developing advanced technologies, we offer revolutionary products, better user experience, and more environmental benefits. We also select eco-friendly materials to be dedicated in clean production and strengthen a sustainable value chain through the co-prosperity developments in the supplier and customer ecosystems.



With advantages including lightweight, slim, lowpower, and sunlight readable under direct sunlight, the ePaper is a total solution of unlimited possibilities for information display, such as transportation, building, healthcare, or public information, for the sustainable development of smart cities. The ePaper can further be combined with detectors and cloud storage to display data and information to become one of the system solutions for IoT and big data.



E Ink's technology is commonly referred to as "bistable", the ePaper display will be retained even when all power sources are removed. This means that the display is consuming power only when something is changing. The widespread and long-term use of E Ink products to replace existing display technologies can significantly reduce energy consumption and carbon emissions and mitigate the impact of global climate change brought about by greenhouse gases. ePaper is suitable for applications in non-single-use and re-usable packages to display information, replacing all kinds of traditional paper shipping documents and labels, and achieving the transformation of information digitization.

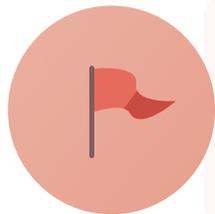
Sustainability **02** Column

Anti-epidemic Social Inclusion



Driving force for social inclusion

- Link to SDGs
- Connection to company resources
- Needs of society



Objective for social inclusion

- Promotion of digital reading to minimize the gap of educational resource discrepancy
- Caring for the disadvantaged groups
- Contribution to the communities



Anchor for social inclusion

- Anti-epidemic: We have complete epidemic prevention measures to take care of the health and safety of employees and their families; donated epidemic prevention and medical supplies to the community where the Company is located to assist in easing the epidemic.
- eRead for the future: promote digital reading and eliminate the gap in educational resource
- Local care: to pool corporate resources and involve employees to take part in charity and give back to society.

Since 2020, we have assessed our support of public welfare for the communities at our business locations based on the spirit of the "E Ink Can Help!" and made adjustment on a rolling basis. Since the epidemic cases occurred in Taiwan at the beginning of May 2021, we have monitored the epidemic continuously and worked with local governments to understand the demands for epidemic prevention resources and participate in relevant activities in Taiwan.



- As the COVID-19 pandemic was spreading all over the world, we tried to understand the supplies needed to prevent the epidemic. We used our online resources and supplies deployment to donate the required epidemic prevention and medical supplies to the local communities in a timely manner.
- The two main themes of social inclusion, eRead the future and local care, were launched.

1. eRead for the Future: a high-quality eReader equips with the features of ePaper (see Chapter 3 for details), including digital technology and eye protection, providing students with a focused and comfortable reading experience
2. Small social care projects are planned by each site according to the needs of the local community.



- Because of the COVID-19 pandemic, students in some countries are unable to attend school, and distance learning is an inevitable learning method. Electronic hardware has become the most important apparatus in bridging the digital learning gap, so we donated eReaders and eNotes to schools to give students a different learning experience.
- The eRead for the Future is the core of the project to promote digital reading and improve the quality of digital education and learning through eBook readers, reading take-away, composition and drawings and digital reading lectures.



- In the midst of the severe COVID-19 epidemic, direct human contact is drastically reduced and a zero-contact economy is created in response. We are working with global ecosystem partners to combat the epidemic, protect the health and safety of employees and their families, and maintain uninterrupted operations along the value chain of the ePaper industry, creating co-existence and co-prosperity.
- In conjunction with our management strategy of generating greater value for ePaper for our partners in the ecosphere and collaborating with our supply chain partners, we wish to give back to society as outlined in our core values to promote positive development in our society.



In accordance with the relevant requirements of the Social Value International evaluation of the Social Return on Investment (SROI), a preliminary assessment of the eRead for the future project would generate **\$2.63** in social benefits for every \$1 invested.

◀ eRead for the future results video

In May 2021, during the rapid outbreak of the COVID-19 pandemic in Taiwan, there was a need for a large number of PCR testing facilities to help protect the safety of the community. The Company immediately contacted the local city governments where the sites were located to understand the needs of the first-line medical professionals, and took the initiative of PCR testing huts donation. A total of four positive pressure PCR testing huts were donated to the Hsinchu City Government, Taoyuan City Government and Hualien City Government. They were set up at Hsinchu Science Park Screening Station, Taoyuan Minsheng Hospital, Taoyuan Zhongmei Hospital, and Hualien County Ruisui Township Health Center. These four independent, clean, safe and comfortable positive pressure PCR testing huts were made with a positive pressure design where air could only be sent from the inside to the outside. The air-conditioning equipment was installed inside the positive pressure PCR testing huts to maintain a constant temperature and humidity environment, so that medical professionals could carry out sampling work in a safe, protective, clean and comfortable environment to enhance the quarantine protection of front-line medical personnel.



Taiwan

- eRead for the Future project: Taoyuan City Government
- COVID-19 Prevention Assistance/Local Care: Donated a total of four positive pressure PCR testing huts to Hsinchu City, Taoyuan City and Hualien City Government in 2021.



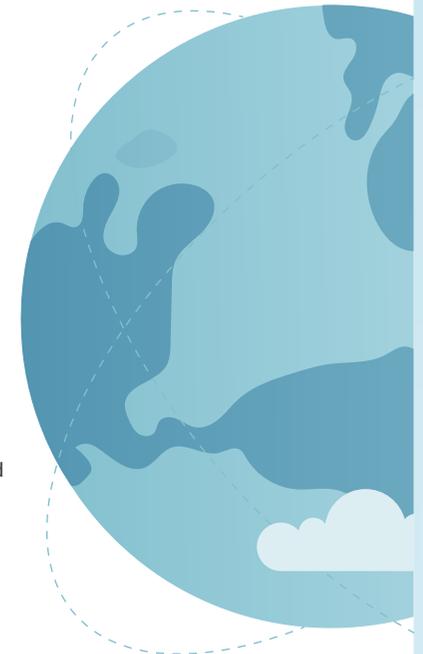
USA

- eRead for the Future project (2020)
- Local Care: Charitable donations (used clothes and toys), blood donations from employees, rides for the ALS patients, food bank volunteering, support of Afghan refugees, etc.
- COVID-19 Prevention Assistance: Donation of medical gloves and medical masks (2020)



Yangzhou

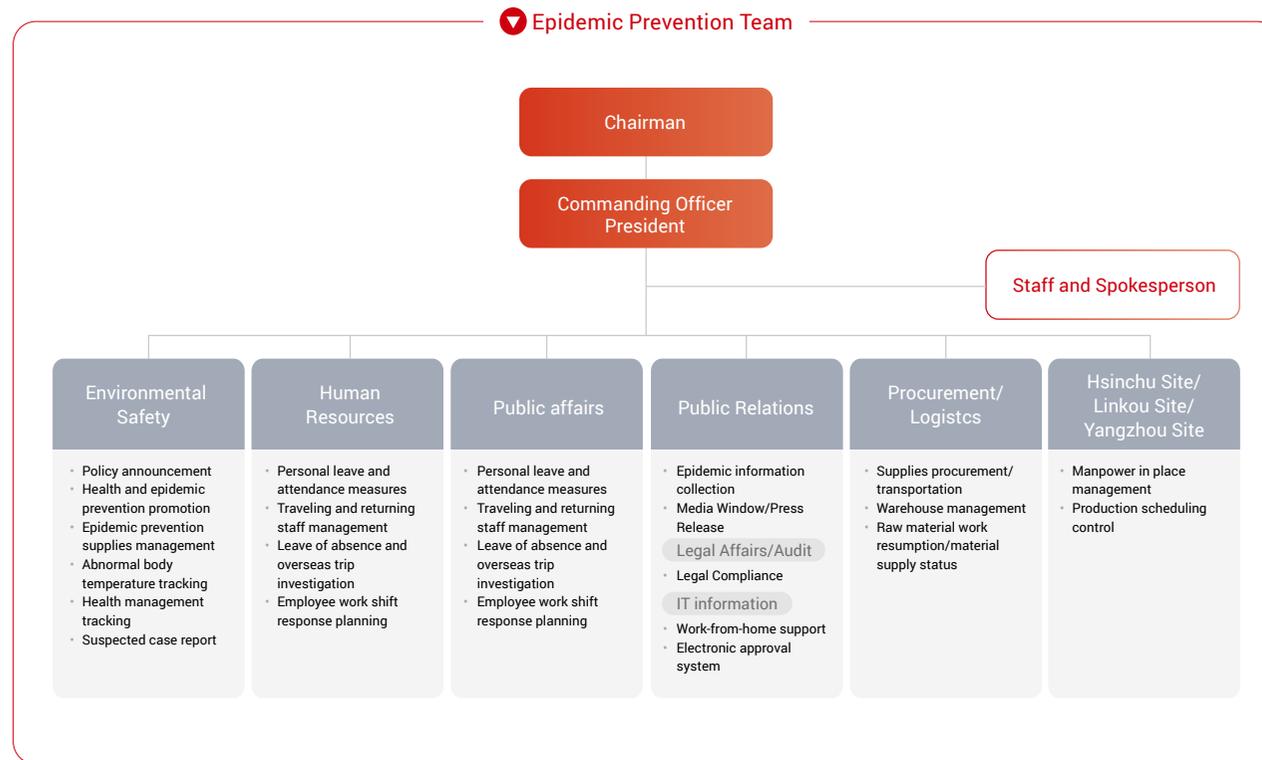
- eRead for the Future project:
- Local Care: Long-term sponsorship of the Ryefield Project (donation of 2 water purification devices and 550 thermos flasks to schools in remote mountainous areas of Guizhou in 2021)
- COVID-19 Prevention Assistance: Donation of RMB 300 thousand to Yangzhou Charity Federation



Sustainability Column 03

E Ink's epidemic prevention response and operations continuity

In response to the COVID-19 epidemic, E Ink issued an announcement at the end of December 2019 with reference to the press release issued by the Central Epidemic Command Center, alerting employees to the development of the epidemic and making preemptive deployment. Based on the experience of SARS epidemic prevention measures, the Chairman and the President convened an epidemic prevention meeting, set up an epidemic prevention working team immediately according to the authority and responsibility of each department, discussed the impact of various epidemic scenarios, and began to prepare various epidemic prevention supplies and internal corporate measures to ensure the health and safety of employees and the continuity of business operations.



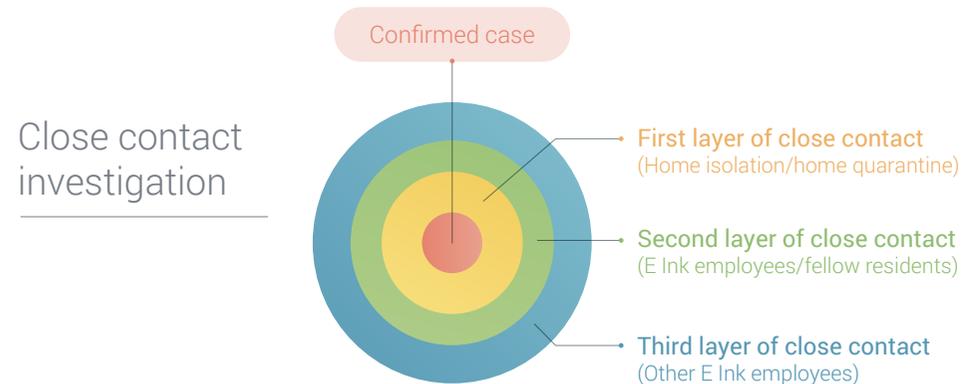
Six major categories of pandemic containment

The epidemic prevention measures were divided into six categories. Considering the internal and external impact of the Company, we established practices according to different epidemic scenarios and strictly implemented them. We held a daily epidemic prevention meeting to track the progress of implementation, review the implementation status of each department and review and adjust epidemic prevention measures on a rolling basis at any time. All colleagues worked together to ensure that there was no negligence in the epidemic prevention work.



Concentric circle of epidemic prevention measures

E Ink proposed a standard procedure of concentric circle theory for epidemic prevention measures to address the possible contact between site employees and confirmed cases. The concentric circle structure can be followed to take preventive measures quickly in response.



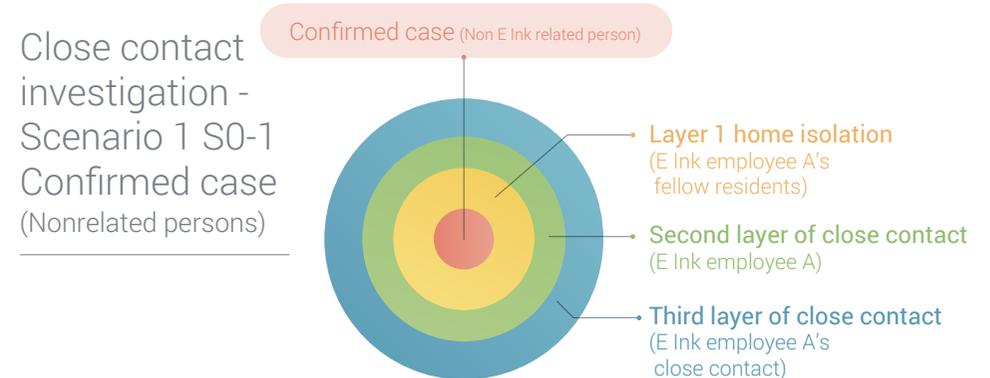
- After receiving the notification for home isolation/home quarantine, compulsory staying at home for 14 days
- If there are clinical symptoms such as fever and epidemiological conditions (travel history/contact history), specimen collection and testing will be conducted after notification.

The investigation of close contacts within the Company 14-day contact history

- * Fellow residents
- * Dining together
- * Same department/same office/seat neighbors
- * Commute carpool/business trip together
- * Business interactions/meeting room gathering
- * Clubs/Gatherings/Outings/Events/Courses

Activated shift and work division, and implemented the pandemic survey

In May 2021, the COVID-19 pandemic containment alert was raised to level 3 from level 2. E Ink Holding activated the shift and work divisions immediately; other than the required production personnel at the production line, the personnel are planned to work at home remotely, with a rigorous restrictions for entering the sites, for decreasing in-person contact. In addition, real-time announcement of the footprints of confirmed cases in the living circle of the site is made daily, and conducting pandemic surveys for all employees, with pandemic containment concentric contingency measures, for timely and early responses, while enable employees to instantly understand the pandemic and high-risk places, to reduce unnecessary outing, and reduce employees' infection risk.



Layer	Attribute	Action
Confirmed case	Non-related persons	Inpatient treatment
Layer-1	E Ink employee A' s fellow residents	Notification of home isolation, compulsory staying at home for 14 days
Layer-2	E Ink employee A	<ul style="list-style-type: none"> • Homeself health management 14 days, medical office tracking management (preventive isolation) • Investigation of A' s close contact (preventive investigation) • Cleaning and disinfection
Layer-3	E Ink employee A' s close contact	<ul style="list-style-type: none"> • Maintain normal operation • Health tracking 14 days

Encourage vaccination to increase the protection

To encourage employees to actively get vaccinated, E Ink provides two days of paid vaccination leave for each dose for employees, so that the second dose vaccination rate of employees reached 96.1%, and the booster dose vaccination rate was also as high as 81%, far more higher comparing to the vaccination rate in Taiwan. In the face of the epidemic, E Ink followed the epidemic prevention guidelines to protect the safety of its employees, supported frontline healthcare personnel with actions, fulfilled its corporate social citizenship responsibilities and continued to be committed to its ESG goals.



E Ink 2021 ESG

Sustainability Performance Summary

G Corporate Governance

Corporate governance

Top **6~20%**

The 8th Corporate Governance Evaluation Ranking

0 case No significant violation cases

100%

Attendance of the Board of Directors, Audit Committee, and Compensation Committee

>315 sessions

Stakeholder communication through more than 315 interactive communication meetings

8 years A new high in profit in 2021



operating revenue reached
NT\$19,650,564
thousand

operating gross profit reached
NT\$8,587,820
thousand

earnings per share was
NT\$4.53

Sustainable supply chain

100%

Critical supplier response rate



87.8 points

Supplier evaluation and audit score on average

>92 points

Customer satisfaction survey score

P Product Sustainability

>99% Green revenue

14%

R&D funds to revenue ratio; NT\$2.65 billion in 2021

>6,000 patents

Accumulated global effective patents

↓50 times

CO₂ emissions from eReader devices against TFT-LCD tablets

↓1.2 thousand times

CO₂ emissions from 10" ESLs against 10" TFT-LCD labels

↓200 thousand tons

CO₂ emissions from ePaper bus stop signs against TFT-LCD

S Social Inclusion

Enterprise care

74%

Employee satisfaction

>2,600 participants

Participants of professional competency courses

7 years

Raise of wages

>2 million hours

As for accumulated accident-free work hours, Hsinchu Site Joining the "Zero Accident Work-Hours" to demonstrate the determination to reduce accidents

Project and stakeholders

>8.6 million



The Social Inclusion Core Project includes the investment of resources in charitable donations, community investments, and business initiatives.

7 partners



Implementation of the "eRead for the Future" project together with the partners in the ePaper ecosystem

10 years

Our Yangzhou Site has participated in the Ryefield Project for ten consecutive years to assist schools in rural regions by providing relevant resources. The accumulated amount of donation has exceeded **RMB 869** thousand, with **12** schools in the rural regions supported.

E Environmental Sustainability

No.1

The first display manufacturer committed to accomplishing RE100 by 2030

2040

Commitment to accomplishing the goal of net zero carbon emissions

1.5°C

Commitment to the Science Based Targets initiative by setting objectives for carbon reduction based on a rise of 1.5°C in the global climate



↓17%

GHG Emissions Intensity decreased 17% from a year before



↓21%

Water consumption decreased 21%, from a year before



>1,900 certificates

Accumulated 1,979 renewable energy certificates purchased



CHAPTER 01

CORPORATE GOVERNANCE

Effective Governance that Promote Business Growth

1-0 Milestones

1-1-1 Company History

Date	Major Events
June 16, 1992	The Company was established
Dec 1995	Hsinchu Site with a designed monthly capacity up to 6,000 pieces was completed
Jan 1997	Hsinchu HQ Building was completed
Sep 2001	Expanded equipment to raise monthly capacity to 36,000 pieces
Mar 2004	Officially listed on TPEx on March 30
May 2005	Acquired Philips' EPD business
Oct 2006	Established the US subsidiary to expand to the US sales network
Jul 2008	Acquired shares of Korea company Hydix Technologies Co., Ltd
Dec 2009	Acquired 100% shares of E Ink of the USA

Date	Major Events
Jun 2010	Changed the company's English name to E Ink Holdings Inc.
Nov 2012	Acquired shares of SiPix for its Microcup® technology and patents to broaden and integrate E Ink's EPD patent deployment
May 2013	Announced the E Ink Spectra™, a tri-color EPD including red or yellow, black, and white
Jan 2015	Announced the E Ink Prism™ color EPD technology
May 2016	Unveiled E Ink Gallery™ (ACeP™), an advanced color ePaper technology
Apr 2017	Established a joint venture with SONY Semiconductor, Linfiny Corporation, to jointly engage in the ePaper display business
May 2018	Announced the strategic partnership with France company SES-imagotag to extend IoT retail market presence
Jun 2019	Subsidiary Yuen Yu Investments merged with Yuanhan Materials and changed its name to Yuanhan Materials Inc
Oct 2019	Subsidiary Yuanhan Materials merged with SiPix Technology to streamline the organization and management of the E Ink Group and enhance the subsidiaries' operational efficiency
Dec 2019	Unveiled E Ink Kaleido™ (Print Color ePaper) to expand the smart application of color ePaper.
2020	E Ink Gallery™ and E Ink Kaleido™, two major color technologies, were commercially available and in mass production, moving into the era of electronic color ePaper and making the year the first year of E Ink's color ePaper world
Dec 2020	To meet the market demands, the Board of Directors adopted the Hsinchu Site ePaper capacity expansion plan
Mar 2021	To meet the market demands, the Board of Directors adopted the Hsinchu Site ePaper capacity expansion plan
April 2021	Announced the E Ink Spectra™ 3100 Four-color ePaper technology (black, white, red and yellow)
May 2021	Invested in Nuclera Nucleics Limited, the digital microfluidics technology company in the UK, to expand the ePaper core technology application to the biotechnology field
June 2021	The subsidiary, Transcend Optronics, made investment in factory establishment so as to develop the business related to upstream materials of ePaper modules
October 2021	The subsidiary, E Ink Corporation, expanded the material capacity of e-ink
Dec 2021	Expanded the scale of the Hsinchu operating headquarters with a new building and a multi-story car parking lot to build an ePaper R&D and manufacturing center
March 2022	Unveiled the E Ink Gallery™ Plus full-color ePaper module of next generation
April 2022	Announced the latest generation print color ePaper technology E Ink Kaleido™ 3, five-color ePaper E Ink Spectra™ 3100 Plus (black, white, red, yellow and orange), and full-color ePaper technology E Ink Gallery™ 3

1-2 Global Locations

In 1992, E Ink was established in Hsinchu Science Park as the first TFT LCD manufacturing Site in Taiwan. In view of the rising demand for TFT-LCD (Thin Film Transistor Liquid Crystal Display) in 2002, E Ink established Transcend Optronics in Yangzhou, Mainland China, to produce and manufacture back-end modules for end-use equipment manufacturers.

In the 1990s, at the beginning of the development of digital publishing, the concept of "ePaper", an emerging display, was born. ePaper started a new trend across the world for its great number of useful characteristics: paper-like legibility, easy-on-the-eyes, energy-efficient, ultra-low power consumption, and viewable under sunlight. Foreseeing the future development of ePaper, E Ink ventured into the research, development, and production of ePaper and acquired Philip's ePaper business in 2005, thereby becoming the world's largest ePaper manufacturer and supplier. Later in 2009, the Company acquired E Ink - the key electronic ink technology proprietor in the US, followed by the acquisition of SiPix in 2012 - a producer of micro-cup e-ink film in Linkou, Taiwan. At this point, we have effectively completed the integration of ePaper production chain covering electronic ink, ePaper panel, and ePaper module manufacturing.

Through our sales offices in major markets (Hsinchu operating headquarters, Linkou, Shenzhen, Tokyo, Japan, Seoul, South Korea, and Billerica, USA) and our R&D centers (Hsinchu operating headquarters, Linkou, Fremont, USA, Tokyo, Japan, and Yangzhou, Mainland China) where we continue to invest in technology breakthrough, we have integrated R&D, manufacturing, and sales with leading technology, excellent products, and mature mass production capabilities. We have been steadily supplying to well-known companies such as Amazon, Kobo, etc. The ePaper modules used in the world's most famous eBook readers are all produced by E Ink Group.

After establishing a firm foothold in the eBook reader market, E Ink began to plan for applications in other fields. Starting from the development of three major technologies in 2015: color, flexible, and reference design (development and evaluation kit), and after the maturity and stability of the related technology and capabilities, in 2016, Electronic Shelf Label (ESL), eNote, and eSignage were the three major growth engines of the Company, which gradually drive

the steady growth of the Company's business. Between 2017 and 2021, on top of maintaining steady growth in our ESL sales, we also launched e-Note related products in collaboration with renowned brand names such as Fujitsu in Japan, reMarkable of Europe, Lenovo, iReader, and Hisense in China and achieved considerable success in the domains of education and professional applications. Our digital signage also enjoyed considerable growth in the field of transportation, with our products chosen for bus time table at bus stops in Taipei City and New Taipei City, Boston, Shanghai, Fuzhou, and Naju (South Korea), along with digital license plates in California and transit advertising in Germany and so forth.

In recent years, with the trend of the Internet of Things (IoT) growing strong, relevant products have begun to thrive. The fact that smart IoT products are more demanding in terms of power consumption and operation in outdoor environments, the trend makes the strengths of ePaper (i.e. ultra-low power consumption, readability under direct/strong light, continuous display without power consumption) stand out even more and will definitely lead to more diverse applications in the future.

In addition to the continuous refinement of existing strengths, E Ink continues to invest in research and development resources. Its R&D personnel integrates expertise in materials, chemistry, electronics and mechanics to break through technological bottlenecks. In 2019, E Ink announced the first year of color ePaper. Color ePaper technology entered the commercial and mass production phase in 2020 with two major color ePaper technologies, Advanced Color ePaper (E Ink Gallery™, Advanced Color ePaper, ACeP™) and Print Color ePaper (E Ink Kaleido™, Print Color ePaper), which broke through the limitations of black and white display.

E Ink continued upgrading the ePaper technology in 2021 and conducting global deployment in the education, retail, transport, logistics and medical care areas with three major ePaper technologies to extend the ePaper applications continuously:

- E Ink Kaleido™ Plus (Print Color Technology) has a warm color display and is capable of playing animations and videos. The product is suitable for educational applications such as textbooks and picture books and is a brand new digital reading and writing alternative in professional applications.
- E Ink Spectra™ 3100 is an ePaper product with vibrant and highly saturated black, white, red and yellow colors. It is suitable for electronic shelf labels and promotion signages and can meet the color marketing requirements of retailers with rich advertising and promotion content. A flashing function, E Ink Sparkle™, during image change of is optional to produce more flexible eye-catching effect.
- E Ink Gallery™ Advanced Color ePaper uses E Ink ACeP™ full-color ePaper display technology. The paper-like texture of the advanced color ePaper gives it the visual effect of a printed poster, making it suitable for use in public display signages, commercial signage, and digital display carriers for museums and galleries.



Color ePaper video

Looking forward, E Ink will continue to invest in technology research and development, so that our technology capability and profile will be more solid and continue to be a technology leader in the industry, and that the ePaper will continue to grow in the fields of smart retail, smart transportation, and smart education, and expand into new applications in smart offices, smart logistics, smart factories, smart healthcare, smart buildings, and smart homes.

Name of organization	E Ink Holdings Inc.
HQ location	Taiwan Hsinchu Science Park (HSP), No. 3, Lixing 1st Road, Hsinchu Science Park, Hsinchu City, Taiwan (R.O.C.)
Major product or service ranges	Research, development, manufacture, and sale of ePaper technology-related materials and products, such as FPL, e-paper Display, EPD, and so forth
Major countries or markets served	The USA, Europe (Germany and France), Japan, and China
Number and distribution of sales locations	We have eight sales locations, including Hsinchu and Linkou in Taiwan, Yangzhou and Shenzhen in China, Billerica and Fremont in the USA, Japan, and South Korea.
Nature of ownership and legal form	E Ink Holdings is a company limited by shares founded in Taiwan in June 1992 and was officially listed on the Taipei Stock Exchange (TEPx: 8069) in March 2004.
Total number of employees	Taiwan: E Ink (1,069), YHMI (35) Mainland China: Yangzhou Site (730) and Shenzhen Office (14) USA-EIC (389) South Korea-Hydis, EIK (11) Japan-EIJ+Linfinity (18)
Total Assets	Total Equity 35,697,885,000 Total Liabilities 21,312,114,000 Total Assets 57,009,999,000
Product Sales	Domestic: 1,131K units Export: 32,457K units

1-2-1 Worldwide Presence



Asia



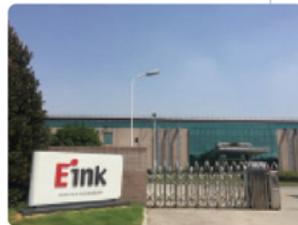
E Ink Holdings
(Global Operating Headquarters)

HQ for R&D, sale, and application service.
No. 3, Lixing 1st Road,
Hsinchu Science Park, Hsinchu City 300,
Taiwan



E Ink Linkou Site

ePaper manufacturing Site
Sales and application service office
No. 199, Huaya 2nd Road, Guishan District,
Taoyuan City, Taiwan 33383



Transcend Optronics

ePaper manufacturing Site
No. 8, Wuzhou West Road,
Yangzhou Economic and
Technological Development Zone

E Ink Shenzhen Office

Sales and application service office
9F, Financial Service & Technological
Innovation Building 1, Sci-Tech. Park. No.8,
Kefa Road, Nanshan District, Shenzhen,
Guangdong Province, PRC

E Ink Japan Office

Sales and application service office
6F, Shinjuku Mitsui Building No.2
3-2-11 Nishishinjuku Shinjuku-ku,
Tokyo, 160-0023, Japan

E Ink South Korea Office

Sales and application service office
9F, Urbanbench Bldg., 325,
Teheran-ro, Gangnam-gu,
Seoul, 06151, Korea



North America



E Ink Fremont Site

R&D center and business location
47485 Seabridge Drive Fremont,
CA 94538 USA



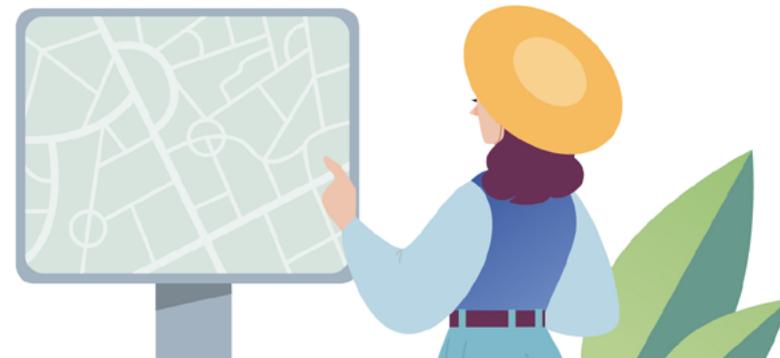
E Ink Corporation (Billerica, MA USA)

R&D, sales, and application service office
1000 Technology Park Drive,
Billerica, MA 01821 USA



E Ink South Hadley Site

Business location
7 Gaylord Street South Hadley,
MA 01075 USA



New ePaper R&D & manufacturing center Promotion of sustainable development

In 2016, E Ink was transformed to be a company focusing on R&D and manufacture of ePaper. As the ePaper market grew, the Company announced the expansion of the ePaper manufacturing capacity and the increase of the employees. We planned to scale up the Hsinchu headquarters with a new building and a multi-story car parking lot, in which an investment of NT\$1.912 billion is expected. The new building was built based on the concept of green sustainability for an ePaper R&D and manufacturing center. The ePaper film and color ePaper technologies and related R&D and production will be the focus in the future. The building will be completed in 2023 as planned.

E Ink connected saving of power and energy with ePaper technology and planned the new building in line with the nine systematic assessment indicators of EEWH. In addition to using recycled building materials, the Company integrated the ecology, energy saving, waste reduction, and health in the green design ideas in the hope to realize the vision of environmental sustainability under ESG in every stage from the infrastructure, business operation, manufacturing to core products.



1-3

Business Strategy and Development



1-3-1 Business Strategy and Performance

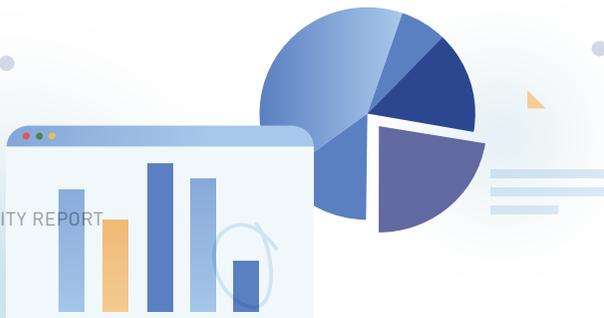
Business Strategy

The global economy and environment in 2021 remained affected by COVID-19 and subjected to the uncertainty in the severity and relief of the epidemic. The Company faced the challenges in terms of operational management, production, manufacturing, smooth shipment, and supply chain coordination. However, E Ink had substantial growth in 2021 thanks to the sound and efficient operating foundation. The consolidated revenue of the Company in 2021 reached up to NT\$19.65 billion, a new record high in the recent nine years. The operating profit margin and net profit margin were 15.4% and 26.2%, respectively. The net profit after tax was NT\$5.15 billion and the EPS was NT\$4.53, another new high in the recent ten years.

Looking back at the business and operation development in 2021, the growth of eReader and eNote will be benefited continuously from the stay-at-home economy, remote teaching and work from home. The contactless economy remained speeding up the digital transformation of the retail and department store industries and stimulated the increase of the demands for ESL. To respond to the prospects of the ePaper industry, the E Ink's Board of Directors adopted the increase of two production lines in Hsinchu Site in 2021. With this and the capacity expansion plan announced in 2020, the Company will have four additional production lines to meet the demand of the growing market. Meanwhile, the Company launched the factory establishment plan in Yangzhou in June 2021 to develop the business related to upstream materials of ePaper modules, and expanded the material capacity of electronic ink in the US in October 2021. Also, we established a new building and a multi-story parkade in Hsinchu, Taiwan in response to the increase in the production capacity and number of employee.

The eReader and eNote find their applications in the smart education, smart office and digital reading and noting areas. With the introduction of the new E Ink Kaleido™ Plus Print Color Technology in the market, the option of the better optical effect and larger screen enables E Ink to assist customers in developing eReader and eNote products that ensure an experience more similar to reading a printed book. The Company makes a contribution to the change of the eReader and eNote with our own color ePaper technology.

In the retail application, electronic shelf labels with a dynamic display function is capable of synchronizing online and offline price changes for promotion. It not only replaces the one-off



printed price label, but also simplifies the price change process and improves the operating efficiency of retail stores. To meet the color marketing requirements of the retailers, the color display of ePaper evolved from black and white to the three-color system (black, white and red or black, white and yellow) of E Ink Spectra™ 3000 and the four-color combination (black, white, red and yellow) of E Ink Spectra 3100™ in 2021, to provide retailers with more product portfolios. The development trend of the Smart Retail and contactless economy speeds up the digital transformation of the retail industry and the installation of the electronic shelf labels, and further injects growing momentum in the retail applications. In addition, as the issues of low carbon and environmental sustainability have become a concern in many industries, the replacement of one-off printed price labels with electronic shelf labels and the lower power demand of the ePaper featuring low power consumption and continuous display without consuming the power are helpful for the retailers and department stores to deploy digital solutions of sustainable values under ESG.

As for the electronic digital signage in the IoT application, the features of the ePaper including ultra-low power consumption, continuous display without consuming the power, and readability under sunlight in conjunction with the solar power supply and power storage system facilitate the operation in the mode of zero carbon emissions. These are also helpful for the development of smart cities without additional power consumption and the demonstration of the sustainable development values of the product. With the large-sized and color ePaper, E Ink will continue to work with our ecosystem partners on smart city and smart medical applications.

To extend and enhance the development of the ePaper industry and collaborate with our partners in the ecosystem to develop the opportunities in the ePaper applications, we form a platform of "E-Paper Industry Alliance" together with BOE, a panel manufacturer in China, and Jiangxi Xingtai Technology, a company under Holitech Technology Co., Ltd., with the focus on eight applications in the smart education, smart office, smart retail, smart transport, smart logistics, smart factory, smart medical service, and smart civil aviation areas. With the E-Paper Industry Alliance as a platform for the development of the industry, E Ink collaborates with the members of the Alliance to make complete and integrated deployment in the supply chain, develop the ePaper market and applications, and drive the ePaper industry for its continuous growth together.

As the ePaper technology keeps improving, E Ink enhances the protection and management of our intellectual properties. In addition to passing the TIPS (Taiwan Intellectual Property Management System) verification in 2021, we will continue protecting the patents, R&D technologies and trade secrets in terms of knowledge and risk management to avoid infringement or illegal disclosure.

One of the key ePaper technologies, Digital Microfluidic, E Ink collaborates with Nuclera, a biotechnology company, to realize multiple applications with ePaper related technologies. E Ink separated the DMF team from the E Ink Corporation, the US affiliated company of E Ink, into a subsidiary of Nuclera (Nuclera Nucleics Ltd) in the United States, to acquire Nuclera's shares and become its biggest strategic shareholder. When the DMF is integrated with Nuclera's biosynthesis technology, the advanced lab-on-a-chip enables users to perform digital programming with a desktop model of synthetic bioprinting system of protein and gene.

In addition, E Ink has continued to refine its R&D capabilities and has been recognized with awards in the technology and technique categories. E Ink Kaleido™ Plus won the Silver Award at the 2021 Taiwan Excellence Award and E Ink Spectra 3100™ All-in-One IC won the 2021 Computex Best Choice Award - IC & Components, continue demonstrating our strength in the R&D of ePaper technology.

In terms of sustainable development of ESG, in addition to receiving the Asia Responsible Enterprise Awards (AREA) for the first time, E Ink won the international "Green Leadership" and "Investment in People" awards, received the TCSA "Corporate Sustainability Report Awards - Gold Award in the Electronic Information and Manufacturing Industry" for five consecutive years, and was presented with the "Taiwan Corporate Sustainability Performance Award" and "Single Performance Award - Growth Through Innovation Leadership Award". E Ink was also ranked in the S&P Global The Sustainability Yearbook 2022 for the first time with our outstanding performance as one of the Top 10% in the Electronic Equipment, Instruments & Components category of the S&P Global Corporate Sustainability Assessment. In addition, E Ink was listed in the ESG related indexes by TPEX and other institutions, including three indexes of TIP TPEX ESG Index, TIP TPEX ESG ITE Total Return Index, and TIP TPEX ESG Growth Total Return Index. Moreover, E Ink received the "Best Companies to Work for in Asia 2021" issued by HR Asia as a recognition of our endeavor in the training of talents, remuneration and welfare, and friendly work environment. These awards and the incorporation in the indexes represent the recognition of our outstanding ESG performance in the environmental sustainability, social inclusiveness, and corporate governance.

Among the ESG goals, mitigation of the climate change has become a core task for every citizen of the planet. The governments and companies in the world are investing resources in the net zero carbon emissions, carbon neutrality, climate neutrality, and other environmental sustainability actions. In May 2021, E Ink achieved the goal of 10% in the use of renewable energy at our Hsinchu Site and became the first company in Taiwan that has fulfilled the obligation of a major power user specified in the Renewable Energy Development Act. The Company also established three major goals in 2021. These goals, which will be achieved in phases, are 40% in the use of renewable energy in 2025, 100% in the use of renewable energy in 2030 to achieve the RE100 goals, and satisfaction of the commitment to net zero carbon emissions in 2040 for the sustainable development of the environment.

2022 Business Highlights

The COVID-19 pandemic brought certain challenges to the economic and environmental development in 2022. At the time when we celebrated our 30th anniversary, we will be dedicated to the innovation of our color ePaper technology and producing low-carbon green products with the "Profitability + Sustainability" strategy to help the Company in the continuous growth and sustainable development. We will also increase the investment in the ePaper material and technology, build an ePaper material supply chain, extend the operation of the ePaper ecosystem, and scale up the ePaper alliance. Increasing our engagement in the supply chain, building robust ePaper capacity, improving our operating efficiency, and enhancing our R&D strength are also the focuses of our business operation. Besides, we will keep optimizing our business model, increasing our profitability, improving sustainability measures, and enhancing sustainable development capability.

In addition to the existing robust eReader, eNote, retail and IoT applications, we work with our partners to expand the ePaper ecosystem and develop more applications for ePaper products. We will meet the market demands for various applications with our solid R&D capability and march from "E Ink on Every Smart Surface" toward the goal of "We Make Surfaces Smart and Green". The development of the color, large-sized, and multi-layer eReader products is successful. We will continue providing paper-like products with integrated pen-writing eNote on the market and hope that the market will grow stably. The provision of multi-color products in retail market, the more complete ecosystem, and other favorable subjective and objective factors give a boost to the growth of the market. We continue transferring the sale of modules to ePaper film and material to meet the demands of customers and requirements of various applications. The IoT related business is developed toward a dual direction of large-sized and small-sized products and can meet the requirements in the healthcare and transport areas more completely. The markets of small-sized labels and smart factories will be growing continuously as expected. E Ink continues expanding the scope of the ePaper applications and markets to drive the growth of the Company on an ongoing basis. The Company was incorporated in the MSCI Global Standard Index in February 2022, showing MSCI's recognition of the focus and persistence of E Ink in the development of the ePaper market.

In addition to continuously promoting the color ePaper development, we also focus on the R&D of the ePaper technology and material. We invest R&D resources in four key areas, including wireless energy harvesting technology, ePaper timing controller chip, and product reference design, for ePaper film and material, color, flexible and ePaper ecosystem related technologies, deploy ePaper related patented technologies comprehensively, and accelerate technology transfer and mass production on the end market. In the meantime, we enhance the manufacturing and R&D of ePaper modules to provide our partners in the ecosystem with more outstanding ePaper module technology references and drive the development of the ePaper industry. With the advantages in the existing environment-friendly ePaper application technology of low power consumption, we will make improvement continuously and keep developing the technologies that have fewer layers, use less materials and consume less energy. With the carbon reduction, energy saving, and innovation as the basis, we will develop products with low carbon footprints and contributing towards environmental sustainability.

As for operational management, E Ink will take further steps to increase the capacity and build production capability to meet the increasing market demands. In the respect of production and manufacturing, we will make use of the global production synergy and enhance the automation in the practice to shorten the production cycle and time of the products, improve the operational efficiency, upgrade the competitiveness of the products, and reduce the time to market. Facilitation of supply chain collaboration and engagement is the core in the procurement and logistics areas. We will dedicate ourselves to strengthening the flexibility and resilience of the ePaper supply chain to cope with the changing external environment. In addition to the sustainable development, respect for human rights, work safety, and many other important issues, the goals of net zero carbon emissions and renewable energy utilization are of interest to the manufacturing in the respect of climate change. E Ink extends the measures to the procurement and logistics and is dedicated to the collaboration with the supply chain partners.



Future outlook

The current external factors, such as COVID-19 pandemic, international politics, climate change, talent sources, information security, and other emerging risks, may potentially be the critical issues that E Ink must face and cope with in pursuance of the growth and sustainable development. We continue adopting strict processes and control approaches to define management guidelines, accepting multiple proposals, and paying attention to decision making efficiency to ensure the resilience and performance in the business operation. In the era of AIoT and during the process in which E Ink is dedicated to the realization of the ESG vision, E Ink will apply the low power and environment-friendly ePaper on smart ePaper products of ultra-low power consumption continuously together with our partners in the ecosystem. This will be favorable for the reduction of electricity use when smart devices are applied in different industries and will be helpful for the companies and institutions to achieve the goal of net zero carbon emissions. Besides, E Ink will improve our R&D and manufacture with lean and efficient operational management, and will conduct close communication with our customers and partners in the supply chain to ensure smooth production and shipment of the ePaper. While securing a stable growth momentum for the Company, we will apply our ePaper technologies and applications to the development of a paperless smart sustainable future.

Consolidated Financial Performance in 2021

The consolidated financial results of E Ink and its subsidiaries are as follows: In 2021, E Ink's total equity amounted to NT\$35,697,885 thousand. Although the global economy and supply chain was severely impacted and challenged by the COVID-19 epidemic, E Ink responded prudently and made preemptive arrangements proactively. In 2021, the Company's business continued to grow steadily, with consolidated revenue of NT\$19,650,564 thousand; even with the challenge towards revenue growth, the Company still actively improved its operational efficiency and strengthened its business constitution, and achieved a gross profit of NT\$8,587,820 thousand with a gross margin of 44% and earnings per share after tax of NT\$4.53, a record profit for nine consecutive years.



Type	Item	Amount
		NT\$1,000 (except for cash dividend per share which is expressed in NT\$1)
Economic Value Produced	Operating Profit	19,650,564
	Net Income (Loss)	3,023,246
	Other Income and Gain	3,944,066
	Other Expense and Loss	418,401
Economic Value Allotted	Operating cost and expense	16,627,318
	Cash Dividend Per Share	4.53
	Shareholder's Cash Dividend and Bonus	3,649,295
	Income Taxes	1,336,863
	Employee Wages and Benefits	4,342,698
	Social Expense	3,549
	Retained Earnings	11,000,202
Economic Value Retained	Net profit for the period (after tax)	5,212,047

Note 1: Cash dividends per share had been approved by the Board of Directors on March 11, 2022 and would be paid upon the approval of the shareholders' meeting on June 22, 2022.

Note 2: Financial data is extracted from the 2021 Consolidated Financial Statement of E Ink Holdings Inc. and Affiliates and audited and verified by Deloitte Taiwan after auditing.

In accordance with the "Regulations Governing Investment Tax Credits for Research and Development Expenditures of Companies", the amount of R&D investment tax credit applied for by E Ink Taiwan was NT\$431,011,252 in 2021, while the amount of government subsidy applied for by the Yangzhou Site was NT\$920,075.44.

Year	Item	Subsidy amount/RMB
2021	Model Intelligent Workshop in Jiangsu Province	500,000.00
	2020 Intelligent Technology Improvement and Upgrade Project	474,900.00
	High-tech Enterprise subvention	50,000.00
	Transit Incentive for Import and Export Goods in Comprehensive Bonded Zone	1,220,000
	Foreign Capital and Efficiency Improvement Project	270,000
	Development Zone Talent Plan	500,000.00
	2021 Intelligent Technology Improvement and Upgrade Project	2,665,100.00
	Lue-Yang Jin-Feng Project	250,000.00
	Jiangsu AA Quality Credit System - Ranked as a Class-A Enterprise	50,000.00
Total		5,980,000.00

Note: E Ink did not make political contributions nor was involved in any donations that might affect politics/policies during the period between 2018 and 2021.

Tax governance

Tax policy and management measures

E Ink Holdings Inc. (hereinafter referred to as E Ink) is the world's leading developer and supplier of electrophoretic electronic paper display technology and occupies an important position in the global electronic paper industry with its subsidiaries located in Taiwan, the United States, Japan, Mainland China and Korea. E Ink attaches importance to tax governance. In response to the international trend of tax governance and sustainable development of tax management policies, E Ink will follow the regulations and fulfill its corporate citizenship obligations. It will proactively pay attention to the changes in tax regulations and possible tax risks in its operating locations.

The tax management guideline of E Ink is as follows

1. Comply with local tax laws and regulations and the spirit of their legislation, calculate the tax amount correctly, file and pay the tax liability according to the law, and fulfill the social responsibility of the taxpayers.
2. Deal with tax-related matters in an ethical manner
3. Follow the internationally recognized transfer pricing standards published by the Organization for Economic Cooperation and Development (OECD) and the disclosure requirements.
4. Support the government's policy of promoting innovation, research and development, and reinvestment in sustainable development.
5. Plan the tax structure in an economically realistic manner and avoid aggressive tax measures.
6. Consider related tax risks and tax implications for daily operating activities or major operating decisions.
7. Assess carefully the impact of changes in tax laws and regulations in different countries, formulate countermeasures and strengthen internal education.
8. Maintain friendly, trusting and honest communication with tax authorities and establish good communication channels to ensure efficient and effective cooperation between the two parties.
9. Disclose tax information in financial statements in accordance with relevant regulations and standards.

Major risks

1. Uncertainty in tax regulations leads to tax disputes.
2. Changes in tax regulations may adversely affect the performance of business operations and increase the cost of taxation for enterprises.
3. Changes in tax laws or tax incentives may have an impact on corporate tax planning.
4. Enterprises carrying out cross-border investment and economic and trade activities can hardly avoid being engaged in more types of transactions, and different transaction types may face different tax returns and tax payment issues under different countries' tax laws
5. Tax authorities in many countries are actively responding to the anti-tax avoidance regulations implemented by the OECD and strengthening anti-tax avoidance measures and tax investigations, which may increase taxpayers' compliance costs in response to tax investigations and regulations.
6. The changing economic environment, such as the tariff war between the United States and China, will lead to changes in international investment competition and investment locations, accompanying tax implications.

Punishment and improvement measures

E Ink had formulated improvement plans and control mechanisms to prevent recurrence of the mistakes.

Site	Item	Amount (NT\$1,000)	Improvement Measure
Taiwan	Fines for tax violation in review of input documentary evidence	27,038	Enhance the education and training of employees, formulate improvement plans and implement control mechanisms to prevent recurrence of the mistakes.
	Fines for wastewater plant and insufficient setback of nitrogen plant for green belts	106,958	

Effective Tax Rate Description

Fiscal year	Net profit before tax (NT\$1,000)	Income tax expense (NT\$ 1,000)	Effective tax rate (prior to adjustment)	Adjustment (NT\$1,000)	Effective tax rate (after adjustment)	Paid income taxes	Cash tax rate
2020	4,239,953	566,265	13.36%	(565,292)	26.69%	233,448	5.51%
2021	6,548,911	1,336,863	20.41%	(135,810)	22.49%	915,959	13.99%

Note: E Ink is a leading developer and supplier of ePaper based on electrophoretic technology around the world. Due to the unique characteristic of the sector, and in order to ensure our technological lead, the Company has to commit substantial resources and funding towards the development of crucial or exclusive technologies even though the business had not grown to a scale that would generate proportionate income. Consequently, we had already accrued significant losses before arriving at this scale of operation. Each year, the Company had declared relevant R&D results for tax deductions and as a result, E Ink's cash tax rate has been lower than other competitors' average cash tax rate.

1-4 Framework for Sustainability

Sustainability Policy

It is E Ink's vision of sustainability as "Creating smart and eco-friendly products and delivering sustainable values through globalized development and local social care with innovative spirit and teamwork". To E Ink, both "profitability" and "sustainability" are equally important toward the long-term corporate growth. E Ink chases profit for the shareholders and the investors while pursuing sustainable development for the employees, society and the environment that E Ink depends on. Through the corporate vision "Aiming to Replace Paper. Not Paper, More than Paper", E Ink also expects to deliver sustainable values in corporate governance, social and environmental aspects continuously, with the environment-friendly products as the core, along with the innovative spirit and robust teamwork that E Ink is proud of.

In respect to the sustainable visions of E Ink, there are sustainable development missions deployed as "Sustainable product from sustainable manufacturing", "People development enables social care", "Governance empowerment for corporate growth", "Transparent information disclosure with integrity", and "Stakeholders engagement for the common good". To the execution, the policies and goals hence would be "Innovation facilitated sustainable products", "Low-carbon and energy saving operations and manufacturing", "Right talent, right position, safe and healthy workplace", "Effective governance enables corporate growth", "Suppliers engaged sustainable supply chain", and "Business cored local care", respectively.

E Ink expects to contribute to change human life and create social value, through the established corporate sustainable development vision, mission and policy.



Sustainability of E Ink and Framework for Sustainability

We establish a feasible framework for the "Sustainability of E Ink" in parallel to the growth and sustainable development of the Company based on the missions and policies of E Ink in the sustainable development.

We have innovative and unique ePaper display technologies and products. In addition to the paper-like display of dynamic information with comfortable legibility, our products are more efficient in the energy saving and carbon reduction than ordinary electronic displays. The sustainable "Product" of electronic paper based on "born for environmental sustainability" in combination with the "Environment", "Social", and "Governance" form the four facets of "PESG" for the sustainability of a company.

The missions of the sustainable development correspond to the "Environmental Sustainability" focusing on sustainable products from sustainable manufacturing, the "Social Engagement" pursuing people development and social care, and the "Corporate Governance" ensuring effective governance and corporate growth, the "Information Transparency" requiring transparent information disclosure with integrity, and the "Stakeholder Relationship" involving stakeholders engagement for the common good.

In the implementation and execution, the policies and goals of the sustainable development correspond to the 6 foundations are "Innovation facilitated sustainable products" for "Product Sustainability", "Low-carbon and energy saving operations and manufacturing" for "Green Production", "Right talent, right position, safe and healthy workplace" for Enterprise Care, "Effective governance enables corporate growth" for "Corporate Governance", "Suppliers engaged sustainable supply chain" for "Supply Chain", and "Business cored local care" for "Product & Stakeholder". In addition, the effective "Risk Management" can identify, reduce and remove risks is an important means for the proper implementation over the six foundations.

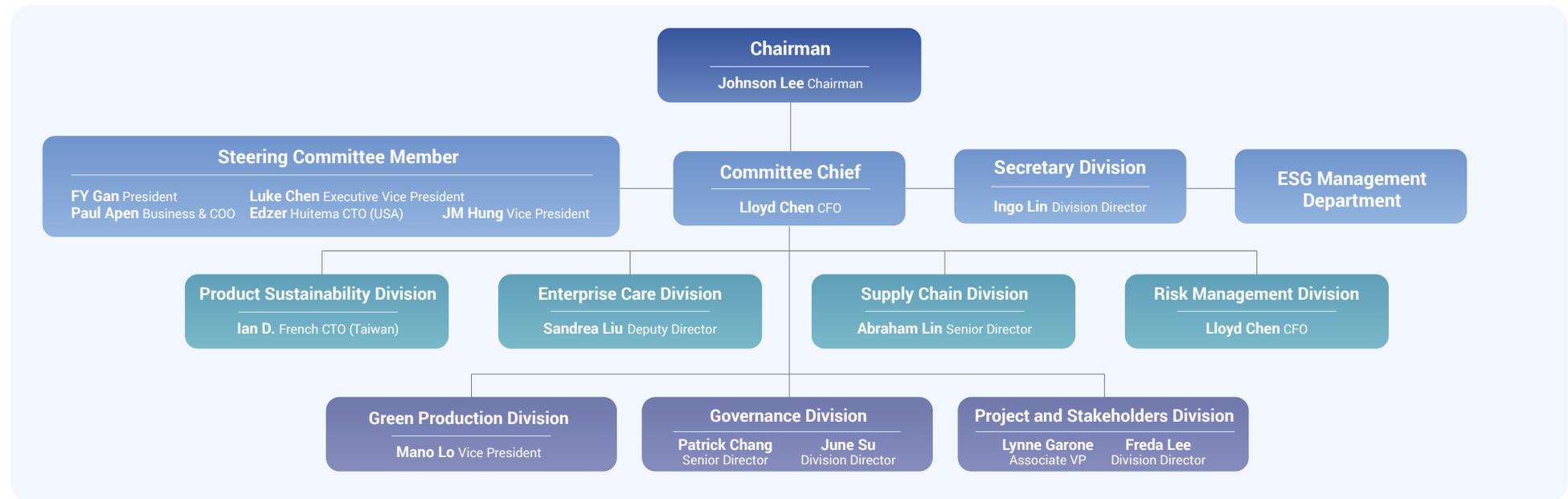


Upgrade to Corporate Sustainability Committee

E Ink established the Corporate Social Responsibility Committee in 2016 to promote and realize the vision of sustainable development through organized management. In consideration of the increasing importance of the ESG related issues on the operation of the Company and in the hope to enhance the measures for the sustainable development, the "Corporate Social Responsibility Committee" was upgraded with a new name of "Corporate Sustainability Committee" in 2021.

The Corporate Sustainability Committee formed concurrently by the members of the functional departments is chaired and directly supervised by the Chairman and CFO acts as the Committee Chief. The Committee has seven subordinate functional groups corresponding to the foundation stones of the "Sustainable E Ink" framework. Seven divisions of "Product Sustainability", "Green Production", "Enterprise Care", "Corporate Governance", "Supply Chain", "Project and Stakeholders", and "Risk Management" are established and led by an officer at the divisional level or above, respectively. In addition, the Company sets up the "Secretary Division" and the dedicated "ESG Management Department" for planning and implementation of related matters. The "Steering Committee" formed by senior executives provides required guidance and assistance

The Corporate Sustainability Committee has 40 to 50 members from different departments of the sites and offices in Taiwan, China, the USA, Japan and Korea. The function groups discuss and plan task goals and blueprints on monthly basis, approve the implementation progress, and report to the Chairman every quarter. They also report to the Board of Directors annually on a regular basis according to E Ink's "Sustainability and CSR Best Practice Principles". To enhance the Board's supervision of the work related to the corporate sustainability, the implementation progress of ESG was reported to the Board of Directors twice in 2021.



Sustainability implementation plans and goals

Every functional group of the Corporate Sustainability Committee formulates its sustainability implementation plans, goals and medium to long-term strategies pursuant to the E Ink's sustainability policies and framework and corresponding to the Company's major issues and the UN Sustainable Development Goals (SDGs).

Functional groups	Corresponding material topic	Promotion Campaign for 2021	Status of achievement	Goals for 2022	Direction of medium and long-term strategy	Corresponding SDGs
Products Sustainability	<ul style="list-style-type: none"> Business growth and product application expansion Product competitiveness Technical competitiveness Product quality and liability Development of green and sustainable products 	Enhanced R&D patents and increased number of patents	Passed the TIPS Class-A certification; more than 6,000 effective patents in the world	Increasing number of new patents owned to achieve technical and innovative breakthroughs.	Innovation-based sustainable low-carbon products	  
		Active innovation and development of new products	Completion of more than 60 new technology applications and new product developments with more than 66% of the revenue coming from new products	Maintenance of the capacity for new technologies and products to ensure the contribution of the new products		
		Low carbon for sustainability and development of energy-saving products with low carbon emissions	More than 99% of the green revenue coming from energy-saving products; completion of 12 sustainable product design technologies	Maintenance of the contribution from energy-saving products to reduce the carbon footprint of products		
		Environmental indicators and carbon footprint verification	Establishment of a carbon footprint assessment architecture and completion of carbon footprint verification for two products.	Improved establishment of environmental indicators for products and planning of product cycle analysis		
Green Production	<ul style="list-style-type: none"> Response to climate change, energy conservation, and carbon reduction 	Combination with green power and use of renewable power	Purchase of 1,979 renewable energy certificates, entering into electricity purchase agreements, and start of power transmission to carry out the transformation to 100% renewable energy in 2030	Use of 10% renewable energy	Low-carbon and energy-saving operation and production	   
		Energy-saving solutions	Renewal air compressor heat recovery, LED light replacement, using green power, steam condensate recovery, etc. Saving a total of 908,00 kWh/year.	Continued to promote relevant energy-saving projects at various sites in an effort to increase the overall power conservation rate.		
		GHG management	Completion of Scope 3. in addition to the Scope 1 and Scope 2 inventories to achieve the goal of net zero carbon emissions in 2040.	Extension of the Scope 3 inventory for continuous reduction of GHG emissions and exploration of negative emission technologies.		
		Climate risks and opportunity assessment	Continuous implementation of TCFD	Continued to identify climate-related risks and opportunities.		

Functional groups	Corresponding material topic	Promotion Campaign for 2021	Status of achievement	Goals for 2022	Direction of medium and long-term strategy	Corresponding SDGs
Enterprise Care	<ul style="list-style-type: none"> Work environment safety and employee health Remuneration, benefits and employee care 	Skill training; improvement of education and training	Enhancement of E Ink University with professional maps for 98 roles and corresponding to 306 courses	Improvement of employees' skills and increase of education and training hours	Healthy and safe workplace with right persons in the right place	  
		Strengthening cohesiveness and growing together with the company	Employee satisfaction 74% and a raise in pay for seven consecutive years	Initiating an employee participation survey and introduce an employee assistance program		
		Safe and Healthy Work Environment	Maintenance of the "Healthy Workplace Certification Mark for Health Promotion Label"; 2,324,925 accumulated disaster-free working hours at Hsinchu Site	EEWH and LEED green building certificates received for the new building of Hsinchu Site		
Governance	<ul style="list-style-type: none"> Governance Strategy for sustainable development Business Ethics Compliance Risk management and response 	Enhancement of corporate governance	Ranked in the Top 6-20% of the Annual Corporate Governance Evaluation, no violation of the antitrust laws, no incidents of personal data leakage, no non-compliance in the environmental, social and governance aspects	Enhancement of the Board's structure and operation, improvement of risk management mechanisms, and more transparent information on investors	Effective governance favorable for corporate growth	 
		Enhancement of the analysis of stakeholders and communication with them	Survey on 183 stakeholders, definition of 15 material issues, and more interactive communication meetings, activities and lectures than previous year	Continuous definition of stakeholders' requirements and enhancement of communication with them		
Supply Chain	<ul style="list-style-type: none"> Sustainable supply chain management 	Establishment of sustainable supply chain management and operation mechanisms	Suppliers sign the Supplier Code of Conduct and complete the ESG questionnaire. 22 suppliers finished evaluations and audits with an average score of 89. 77 suppliers finished the risk assessment and 99% of them were classified in Level A. The 1st general meeting of suppliers with 45 supplier participants	Continue to deepen and optimize E Ink's sustainable supply chain management system.	Value-added supply chain for sustainability and co-prosperity	  
Project and Stakeholders	<ul style="list-style-type: none"> Management of corporate brand and market presence 	Continuous implementation of the E Ink's Social Inclusion Core Project	Investment of resources equivalent to NT\$8.679 million for charitable donations, community investments, and business initiatives Donation of a COVID-19 quarantine booth in Taiwan, participation in US B1G1 public welfare organization, and joining in Ryefield Project in Yangzhou for ten consecutive years to help students in remote villages	Continuous implementation of the E Ink's Social Inclusion Core Project	Local care in combination with the core business	 
		eRead for the Future	Donating a total of 370 eReaders and 30,340 ebooks to 13 junior high schools in Taoyuan City and organizing e-reader training	With ecosystem partners, evaluation and planning to donate eBook readers to an additional county. In order to strengthen the project resources and the public welfare influence of the e-paper industry, we will invite ecosystem partners to participate the project, to achieve the 600,000nt target of e-book procurement in 2022.		

1-5 Honor and Glory

1-5-1 Honor Events

2021 / 2022

March

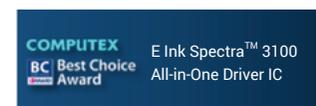
E Ink was nominated **twice** for Global Views Monthly's CSR and ESG Award - **Comprehensive Performance in Electronic Technology Industry**



2021

July

E Ink Spectra™ 3100 Integrated Chip won the 19th COMPUTEX Award - **Best Choice Award- IC & Components**



2021

September

Asia Responsible Enterprise Awards 2021, **Green Leadership & Investment in People**



Best Companies to Work For in Asia 2021



November

E Ink won the Taiwan Corporate Sustainability Awards (TCSA) for the fifth consecutive year

- **Corporate Sustainability Report - Gold Award in the Electronic Information and Manufacturing Industry**
- **Taiwan Corporate Sustainability Performance Award**
- **Single Performance Award - Growth Through Innovation Leadership Award**



December

E Ink's Battery-free ePaper Smart Credit Card won the **Hsinchu Science Park Innovative Product Award** from Hsinchu Science Park Bureau, Ministry of Science and Technology



E Ink won the **2021 Taiwan Excellence Silver Award** organized by the Ministry of Economic Affairs



E Ink was selected by Industrial Department Bureau, **Ministry of Economic Affairs**, as one of the 2021 Taiwan Potential **BRANDING TAIWAN** Top Global Brands



2022

April

E Ink Spectra™ 3100 Four-Color ePaper Display won the **Smart Retail Award of the Smart Display Application Awards** organized by the Taiwan Display Union Association



E Ink Driver IC with Dynamic and Interlaced Scan by AI Computing won the 20th COMPUTEX Award - **Best Choice Award- IC & Components**



1-5-2 Certification and Assessment

Sustainability Yearbook Member 2022

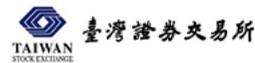
S&P Global

S&P Corporate Sustainability Assessment 2021

Top 10% in the global electronic equipment and component industry and listed in the 2022 S&P Sustainability Yearbook



Received MSCI ESG Rating of BBB



Corporate Governance Evaluation conducted by TWSE Corporate Governance Center

Ranked as one of the Top 6-20% of TPEX listed companies for five consecutive years from 2018 to 2022

SUSTAINALYTICS
ESG Risk Rating
19.2 Low Risk

Received SUSTAINALYTICS ESG Risk Rating of Low Risk



Received Taiwan Sustainability SEED ESG Rating of AA



Paper-like display quality certification and China-mark, TÜV

Paper Like Display Quality-mark and China-mark E Ink Kaleido™ Plus Electronic Color Ink Display Module



Financial Times and Nikkei Asia Climate Leaders Asia-Pacific 2022

MSCI Incorporated in the MSCI Global Standard Index



TIPS Class-A certification from Industrial Department Bureau, Ministry of Economic Affairs

Taiwan Intellectual Property Management System



ecovadis Sustainability Rating BRONZE



International Dark Sky Association Dark Sky Certification

The first display technology in the world receiving the certification from the International Dark Sky Association

1-5-3 Participation in International Initiatives



Low Carbon Initiatives, European Chamber of Commerce Taiwan



TALENT, in Taiwan, Taiwan Talent Sustainability Alliance

A pledge to keep in line with the six talent sustainability action indicators for sustainable competitiveness, including Meaning and Value, Diversity and Inclusion, Organizational Communication, Rewards and Incentives, Physical and Mental Health, and Talent Growth



RACE TO ZERO Campaign, UNFCCC

An initiative for achievement of net zero carbon emissions by 2050 (E Ink is committed to the fulfillment of net zero carbon emissions by 2040)



TCFD Supporter

An initiative for voluntary climate-related financial disclosures



RE100

A global renewable energy initiative for the commitment of achieving 100% use of green power by 2050 (E Ink is committed to the fulfillment of 100% use of green power by 2030)



The Climate Pledge

An initiative for achievement of net zero carbon emissions in 2040, E Ink is the first display manufacturer in the world to join this initiative



Science Based Target initiative (SBTi)

Definition of the carbon reduction and net zero carbon emissions based on a rise of 1.5° C in the global climate



The United Nations Global Compact (UNGC)

This is the largest global corporate sustainability initiative organization acting on the ten principles that the United Nations defined for corporate operation strategies, including human rights, labor, environmental protection, and anti-corruption. Our USA sites were chosen as a member of the pact in 2018 for our commitment to sustainable development and outstanding performance in the area.

1-5-4 Membership of Associations

With the ePaper as the core technology, E Ink works with the partners in the ecosystem to produce multiple environment-friendly ePaper devices and make great contributions to the global panel industry. To maintain the influence and leadership in the industry, E Ink concerns about Sustainability, Economics and Technological Development in the world, and participates in associations in various fields of industry, sustainability, commerce, and more, facilitating the industry and cross-industry collaborations.

With the development of the Internet of Things and smart cities, E Ink is also actively participating in international associations and consortiums and initiating technology policy development in order to promote ePaper as the best display technology for reading, writing and IoT applications. E Ink plays an important role in different committees and alliances. For example:

- The Executive Yuan's "Digital Nation and Innovation Development Program (DIGI+)" serves as an advisory committee to the private sectors, bridging the gap between the government and the industry and advising on information and communication development strategies.
- Under the Executive Yuan's digital nation and innovation economy policy, the Industrial Development Bureau of the Ministry of Economic Affairs has planned and established the Smart Display Industrial Alliance (SDIA) under the direction of the "Taiwan Display Technology and Application Action Plan". The SDIA has committees on Smart Retail, Smart Medical, Smart Education & Entertainment, and Smart Mobile, with E Ink as the convener of the Smart Medical Committee to promote cross-industry, cross-unit, and cross-domain cooperation in display technology to enhance industry competitiveness.

Membership of important associations

Type	Name	2021	
		Membership	Administrative Role
Industry initiatives	Taiwan Display Union Association , TDUA	V	Director
	Taiwan Panel & Solution Association, TPSA	V	Director, supervisor
	Society for Information Display, SID	V	-
	Photonics Industry & Technology Development Association, PIDA	V	Director
	E-paper Industry Alliance, EPIA	V	Director
	The Allied Association for Science Park Industries	V	-
	Taiwan Electrical and Electronic Manufacturers' Association, TEEMA	V	-
	Taipei Computer Association, TCA	V	-
	The American Chamber of Commerce in Taipei, AmCham	V	-
	European Chamber of Commerce Taiwan, ECCT	V	-
	Taiwan Elderly Care Industry Association, TECIA	V	-

Type	Name	2021	
		Membership	Administrative Role
ESG	Taiwan Renewable Energy Certification Association	V	Executive director
	The Institute of Internal Auditors - Chinese Taiwan	V	-
	CWS	V	-
	International Dark Sky Association, IDA	V	-
Standard setting	Flexible Hybrid Electronics, FHE	V	Vice Chair
	Taiwan Digital Publishing Forum, TDPF	V	-
	Digital Stationery Consortium, DSC	V	TBC
	Digital Signage Multimedia Alliance Taiwan, DSMA Taiwan	V	-

E-Paper Industry Alliance

E Ink formed the "E-Paper Industry Alliance" together with BOE and Xingtai Technology in 2021. We invite the partners in the ePaper ecosystem and other cross-industry partners to join the Alliance for further development of the ePaper industry.

The E-Paper Industry Alliance is a platform for exchange between the industries. In addition to setting ePaper standards and promotion of ePaper technologies and applications, members can find new opportunities on the platform, including the application development of ePaper in the targeted eight areas of retail, education, office, transport, medical service, industry, civil aviation, and logistics.

The Alliance has one hundred member companies, academic institutes and institutions from the ePaper industry chain, including Lenovo, Alibaba, Tencent Education, Qingdao Hisense Communication, iFlytek, and Hanshow. There were 100 members as at December 2021.



More channels of communication with stake holders - "E Ink ESG" Facebook

E Ink set up an "E Ink ESG" page on Facebook in October 2021. We make use of the feature of the social media in sharing real-time information to share our latest news with stakeholders from different areas, including the outcomes of sustainable development and related activities, ePaper technology, and product release topics.

In addition to issuing related messages, we use Facebook Messenger as an additional channel of communication with stakeholders. By doing so, we improve the transparency of the messages and the efficiency of communication with stakeholders.



Scan the QR Code to follow up on E Ink ESG.





CHAPTER 02

CORPORATE GOVERNANCE

Effective Governance that Promote Business Growth

2-0 Performance Results



Survey through **183** stakeholders to define **15** material issues

A total of **9** members in the current Board of Directors including **3** independent directors and **1** female director with an average age of **62** and an average board attendance rate of **100%**

Stakeholder communication through more than **315** interactive communication meetings

188 sessions of education and training	61 audits as auditor or auditee
8 media events	7 talks

Ranked **6~20%** among the listed companies in the 8th Corporate Governance Evaluation

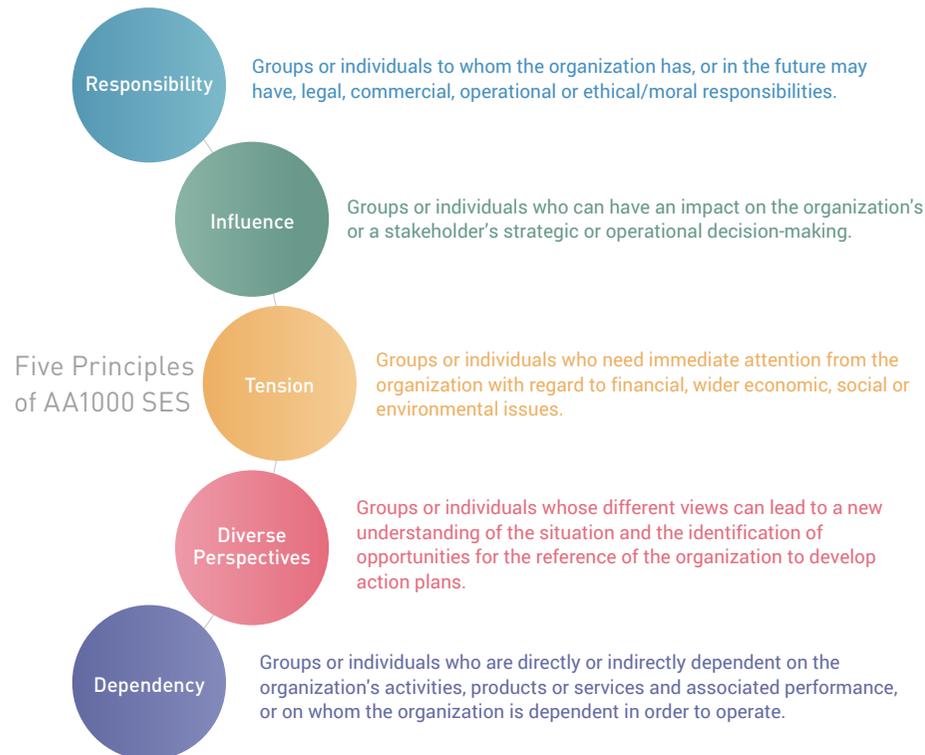
No violation of the antitrust laws, no incidents of personal data leakage, no non-compliance in the environmental, social and governance aspects



2-1 Material Issue Analysis and Stakeholder Communications

2-1-1 Identification of Stakeholders

Placing importance on the expectations and requirements of the stakeholders, E Ink referred to the five main principles of AA1000 Stakeholder Engagement Standard (AA1000 SES) and gathered the representatives of all departments through the Corporate Sustainability Committee to identify the stakeholders. Nine major stakeholders have been identified, including government agencies, employees, suppliers/contractors/outsourcers, customers, group and affiliates, shareholders, the media, other companies in the industry and trade associations, community and society.

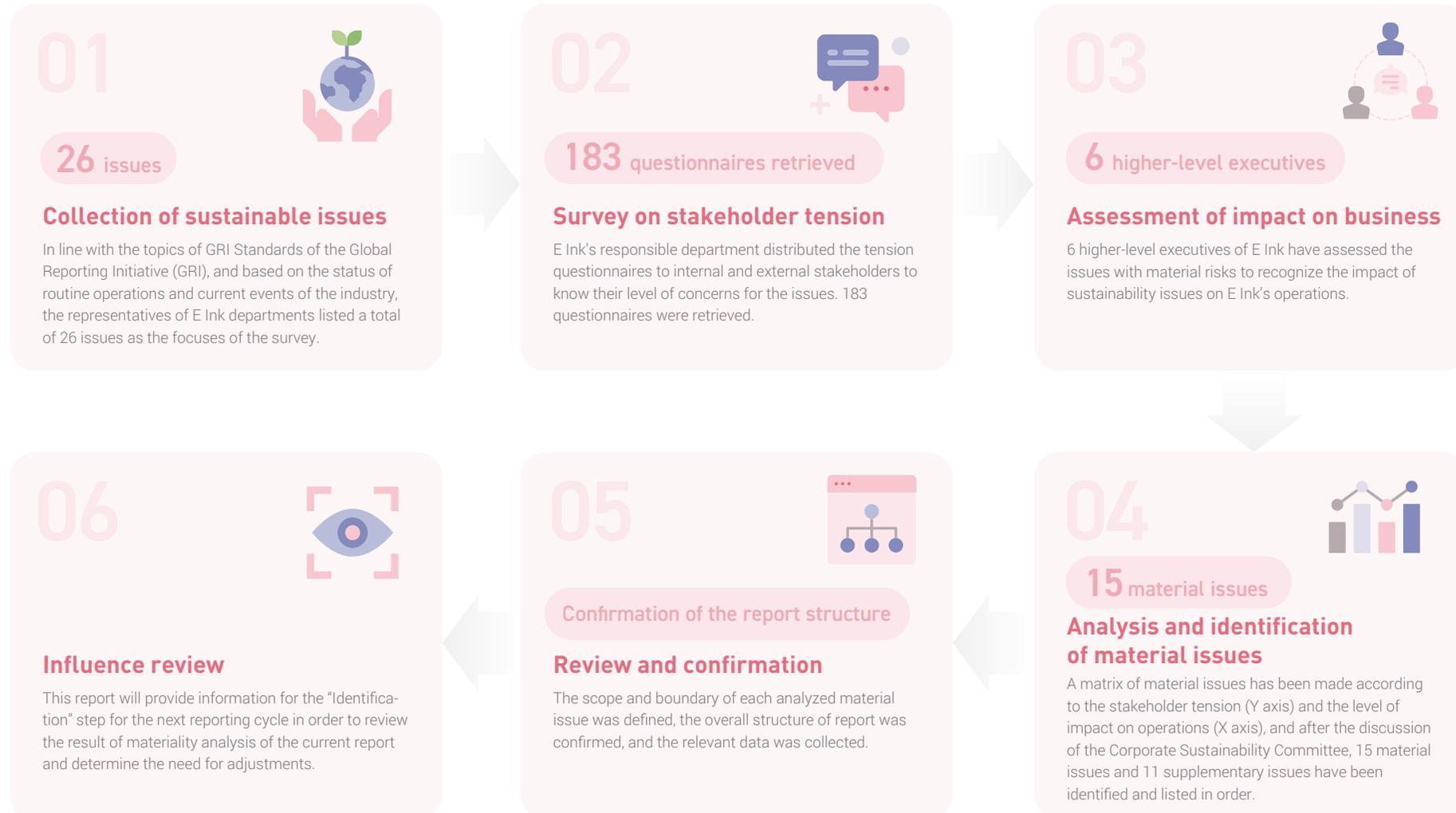


Relationship between the Stakeholders and E Ink

Prioritization	Types of Stakeholders	Relationship to E Ink
1	Government agencies	E Ink complies with the related laws and regulations of the government and competent authorities and proactively cooperates with the government policies to fulfill our corporate social responsibilities.
2	Shareholders	We respect the opinions of shareholders and treat such opinions as an important reference for continuous progress.
3	The Media	We proactively respond to the public through the media and strive for information transparency.
4	Customers	By insisting on product quality and services, we hope to provide customers with the best solutions, develop the market, and grow together.
5	Suppliers/contractors/outsourcers	Suppliers/contractors/outsourcers are important partners of E Ink. Through persistent management, interaction, and cooperation, we can create a more sustainable value chain.
6	Group and affiliates	We maintain constant interaction with the group and affiliates and follow related development policies.
7	Employees	Employees are an important asset that enables E Ink to engage in continual innovation and advancement. Establishing a harmonious labor-management relationship is the only way to constantly create value.
8	Other companies in the industry and trade associations	We continuously participate in the operation of trade associations and interact with other companies in the industry, hoping to contribute our value to the industrial chain.
9	Community and society	By expressing persistent care for local communities, vulnerable groups, schools, etc., we demonstrate the corporate responsibility spirit and make constant, positive contributions to society.

2-1-2 Identification of Material Issues

E Ink further made identification of material issues based on the identified stakeholders to regularly review the feedback from stakeholders and the development trends of environmental, social and governance (ESG) issues, and thereby establish the long-term sustainable goals of E Ink. It is also our hope that effective communication with stakeholders can be achieved through clear disclosure.



▼ **Material issue identification results**

In this report, we have disclosed all management approaches, strategies, and performance of core topics that are related to E Ink's key business items.

Material issues (15)

- Issues with greater economic, environmental, and social impacts on E Ink
- Topics of higher stakeholder tension

A1	Corporate governance	A2	Business growth and product application expansion
A3	Work environment safety and employee health	A4	Product competitiveness
A5	Sustainable supply chain management	A6	Technical competitiveness
A7	Strategy for sustainable development	A8	Ethical management
A9	Response to climate change, energy conservation, and carbon reduction	A10	Remuneration, benefits, and employee care
A11	Product quality and liability	A12	Development of green and sustainable products
A13	Legal compliance	A14	Management of corporate brand and image
A15	Risk management and response		

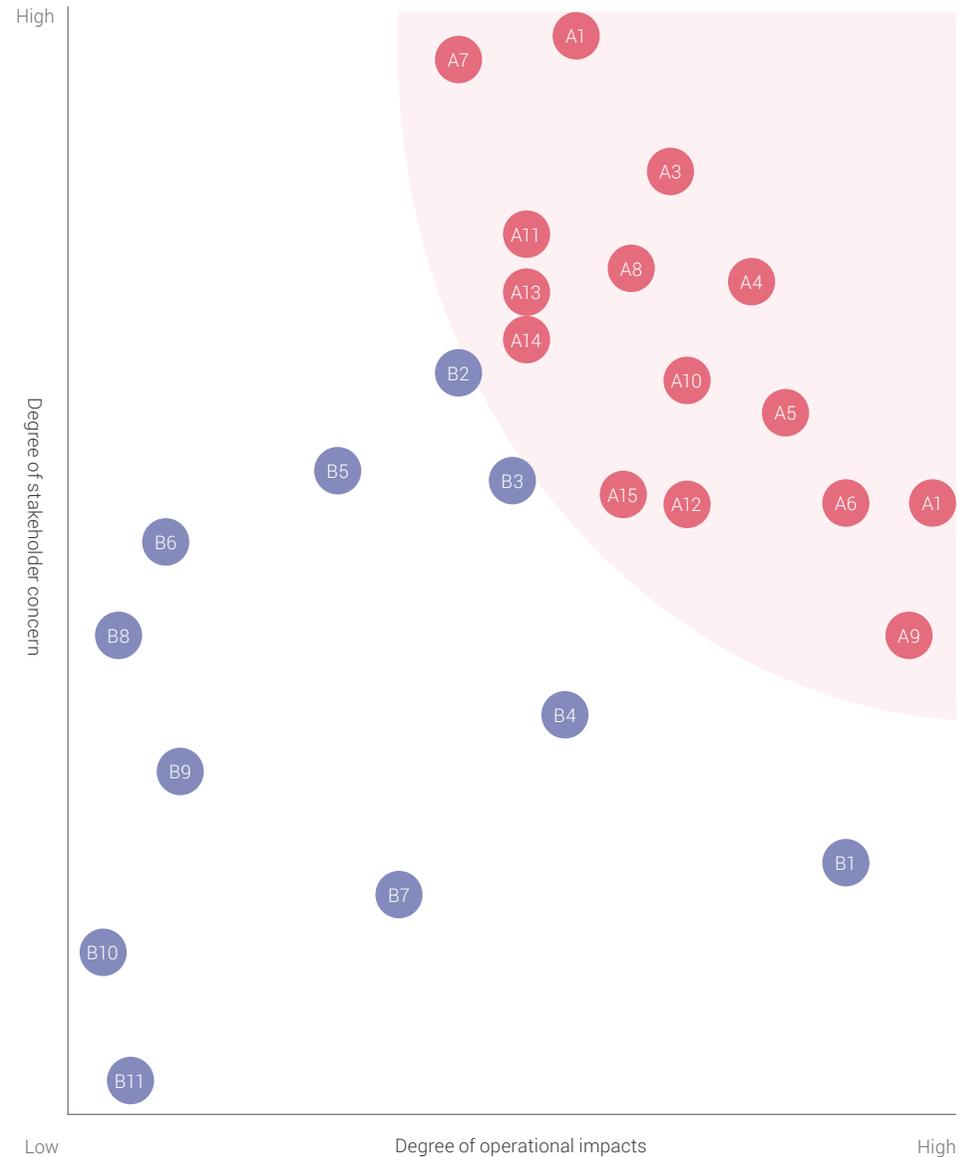
To fully respond to the needs of stakeholders, we have presented the relevant performance of supplementary topics.

Supplementary issues (11)

- Issues with medium or low significant economic, environmental, and social impact but still a concern on the part of stakeholders

B1	Strategic partner and customer relationship management	B2	Information security management
B3	Operating performance and financial performance	B4	Employee development and career development
B5	Social participation and care	B6	Promotion of labor-management relations and communication
B7	Human rights	B8	Pollution control
B9	Resource management and circular economy	B10	Water resources management
B11	Tax		

▼ **Matrix of E Ink's material issues**



Material issues and their comparison with the topics of GRI Standards and the boundaries of value chains

Key Topics	Topics of GRI Standards	Significance to E Ink	Value chain					Corresponding chapters
			Group and affiliates	Customers	Shareholders	Suppliers/contractors/outsourcers	Community and society	
Governance	General disclosure	We uphold the spirit of governance and practice governance, insist on operation and information transparency, and care about stakeholder interest.	●	●	●	●	●	2-2 Ethical management and sustainable governance
Business growth and product application expansion	N/A	The main product of E Ink is ePaper. As it can contribute to the energy conservation and environmental protection, it is helpful to the fulfillment of ESG sustainable development goals. Meanwhile, aggressively expanding the production capacity and building up the material production capability to meet the continuously rising market demand, increase the revenue and promote the brand image has long been one of the key strategies of E Ink. We will keep on innovating our products and technologies and collaborating with partners to expand our product applications and continue to promote market development.	●	●	●	●		1-3 Business Strategy and Development 3-2 Technology and Innovation
Work environment safety and employee health	Occupational Health and Safety	Employees have always been the most important asset of E Ink. In order to protect the health and safety of our employees, we have established occupational safety and health management measures and policies, and obtained ISO 45001 Occupational Health and Safety Management System certification to maintain a safe work environment and create a healthy workplace.	●	○		●		6-4 Maintaining a Safe and Healthy Work Environment
Product competitiveness	N/A	E Ink has actively expanded the scope for a more comprehensive application and devoted itself to continuous improvement, R&D and innovation so as to provide products and services of high quality. In 2021, E Ink even decided to increase 4 new production lines to satisfy the market demand.	●	●	●	●	○	3-1 Eco-friendly Sustainable Technologies and Products 3-2 Technology and Innovation 5-2 Quality Persistence
Sustainable supply chain management	N/A	The whole world is now increasingly adopting measures to cut carbon emissions, reduce waste and improve labor conditions. E Ink has declared that it will reach the goal of a 100% use of renewable energy (RE100) by 2030 and the goal of net zero carbon emissions by 2040, strengthening the foundation of supply chain management and move forward to the goal of sustainable co-prosperity.	●	●	●	●	○	5-1 Supply Chain Management
Technical competitiveness	N/A	E Ink has been making efforts to promote the concept of replacing paper with ePaper to further reduce the logging of trees and the CO ₂ emissions. The product is eco-friendly and does not have the high-energy visible light (HEV) that is harmful to the eye through direct exposure, which is wonderful news. Now, the application of green technologies has been expanded from reading, retailing and transportation to buildings; these technologies are going to be the new trend of life in the future.	●	●	●	●		3-1 Eco-friendly Sustainable Technologies and Products 3-2 Technology and Innovation 3-3 Sustainable Product Design
Strategy for sustainable development	N/A	In order to ensure E Ink's sustainable operation, E Ink has formulated relevant policies and strategic plans, including setting short-, medium- and long-term goals and taking actions in various economic, environmental and social aspects.	●	●	●	●	○	1-4 Framework for Sustainability
Business Ethics	Anti-corruption and anti-competitive behavior	E Ink understands the importance of ethical management in business operations. It adheres to its philosophy, including establishing and following a code of ethics, internal controls, insider trading, intellectual property management, personal data protection, and prohibiting corrupt and competitive behavior.	●	●	●	●	○	2-2 Ethical Management and Sustainable Governance

Note: ● represents direct impact; ○ represents indirect impact/business relationship

Key Topics	Topics of GRI Standards	Significance to E Ink	Value chain					Corresponding chapters
			Group and affiliates	Customers	Shareholders	Suppliers/contractors/outsourcers	Community and society	
Response to climate change, energy conservation, and carbon reduction	Energy, emission	E Ink has established the "ESHE Policy", and adopted Task Force on Climate-related Financial Disclosures (TCFD) to assess the risks and opportunities of climate change. Also we have set the energy saving goals and continuously promoted energy saving and carbon reduction plans and measures.	●	●	●	●		4-2 Environmental Protection 4-3 Climate Change 4-4 Energy Consumption and Management
Remuneration, benefits and employee care	Occupational Health and Safety	Valuing the effort and value of each employee, E Ink builds a friendly environment in an active manner, promotes labor-management communication, provides regular health checks on an annual basis, and enhances the overall remuneration and benefits such as increasing the pay for seven consecutive years. The employee satisfaction survey in 2021 shows a satisfaction rate of 74%.	●	○		●		6-2 Building a Healthy, Positive and Beautiful Workplace 6-3 Diversified Development and Growth of Employees 6-4 Maintaining a Safe and Healthy Work Environment
Product quality and liability	Marketing and labeling	E Ink insists on continuous improvement and R&D innovation to provide high quality products and services to meet customers' needs. It has obtained relevant quality or customer audit certifications such as ISO 9001, SONY Green Product (GP) and Amazon.	●	●	●	●		5-2 Quality Persistence
Development of green and sustainable products	N/A	ePaper, the main product of E Ink, has sustainable features compared with similar products, including energy saving and carbon reduction, and consumer health protection. In the future, we will continue to incorporate sustainability into product design to reduce the negative impact of our products.	●	●	●			3-1 Eco-friendly Sustainable Technologies and Products 3-3 Sustainable Product Design
Legal Compliance	Legal compliance on environmental protection, social and economic regulations	E Ink follows and treats legal compliance as the most basic principle and publicly discloses and responds to penalties in major events such as environmental regulations, product regulations, and labor regulations.	●	●	●			2-2 Ethical Management and Sustainable Governance 4-1 Environmental Protection 5-2 Quality Persistence
Management of corporate brand and market presence	Indirect Economic Impacts	E Ink continues to engage in branding and image enhancement activities to show its business philosophy, values, and corporate culture to the public and increase stakeholders' understanding and support.	●	●	●		●	3-2 Technical and Innovation Capacity 6-2 Building a Healthy, Positive and Beautiful Workplace 7-2 Actions to Care the Community
Risk management and response	N/A	In order to respond to important trends and risks in a timely manner, E Ink identifies, manages and prevents various operational risks and conducts business activities within an acceptable level of risk to ensure operational stability.	●	●	●	●		2-3 Risk Management 4-2 Environmental Protection 6-4 Maintaining a Safe and Healthy Work Environment

Note: ● represents direct impact; ○ represents indirect impact/business relationship

2-1-3 Stakeholder Communication and Engagement

Based on interactions with stakeholders in routine operations, representatives of E Ink departments identify and gather the concerns and topics raised by different stakeholder groups. In this report, we will respond to the concerns and expectations of stakeholders in respective sections in accordance with the GRI Standards covered by relevant topics. We will also disclose clear and complete information for special topics.

We have established individualized communication channels for different stakeholder groups, and accept and respond to the concerns and requirements raised by stakeholders.

▼ Stakeholder communication channels and communication results

Stakeholders	Concerned Topic	Communication Channels and Frequency	2021 Concrete Communication Results
Government agencies	<ul style="list-style-type: none"> Legal Compliance Response to climate change, energy conservation, and carbon reduction Development of green and sustainable products Work environment safety and employee health Social welfare and care 	<ul style="list-style-type: none"> Correspondence of official documents (periodic) MOPS (uploading and disclosing relevant contents in accordance with the law) Gathering information from government websites (quarterly) Pollution control awareness meeting, regulation presentations, in-site audit and interview (periodic) Government routine/unannounced inspections (periodic) 	<ul style="list-style-type: none"> Participated in over 50 regulation presentations organized by government agencies 7 government in-site inspections (Yangzhou); no major non-compliance found
Employees	<ul style="list-style-type: none"> Remuneration, benefits and employee care Work environment safety and employee health Promoting harmonious labor relations Employee development and career development Business Ethics 	<ul style="list-style-type: none"> Labor-management town hall meeting between employees and the management (quarterly) Labor-management meeting (quarterly) Employee Welfare Committee meeting/Union Committee meeting (regular) Performance evaluation (monthly/yearly) Employee education and training (periodic) E Inker internal publication (periodic) / monthly union publication (monthly) Talks and seminars (periodic) Department head mailbox, labor union suggestion box, audit box (periodic) Intern welcome party/farewell party (periodic) Employee health preservation knowledge promotion (quarterly) Internal mails and announcements (periodic) 	<ul style="list-style-type: none"> 2 full staff seminars (Taiwan) and 2 staff seminars (Yangzhou) held in total 8 labor-management meetings held with consensus on 20 proposals reached (Taiwan) 4 Employee Welfare Committee meetings held with resolutions on 11 proposals made (Taiwan) 1 (Taiwan)/ 2 (Yangzhou) annual performance evaluations conducted A total of 157 employee education and training courses organized 1 E Inkers publication (Taiwan) / 12 monthly union publications (Yangzhou) 7 health awareness talks organized (Taiwan) 4 suggestions received from the employee suggestion mailbox and resolved (Taiwan) 89 times of intern welcome parties/farewell parties (Yangzhou) Employee living promotion announcement issued 59 times (Yangzhou)
Suppliers/contractors/outsourcers	<ul style="list-style-type: none"> Business Ethics Strategy for sustainable development R&D innovation and expansion of product application Legal Compliance Product quality and liability 	<ul style="list-style-type: none"> Supplier audit and visit (periodic) Quality review meeting (regular)(weekly) Supplier guidance and audit (annual) Production-sales coordination meeting (weekly) Cost reduction meeting (annual) Procurement contracts, industrial safety training, in-house tour inspection (periodic) Routine security work discussion meeting (weekly) 	<ul style="list-style-type: none"> Audits and visits for more than 2 suppliers every month Weekly quality meeting with major material suppliers, with a total of 17 participating suppliers Quality Process Audit (QPA) conducted for 23 suppliers (13 on-site audits and 10 written audits) Quality System Audit (QSA) conducted for 4 new suppliers (3 on-site audits and 1 written audit) On-site personnel from 6 suppliers arranged to handle raw material problems at the Yangzhou site Visits to our Taiwan sites and Yangzhou site by about 2-3 suppliers every month for business visits or work meetings Safety education and training sessions given to 31 construction contractors (Yangzhou)
Customers	<ul style="list-style-type: none"> Strategy for sustainable development Risk management and response Legal Compliance Management of corporate brand and market presence Product quality and liability Strategic collaboration and partner alliances Supply chain management Materials management Response to climate change, energy conservation, and carbon reduction 	<ul style="list-style-type: none"> Visits by sales personnel and senior officers (periodic) Business review meeting (weekly) Quarter Business Review (QBR) for suppliers (quarterly) Customer Satisfaction Survey Form (annually) In-house audit by customers (periodic) Customer questionnaire response (periodic) Sales order Seminars and trade shows (periodic) Corporate website information disclosure (regular) 	<ul style="list-style-type: none"> Mutual visits by sales personnel and senior officers for 24 times to discuss technology development, product shipping, and delivery dates of key parts and components 3 QBRs for heavyweight customers organized with 81 participants from both sides; weekly conference calls/weekly onsite visits and discussions/improvement of the most immediate quality problems for important customers A 90% retrieval rate of the customer satisfaction survey form, and with an excellent average score shown A customer questionnaire response rate of 100%

Stakeholders	Concerned Topic	Communication Channels and Frequency	2021 Concrete Communication Results
Group and affiliates	<ul style="list-style-type: none"> • Governance • Legal Compliance • Resource management and pollution prevention • Information disclosure and communication • Risk management and response • Research innovation and expansion of product application • Strategic collaboration and partner alliances 	<ul style="list-style-type: none"> • Board meeting (at least once every quarter) • Senior officers' meetings (weekly) • Project meetings (periodic) 	<ul style="list-style-type: none"> • 7 board meetings held, with attendance rate of 100%
Shareholders	<ul style="list-style-type: none"> • Operating performance and financial performance • Research innovation and expansion of product application • Remuneration, benefits and employee care • Management of corporate brand and market presence • Development of green and sustainable products 	<ul style="list-style-type: none"> • Board meeting (at least once every quarter) • Shareholders' meeting (annually) • Earning calls (quarterly) • Monthly revenue announcement (monthly) • Financial statement (quarterly) • Investors section on the corporate website (periodic) • Disclosures of material information and financial statements on MOPS (periodic) • Press release (periodic) • Face-to-face and telephone communication meetings (periodic) • E-mail (periodic) 	<ul style="list-style-type: none"> • 1 shareholders' meeting attended by shareholders representing 76.49% of the total issued shares • Organizing 4 quarterly earning calls, participating in another 5 earning calls at other's invitation, and presenting our financial and business-related information at 49 face-to-face meetings and conference calls with investors • Filing financial statements in accordance with the law for 4 times • 86 material messages published in accordance with the law • Immediate response to investors' questions
The Media	<ul style="list-style-type: none"> • Research innovation and expansion of product application • Product quality and liability • Strategic collaboration and partner alliances 	<ul style="list-style-type: none"> • Press release: Focusing on ePaper technology and application, corporate operation strategy and deployment, and financial statements (periodic) • Media events: Quarterly earning calls, annual shareholders' meetings, and periodic trade show visits • Media interviews (periodic) • Real-time media demand service: Using real-time communication software, telephone (company desk and cell phone) and e-mail as the main media communication channels, and handling the demand immediately (periodic) 	<ul style="list-style-type: none"> • A total of 28 press releases • 8 media events held, including 2 press conferences, 4 investor conference, 1 shareholders' meeting and 1 media gathering • A total of 13 media interviews • Real-time response with media demand service
Other companies in the industry and trade associations	<ul style="list-style-type: none"> • Strategy for sustainable development • Legal Compliance • Response to climate change, energy conservation, and carbon reduction • Development of green and sustainable products • Risk management and response 	<ul style="list-style-type: none"> • Taiwan Panel & Solution Association (TPSA) • Trade association 	<ul style="list-style-type: none"> • Participation in 6 TPSA industrial safety and environmental protection committee meetings (Taiwan) • Participation in more than 24 meetings of the Industrial Safety Committee and Environmental Protection Committee of the Trade Association (Taiwan)
Community and society	<ul style="list-style-type: none"> • Remuneration, benefits and employee care • Legal Compliance • Work environment safety and employee health • Management of corporate brand and market presence • Development of green and sustainable products 	<ul style="list-style-type: none"> • Whistleblowing to government agencies (anytime) • Compliant line (anytime) • Nearby resident surveys on construction projects (periodic) 	<ul style="list-style-type: none"> • Participation in the industrial safety and environmental activities organized by the HSP Bureau • No complaint from neighboring/nearby residents received

Topics of GRI Standards

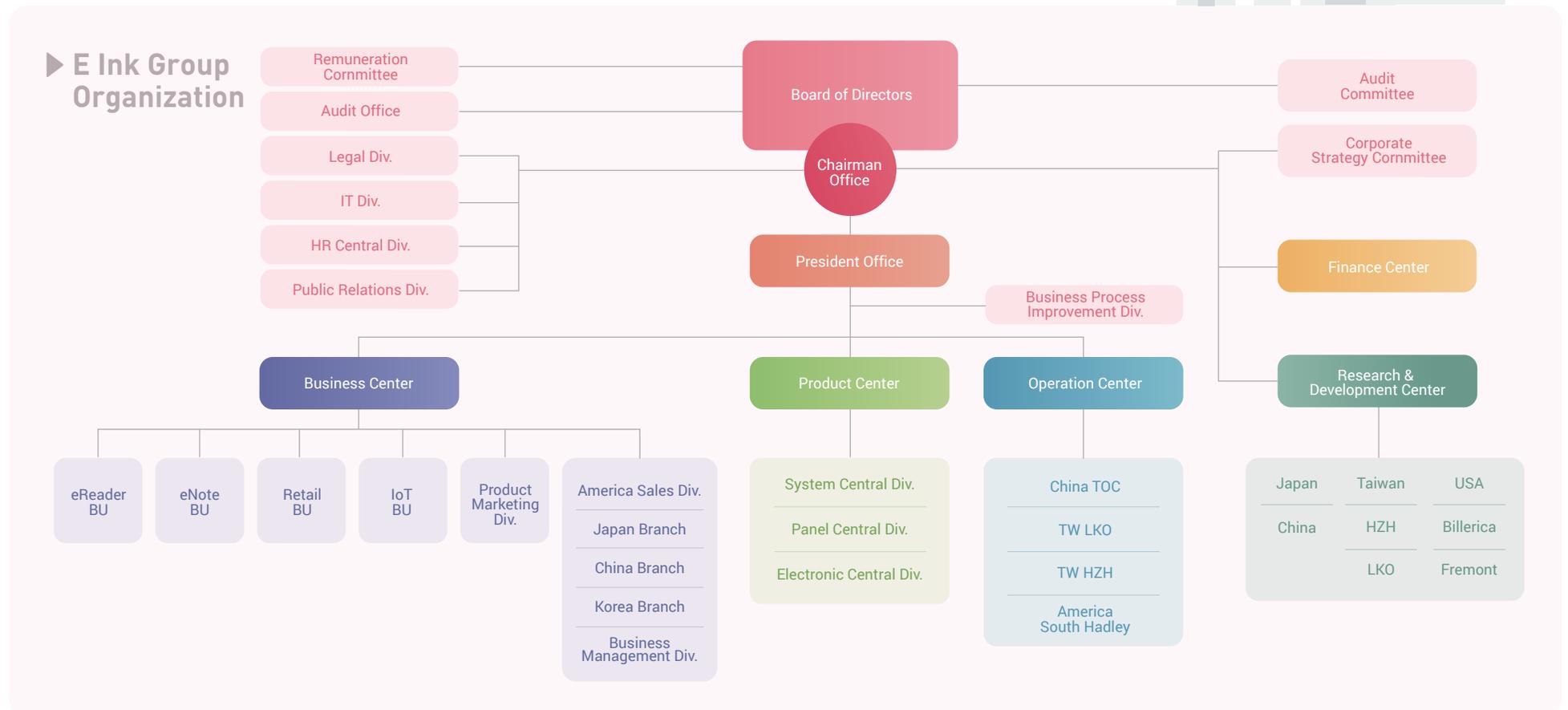
At E Ink, we have established processes or countermeasures for the routine management of various material topics. The table below shows these processes and countermeasures presented in accordance with relevant requirements in the GRI Standards. Please refer to the corresponding sections for the details of respective management approaches.

Aspects	DMAs	Evaluation Mechanism / Results	Corresponding Sections	Page	
Economic	Indirect Economic Impacts	<ul style="list-style-type: none"> Draw up plans for participation in social charitable activities and launch cooperation with NGOs and schools. 	<ul style="list-style-type: none"> The Social Return on Investment (SROI) was introduced to the "eRead for the Future" project; it was estimated that every \$1 invested could generate \$2.63 in social benefits. 	7-1 Social Inclusion 7-2 Actions to Care the Community	166-177
	Anti-Corruption	<ul style="list-style-type: none"> Establish the code of business conduct, reinforce awareness education, and include the code in the annual audit program for management. Establish whistleblowing and complaint mechanism. 	<ul style="list-style-type: none"> No whistleblowing reports were received during the year. 	2-2 Ethical management and sustainable governance	45-47
	Anti-competitive Behavior				
Environmental	Legal Compliance with Environmental Protection	<ul style="list-style-type: none"> Keep track of legal requirements and update relevant regulations periodically, and organize education and training activities. Establish an environmental complaint mechanism that gives priority to compliance with local laws and regulations. 	<ul style="list-style-type: none"> The Taiwan and Yangzhou sites conduct annual legal compliance audits. No significant penalties were imposed during the year. 	4-2 Environmental Protection	84-86
	Energy	<ul style="list-style-type: none"> Implement ISO 50001 Energy Management System and set annual energy saving and carbon reduction plans and targets. Regularly conduct filing of greenhouse gas emissions and energy consumption in accordance with the law. Increase the use of renewable energy. Monitor air pollution emissions and declare them in accordance with the law. 	<ul style="list-style-type: none"> In 2021, the energy-saving project focused on electricity-saving, with 908,000 kWh. The plan to reach a 100% use of renewable energy by 2030 has been made. As of December 31, 2021, E Ink has traded a total of 1,979 renewable energy certificates. 	4-2 Environmental Protection 4-3 Climate Change 4-4 Energy Consumption and Management	84-102
	Emissions				
Society	Occupational Health and Safety	<ul style="list-style-type: none"> Establish the ESHE policy and arrange employee health examinations, occupational hazard health examinations, and relevant talks and education/training activities. 	<ul style="list-style-type: none"> The accumulated incident free working hours at the Hsinchu site reached 2,324,925 hours. The accumulated incident free working hours at Linkou site reached 943,812 hours. 	6-4 Maintaining a Safe and Healthy Work Environment	114-117 162-164
	Marketing and labeling	<ul style="list-style-type: none"> Conduct customer satisfaction periodically and include customer feedback as the reference for future planning. 	<ul style="list-style-type: none"> Manage and verify the content of marketing communications with the internal audit mechanism. 	5-2 Quality Persistence	122-130
	Compliance with Social and Economic Laws and Regulations	<ul style="list-style-type: none"> Keep track of legal requirements and update relevant regulations periodically, and organize education and training activities. Establish whistleblowing and complaint mechanism. 	<ul style="list-style-type: none"> No significant penalties were imposed during the year. 	2-3 Risk Management	45-47

2-2 Ethical management and sustainable governance

2-2-1 Board of Directors and Functional Committees

Organization System



Organizational Function Introduction



Chairman's Office

including the Corporate Strategy Committee, Legal Division, IT Division, Human Resources Central Division, Public Relations Division, R&D Center, Finance Center, President's Office, and its subordinating units

Plan operational strategies and goals; plan and implement internal control; manage legal affairs and plan and manage document control; plan and implement human resources affairs; plan IT system and implement new IT system development; develop market presence and contact the media; plan, implement, and supervise public affairs, such as international exhibitions and product promotional activities; command the direction of product design and application; have overall control of the Company's financial situation; and authorize the president to execute the decisions of the board of directors to achieve the management goals set by the board.



President's Office

including Business Center, Product Development Center, Operations Center, and Business Process Improvement Division

Responsible for leading the Company's Operation Center, Business Center, Product Development Center, and branch offices, coordinating and operating to achieve company goals and strategies. Lead the Company's overall business development, make decisions and promote policies and assessments, and formulate operational rules and regulations.



Business Center

including the eReader BU, eNote BU, Retail BU, IoT (Internet of Things) BU, Product Marketing Division, Business Management Division

In charge of global business management and strategic direction; in charge of global product planning and strategic direction; in collaboration with product application engineering departments to propose efficient product development timelines for customers and shorten customer development time; draw up product development road maps; achieve company performance goals; plan and implement new product and new market ecosystem construction for the Company.



Financial Center

Responsible for finance, accounting affairs and control over related matters, and planning as well as execution of sustainable business management and public affairs.



R&D Center

Taiwan, Japan, USA, and China

E Ink R&D is located at five labs with different areas of responsibility in Taiwan, USA and China. R&D is responsible for technology breakthroughs, range extension and continuous improvements for e-paper products. Most projects are cross-site, requiring close coordination between experts in different fields in the five labs to deliver integrated solutions. The scope of the work includes e-paper types, patent portfolio management, prototype panel design, new production technologies, metrology, construction of new platforms and module production technologies, as well as the introduction of critical materials, parts and components. As the only maker of high-volume reflective displays for consumer and office devices, we also develop Touch and Front Light solutions and reference designs to support customer adoption of this unique technology.



Product Center

including System Central Division, Panel Central Division, and Electronic Central Division

Responsible for the development of CE/IoT products; integrate chip designs; in charge of the technology development of panels, driving waveform, touch design, front light, process for modules, systems, etc.; assist BUs in implementing mass production and solving the customers' problems, shortening the customers' time for design, and reaching the Company's mass production goals for products.



Operation Center

Taiwan, China, USA

Integrate and make plans for the production bases around the world, promote process integration and production capacity expansion, and make effective use of the resources to achieve the greatest synergy. Also, plan, implement, and supervise the procurement of raw materials for products, equipment, and projects; plan raw material requirements and manage bonds and logistics; ensure the quality and reliability of raw materials and products; manage and implement production planning; analyze the production process in the product manufacturing process and plan and implement process management.

Board Member Diversity

E Ink has established its Board Diversity Policy pursuant to the Corporate Governance Best Practice Principles, which stipulates that the board composition ought to reflect the diversity of members. Apart from the restriction that directors concurrently serving as company officers may not exceed one-third of the total number of the board members, the Company should also formulate suitable guidelines for diversity based on the needs for corporate operation, business type and business development. These include general guidelines (not exhaustive) in two specific aspects:

Basic requirements and values

Gender, age, nationality, cultural background of members, and so forth.

Professional knowledge and expertise

Professional background (i.e. in law, accounting, industry, finance, marketing or technology), specific expertise and previous experience in relevant industry sectors.

The composition, ratio and term of the board members all correspond to the goals of the diversity policy:

	Number of board members	Independent Director	Director concurrently serving as a company officer	Female director
Total number	9	3	3	1
Percentage in the total number of board members		33%	33%	11% V
Features	1. The basic requirements and values are achieved. 2. All the directors have adequate experience and professional knowledge in relevant fields.			
Consecutive terms of independent directors	All the independent directors shall not serve more than three consecutive terms on the board.			
Average tenure of all directors	7.5 years.			



Title	Name	Gender	Years of service as an independent director			Major experience/education			Age (years old)				Concurrently serving as a company officer	Serving concurrently as director in other companies (Publicly listed company) ^{*Note 1 *Note 2}
			<3	3-9	>9	Industry, technology	Law, finance, commerce or accounting	Technology research	<50	50-60	60-70	>70		
Chairman	Johnson Lee	Male				V	V		V				V	2
Director	S. C. Ho	Male				V	V					V		5
Director	Felix Ho	Male				V	V		V					3
Director	Feng-Yuan Gan	Male				V				V			V	0
Director	Chuang-Chuang Tsai	Female				V		V				V		0
Director	Luke Chen	Male		V		V				V			V	0
Independent Director	Po-Yung Chu	Male	V			V	V					V		4
Independent Director	Shi-Chern Yen	Male	V			V		V				V		3
Independent Director	Donald Chang	Male	V			V	V					V		2

Note 1: Pursuant to Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies, no independent director of a public company may concurrently serve as an independent director of more than three other public companies.

Note 2: The determination of a director's independence shall be performed in accordance with the following principle: compliance with no less than 4 out of the 9 criteria and compliance with at least 2 criteria out of the first 3: (For information on the criteria as stipulated by the laws of R.O.C., please refer to relevant sections in E Ink's Annual Report for 2021)

(1). In the past five years, none of our directors have served as a member of E Ink's senior management. (2). For the current fiscal year and the past three years, none of the board members and their family members have received amount in excess of US\$ 60,000 from the Company or any of its subsidiary. However, this restriction does not apply to those who meet the requirements of U.S. SEC Rules 4200. (3). For the current fiscal year and the past three years, none of the board members' family members have served as a member of E Ink or any of its subsidiary's senior management. (4). None of the directors are acting as the Company or its management's advisor. In addition, they have no stake with the Company's consultants/advisors. (5). None of the directors have any stake in the Company's primary customers or suppliers. (6). None of the directors are bound by contractual relationships with other enterprises or their management. (7). None of the directors have any stake in NPO that are recipients of donation/contribution from E Ink. (8). None of the directors have served at an external auditing body or acted as partners at such body within the past 3 years. (9). None of the directors have personal interests that conflict with the independent operation of the board.



Operation of the Board of Directors, Audit Committee, and Compensation Committee

Board Meeting

We uphold the spirit of governance and practice governance, insist on operation and information transparency, and care about shareholder interest. Therefore, we have established our articles of incorporation, governance framework, and code of practice in accordance with the Company Act, Securities and Exchange Act, the best practice principles for TWSE/TPEX listed companies, the law and regulation interpretations and rules of competent authorities such as the Financial Supervisory Commission, Taiwan Stock Exchange, and Taipei Stock Exchange. The board of directors has also established the rule of procedures for board meetings to define the duties and operation of the board meetings. The board of directors holds a board meeting at least once a quarter. Major duties include establishing organizational strategies and policies, resolving major business affairs, and selecting, supervising, and instructing the management. Board members are elected by the general meeting of shareholders and the board is formed by professionals in different fields. Each board member has rich experience in related industries and higher education attainment in related fields, such as technology, business, finance, accounting, and corporate operations. After the re-election of directors in the 2020 annual shareholders' meeting, the board currently has nine directors, including three independent directors and one female director, with an average age of 62.4. The term of all current directors is three years, from June 18, 2020 to June 17, 2023.

Audit Committee

To optimize the audit and supervision functions and strengthen management adequacy, the Audit Committee assists the board of directors in implementing its supervision duty and exercising the authority specified in the Securities and Exchange Act, Company Act, and other laws and regulations. The Audit Committee communicates and exchanges with certified public accountants (CPAs) periodically and audits the selection, independence, and performance of CPAs. At the same time, internal auditors periodically submit summary audit reports to the Audit Committee based on the annual audit program. Audit Committee members also periodically assess the company's internal control system and internal auditors and their work.

E Ink's Audit Committee is formed by three independent directors who comply with the professionalism, independence, work experience, and the number of companies where they are also serving as independent directors concurrently as specified in the "Regulations Governing Appointment of Independent Directors and Compliance Matters for Public Companies"

The Audit Committee is operated to achieve the following supervisory goals

- The fair presentation of the Company's financial statements.
- Selection (dismissal), appraisal of independence, and performance of CPAs.
- The effective implementation of the Company's internal control.
- The Company's performance in legal compliance.
- The Company's control over existing or potential risks.

Compensation Committee

The Compensation Committee is established to make a reasonable, impartial, and competitive compensation strategy according to the external competition environment of the industry, pay on the benchmark market, and operational performance by external professionals. This is done in order to strengthen management strategies, operational performance, and the internal audit system of the company, and co-supervise the reasonable remuneration for directors and higher-level managers. In doing so, we hope to attract, retain, and encourage outstanding talents and thereby enhance the company's overall competitiveness.

Avoidance of Conflicts of Interest for Directors

We have included provisions regarding the avoidance of conflicts of interest in both the Rules of Procedure for the BOD Meeting and the Articles of Organization of the Audit Committee. When a director or the corporation he/she represents has a conflict of interest with a proposal discussed at a board meeting, and such a conflict of interest may harm the company's interest, this director must not participate in the discussion or voting of the proposal and vote for other directors.

The statistics on the avoidance of conflicts of interest in the board meetings in 2021 are shown below (please refer to the 2021 Annual Report for details):

- Board of Directors: There were 4 times of avoidance of conflicts of interest involving 5 proposals in the 7 board meetings.
- Audit Committee: No such situation for the year.

Number of meetings and attendances of the Board of Directors, Audit Committee, and Compensation Committee in 2021

7 board meetings, audit committee meetings and compensation committee meetings were held in 2021. To enhance the board performance, E Ink always arranges the meeting time through the communication beforehand to ensure that the directors are able to attend in person. Thus, the attendance rate has been better than the attendance standard specified in the laws and regulations, with average attendance of directors for the year reaching 100%.

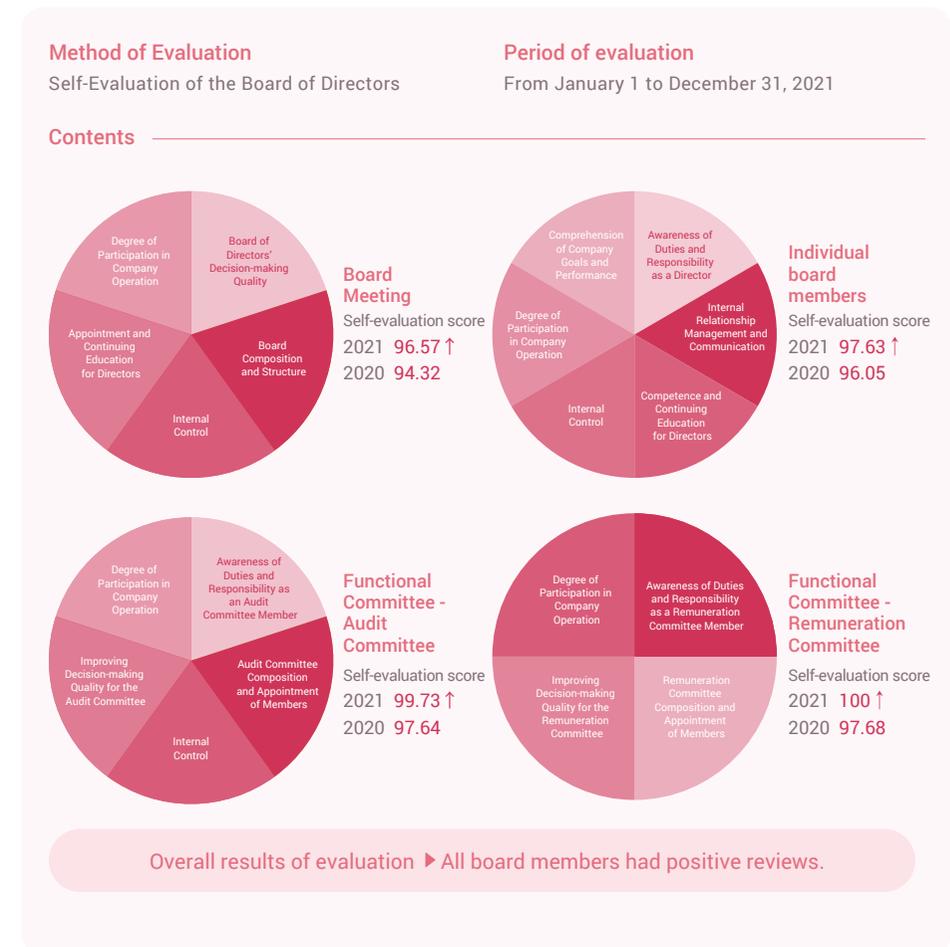
		Board Meeting	Audit Committee	Compensation Committee
Number of Meetings in 2021		7	7	7

Title	Name	Board Meeting Actual Attendance Rate (%)	Audit Committee Actual Attendance Rate (%)	Compensation Committee Actual Attendance Rate (%)
Director	Aidatek Electronics, Inc. Representative: Johnson Lee	100%	-	-
Director	Aidatek Electronics, Inc. Representative: S. C. Ho	100%	-	-
Director	Aidatek Electronics, Inc. Representative: Felix Ho	100%	-	-
Director	Hsin Yi Enterprise Corp. Representative: Luke Chen	100%	-	-
Director	Hsin Yi Enterprise Corp. Representative: Feng-Yuan Gan	100%	-	-
Director	Hsin Yi Enterprise Corp. Representative: Chuang-Chuang Tsai	100%	-	-
Independent Director	Po-Yung Chu	100%	100%	100%
Independent Director	Shi-Chern Yen	100%	100%	100%
Independent Director	Donald Chang	100%	100%	100%

Note: According to the Company Act and Regulations Governing Procedure for Board of Directors Meetings of Public Companies, more than half of the directors shall be present at the meeting, or the meeting is not legal

Status of Board Performance Evaluation

E Ink has established the "Procedure Governing Board Performance Evaluation," and an evaluation of board performance has been held in accordance with this procedure in 2021. Regarding the results of performance evaluation of the overall board, each director and functional committees in 2021, the average self-evaluation score was 98.5, which is 2% higher than the result in 2020. The overall evaluation results showed that all board members had positive reviews. The following is the summary of the evaluation results:



Further Education of Directors

To enhance the professional competencies of directors, all of the E Ink directors take part in the courses related to corporate governance to know the latest domestic or international trends in corporate governance. In 2021, each director has been trained for more than 6 hours. For the courses that the directors have taken, please refer to the Annual Report.



2021
Annual Report

2-2-2 Ethical Management

Ethics and integrity are the core values of E Ink. Upholding ethical business practices, we keep reminding ourselves of the importance of integrity, honesty, fairness, accuracy, and transparency while carrying out our promises and practices. Based on the framework of organizational codes and regulations, we establish relevant policies or guidelines in respect of legal compliance in different areas, including business ethics, sexual harassment prevention, financial statement production, internal control, insider trading, intellectual property management, and personal information protection. We believe that these defined policies and guidelines can help enhance operational efficiency and effectiveness, maintain regulatory consistency, and improve business ethics.

Regulation name	Key points of the regulations
Corporate Governance Best Practice Principles	In order to promote the Company's sound development and establish a good corporate governance system, E Ink has formulated the principles with reference to the "Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies".
Sustainability and CSR Best Practice Principles	In order to promote the Company's corporate social responsibility and the sustainable development of the economy, society and environment, E Ink has formulated the principles with reference to the "Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies".
Procedure Governing Board Performance Evaluation	In order to implement corporate governance, enhance the functions of the Company's Board of Directors, and establish performance targets to strengthen the efficiency of the Board of Directors' operations, E Ink has established the procedure in accordance with Article 37 of the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies.
Business Integrity Code of Conduct	In order to maintain the corporate culture of ethical management and its sound development, E Ink has established the principles with reference to the "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies".



Please refer to the Company's website for our important regulations.

Business Integrity Code of Conduct

These principles have been established in reference to "Ethical Corporate Management Best Practice Principles for TWSE/GTSM Listed Companies" in order to uphold our corporate culture for ethical management and sound development. These principles are applicable to E Ink and all its subsidiaries that appear on its consolidated income statement. The Company's operation is based on ethical corporate management practices. We endeavor to establish a comprehensive control mechanism for corporate and risk management to create an ideal environment for sustainable development.

In accordance with the principles, the Company may establish regulations for preventing unethical behaviors (the "prevention program"), which shall analyze business activities within the scope of business with a higher risk of unethical behaviors and strengthen relevant preventive measures. The above prevention program should cover at least the prevention measures for the following behaviors.

1. Offering and accepting bribery.
2. Provision of illegal political contributions.
3. Improper charitable donations or sponsorships.
4. Offering or accepting unreasonable gifts, entertainments or other improper benefits.
5. Infringement of trade secrets, trademarks, patents, copyrights and other intellectual property rights.
6. Engaging in unfair competitive practices.
7. The products and services are developed, procured, manufactured, provided or sold in a manner that directly or indirectly harms the rights, health and safety of consumers or other interested parties.

Introducing regulations related to ethical management

Protection of confidential information

As a leading global brand of EPD technology, E Ink must maintain the value and keep absolute confidentiality of material information to maintain corporate competitiveness. And as such, we continue to verify and optimize the effectiveness of key technologies and information while passing down and managing relevant know-how while strengthening relevant training for our employees in order to help them foster the right mindset for the protection of confidential information and alertness to reduce the risks of confidential information loss. We engage our customers and suppliers in the joint effort for confidential information protection through the signing of confidentiality agreements in order to ensure proper protection of best interests for the Company, our shareholders, employees, customers, and suppliers. Currently, the following approaches are applied to ensure the appropriate and effective protection of confidential information.

Access Management	Awareness Education and Training	Stringent Controls
<ul style="list-style-type: none"> We constantly monitor and control personnel and vehicle access to the company, taking steps to prevent personnel from carrying confidential information out of the company with personal devices. 	<ul style="list-style-type: none"> We arrange periodic awareness education on the topic of confidential information protection, with relevant internal audits carried out regularly We also arrange security education/training and management courses for suppliers and assist them in complying with E Ink's security management system 	<ul style="list-style-type: none"> For those committing serious violations of the non-disclosure policy, strict disciplinary actions will be taken. We ask customers and suppliers that have business dealings with the Company to sign confidentiality agreements

In order to ensure the appropriate preservation methods and relevant protection measures for the documents of different classification levels in the Company, the Taiwan Intellectual Property Management System (TIPS) has been established in 2021 as management regulations for classified documents. The classified documents are divided into two levels: confidential and secret (from least to greatest). Every responsible personnel shall manage the documents according to the classification levels for proper compliance.

▶ 2021 TIPS A-level certification



Anti-insider trading concept promotion and anti-corruption/anti-insider trading statements

After taking relevant courses, the employees are requested to sign the agreement on prevention of insider trading. By doing so, we aim to enable all employees to understand our operational management policy and reach a consensus. In addition, we have established codes for processing internal material information and communicate this message to our directors, managers, and all employees to prevent insider trading due to violations of the Procedure for Handling Material Inside Information

Anti-Trust

As the global leader of ePaper technology, E Ink is committed to business activities that are in compliance with the principles of integrity and clean transaction and antitrust-related regulations. Currently, our antitrust compliance policy and related training courses have been implemented to educate all employees, from the higher level managers to general staff, about the basic concept of antitrust and code of conduct for their respective positions and responsibilities. Through education and training, we hope that the employees can comply with and further understand the relevant laws to prevent any alleged violation of the law. No penalties resulting from the violation of antitrust were imposed in 2021.

Protection of personal information

In addition to placing major emphasis on the protection of personal information for all stakeholders, E Ink has made it a point to ensure that all departments will take adequate protective measures when collecting, processing and using personal information. The Personal Information Taskforce Lead by the Legal Affairs Division is entrusted to be in charge of the implementation, regularly requests the departments that might be involved in matters of personal information to complete the Personal Information Security Checklist every year to make sure whether they have had access to any process involving the flow of personal information. They should accordingly submit their initial processing method so that the Personal Information Taskforce can collect relevant information, review the matters at the Personal Information Protection Meeting, and provide improvement plans.

In addition, we have complied with the EU's General Data Protection Regulation (GDPR), and completed updating our privacy policy and terms of use (in both Chinese and English) on E Ink website. Not only that, we have also established our Cookie policy and followed up on the control of internal/external flows of personal information to ensure legal compliance. Thus far, there has been no incident involving secondary use of customers' information for unrelated purposes and we had zero personal data leakage incidents in 2021.

The responsibility and duty of protecting the trade secrets and intellectual property have been promoted through education and training as well. Further, we required our employees to sign the agreement on non-disclosure of sensitive information and protection of Company IP to ensure that they understand the importance of trade secret and intellectual property protection to a company and implement the measure of confidentiality agreement.



[Link to our
privacy policy](#)

Providing training courses on the Business Integrity Code of Conduct

E Ink not only asks all of the employees to strictly observe the Business Integrity Code of Conduct, but also requests all the existing and new employees in Taiwan to receive the education and training related to the Business Integrity Code of Conduct. Such education and training cover the topics of anti-corruption, anti-unfair competition, code of business conduct, responsibilities, whistleblowing regulations and trade secret protection. In 2021, 1,107 employees in Taiwan took the training courses.

In order to strengthen the employees' awareness of anti-corruption, we have planned to arrange online anti-corruption policy training courses in 2022. By discussing corruption cases and relevant regulations, we aim to remind the employees to adhere to the anti-corruption principle during their operations and thereby reduce the occurrence of employee corruption. In the future, our anti-corruption policy training courses will be continuously introduced to the other business locations around the globe.

Establishing open whistleblowing channels

In support of a culture featuring transparent and ethical practices, E Ink has established various reporting channels for employees and outsiders to report inappropriate matters by email (Appeal@eink.com), by letter, or on our website. When E Ink receives a whistleblowing report, the Human Resources Central Division will investigate the case to verify the incident. During the process, the identity of the whistleblower and the content of the case will be kept a secret.

If the case is confirmed, we will take serious actions to handle the incident in order to eliminate corruption. In 2021, we received no grievances relating to the violation of our Business Integrity Code of Conduct. E Ink was also not involved in alleged violation/lawsuits or penalties for relevant violations, corruptions, bribes, fraud, insider trading, anti-competitive behavior, or breach of anti-trust/monopoly/market manipulation regulations, so there is no follow-up matter.

Adopting internal control procedures to ensure that no regulations were violated

We insist on ethical business practices in governance. Therefore, legal compliance is our basic principle and spirit. In legal compliance, each E Ink unit carries out its duty according to the laws and regulations of the competent local authorities and internalizes them in E Ink's code of business practice and routine operations as guidelines for all business activities. E Ink has no violation case in ethical business practice.

Our internal audit unit conducts internal audits every year according to the relevant laws and regulations and the Company's internal operating standards. It promptly revises the scope and items of the audits to prevent illegal activities and thereby ensure E Ink's sustainability operations. Meanwhile, each of our department periodically identifies the laws and regulations, reviews the legitimacy and risks of impact to E Ink, and takes corresponding actions to meet the laws and regulations. After detecting any illegal activities, we will honestly disclose their cause(s) according to the regulatory requirements and codes of the competent authorities without hiding.

Corporate governance evaluation

To strengthen corporate governance, the FSC has included corporate governance evaluation as a key evaluation item in recent years, and corporate governance is also the goal we have been pursuing over the years. We implemented appropriate board meeting operations by establishing the Rules of Procedures for Board Meetings and the independent director post. We also established the Audit Committee, which holds Committee meetings periodically. The Committee also invites CPAs and internal audit officers to the meeting to concretely implement the committee's supervision functions in order to put corporate governance into practice.

A total of 1,639 TWSE or TPEX listed companies participated in the 8th Corporate Governance Evaluation, which evaluated those companies with 4 types of indicators.

E Ink was ranked 6% to 20% in this year's evaluation, which is an outstanding achievement. In addition, for the parts that are not well taken care of, we will continue to evaluate the feasibility of future improvements and actively implement them in order to earn points and improve the overall image of E Ink. Priorities and measures for enhancement are as follows:

1. Comprehensive promotion of sustainable development
2. Improvement of information transparency for investors
3. Enhancement of board composition and operation

2-3 Risk Management

E Ink has, in accordance with the Corporate Governance 3.0 blueprint announced by the Financial Supervisory Commission, made the first step by working on the charter of E Ink's Risk Management Taskforce for the management. In 2021, the plan of establishing a Risk Management Committee has been proposed and communicated with the directors; it is hoped that through the plan, the Company's risk management effort can be improved and the awareness of risks can be better developed and risk better controlled.



2-3-1 Operational Risk Identification Results

In the part of risk identification and management, each functional unit carries out detailed risk identification according to the division of profession and prepares management strategies and response plans to reduce, transfer or avoid risks in order to effectively reduce the Company's operational risks. In the event of an emergency or major incident, the crisis handling mechanism of E Ink is activated. The crisis handling team comprises all units, with functional teams, and an emergency handling meeting is held to immediately come up with an assessment of the incident and the affected target and prepare and publish communication messages to ensure information transparency and immediacy.

The table below shows the controls of identified and captured risks within the organization.

Operational Risk Category	Item	Risk Description	Degree of Impact	Frequency of Occurrence	Control Strategy
Continuing Operations	Legal Compliance	The global political, economic and industrial trends, fluctuations and new forms of trade affect the environmental and trade regulatory requirements and impact the enterprise costs, profitability and risks of financial operations.	High	Low	Collect and analyze the legal trends and knowledge in different fields on a regular basis, and come up with response plans for the level of exposure to risks.
	Business Ethics	The Company's management results can get negatively impacted by the personnel's corruption or competitive behavior.	High	Low	Offer relevant management policies and communication channels, and provide new employees with related education and training.
Product Technology	Technology R&D	Innovative technology R&D can promote the commercial development of the value chain, enhance product profitability and strengthen the Company's core competitiveness.	High	High	Improve the competitive advantage of products through product differentiation and high-quality technology; be engaged in strategic alliance and cooperation.
Manufactured Risk	Supply Risk	Supply risk from concentration of supply, such as supply shortages due to the under capacity of suppliers, accidents to the site, or natural disasters. Currently, we have established the "Business Continuity Management Regulations."	Medium	Low	<ol style="list-style-type: none"> 1. Regularly check the stock of various raw materials every week to determine the optimal stock planning. 2. Carefully assess suppliers and aggressively cultivate supply sources.
	Rapid Changes in Supply and Demand	The stock and warehousing costs might increase due to the rapid changes in supply and demand, or the Company might lose customers due to under production.	Medium	Medium	Plan and simulate various production-sales situations based on purchase order estimation to dynamically adjust the production plan.
Information System Risk	Confidential Information Leakage	Theft, tampering, damage, loss, or leakage of trade secrets, patents, and research and development data.	Medium	Low	<ol style="list-style-type: none"> 1. Promote personnel management, information security education and training, information security policy, and awareness of information security. 2. Develop a safe and reliable information center based on a backend system with good operation maintenance management. 3. Provide good backup, system disaster recovery exercise, and data validation mechanism. 4. Use functionally sound anti-virus software and automatically update the virus signatures to reduce the risks of virus infection and malicious attacks. 5. Implement the security control mechanism for information terminal equipment to reduce the risk of leakage of confidential corporate information to private devices. 6. Formulate the network access control policy to regulate the access to intranet and extranet, the data exchange with customers and suppliers, and the determination procedures for approving the application for such matters or not. 7. Adopt the emergency handling mechanism for information system anomalies.
Safety and Health Risk	Disaster Risk	To prevent various disasters from causing critical business interruptions, we have established the "Business Continuity Management Regulations" and the disaster response team to achieve business continuity.	Medium	Low	<ol style="list-style-type: none"> 1. Establish standard operating procedures and arrange employee education and training periodically. 2. Update hardware protection and conduct inspections periodically.
	Health and Safety Risks	The employee productivity may decline due to occupational diseases or poor personal condition.	Medium	High	Establish the "Occupational Safety and Health Management Procedures," perform health risk management and create a healthy environment to take care of the physical and mental health of employees.
Environment Management Risks	Energy Management	The production capacity may be impacted by power shortage or outage.	High	Low	Save the electricity and costs and use green power for energy conservation.
	Green Production	Emitting pollutants to the environment may leave the outside community with a poor impression of the Company.	High	Low	Enhance the effectiveness of water/air pollution prevention and make more efforts to remove the pollutants.

2-3-2 Impact of Emerging Risks and Counter-Strategies

The risks of E Ink's daily operations and management primarily encompass specific control operations pertaining to operation, manufacturing and asset management; with regards to external emerging risks that the group faces and according to the Global Risks Report published by the World Economic Forum (WEF), we have identified key emerging risks relating to the environment including global warming and extreme weather. For information security, our emerging risks include cyberattacks, data fraud or theft, emerging technology applications and so forth. E Ink has further carried out the management in depth in terms of the risks related to climate change and information security.

Climate Change Risk

In the Global Risks Report published by WEF, climate change has remained one of the top five risks for several years. According to a simulation conducted by the Ministry of Science and Technology on the worst-case scenario of climate risk at RCP 8.5 as established in IPCC's 5th Assessment Report, compared to the end of the 20th century, the temperature in Taiwan may go up by as much as 3.18 degrees Celsius by the end of 21st century, with the longest streak of rainless days increasing by 13%, the ratio of moderate/severe typhoons by 10% and maximum rainfall variability by as much as 129.86%.

In light of climate changes, we have studied materials including our internal/external stakeholder surveys and assessments, international researches and reports, trends in domestic/international sectors and so forth to identify the physical risks and transition risks that E Ink may face due to the effects of climate changes. For the risks and opportunities identified, we then carried out analyses on the chances of occurrence and severity of impact while assessing our corresponding countermeasures for each risk to establish a specific strategic direction for relevant climate changes.



Risk impact

With the increasing intensity and frequency of natural disasters, it is natural to assume that such weather incidents could lead to a shortage of water resources needed for production, potential damages to basic infrastructures, or disruption of energy supply that may disrupt the Company's operation.

Impact to E Ink

Each year, severe disasters such as typhoons, floods, storms and so forth have caused our sites to flood, disrupted power supply and led to disruption of operations. In light of the latest international trends, the current power market is strongly promoting renewable energy generation. Domestically, the government has legislated a clause for "high-energy users", which requires energy-heavy industries to achieve an installed capacity of 10% for renewable power generation within 5 years; industries that fail to achieve this requirement will face a significant surcharge for their power consumption.

Counter measure

And as such, E Ink shall continue to analyze the potential risks that might result from natural disasters and establish appropriate response strategies. Presently, E Ink has already formulated disaster response plans for typhoons, chemical leakage and other incidents that may severely impact E Ink's operations so that we can prepare for such risks. E Ink has proactively planned for the use of renewable energies. Due to considerations for the diversity of renewable energies and distributing their sources, E Ink has considered incorporating rooftop solar power, inland wind power, or even biomass power generation as potential renewable energy sources. In addition, we have also introduced the TCFD framework and scenario analysis to prepare for potential climate risks that may emerge in the future while seeking opportunities for development despite climate change.

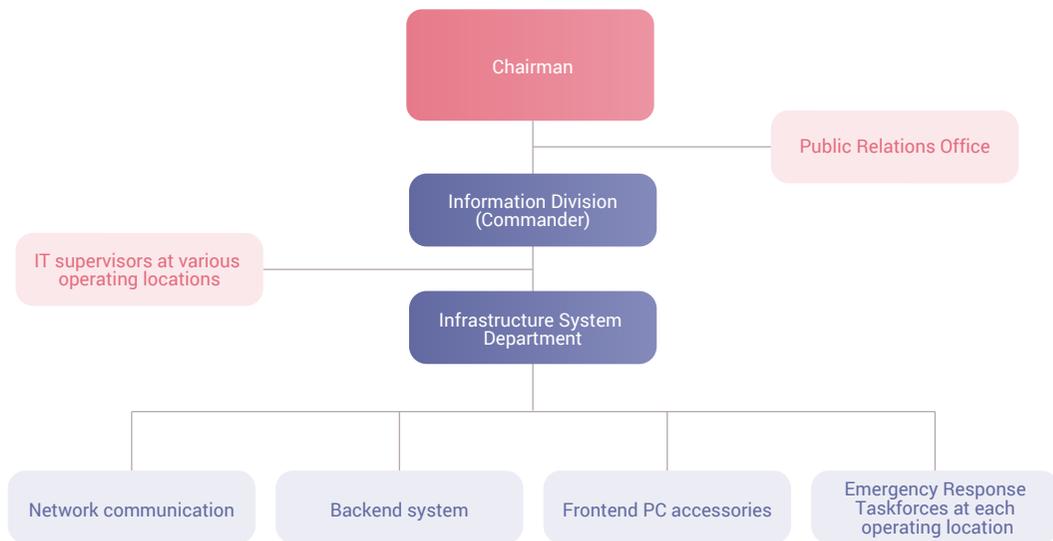
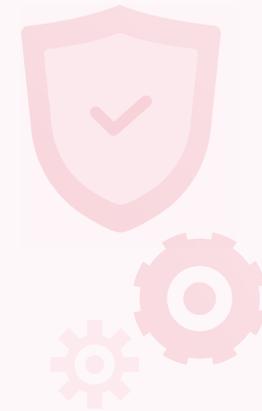
For more information on Climate-related Financial Disclosures (TCFD), refer to 4-3 Climate Change for details.

Information security risks

For information security related risks, large scale cyberattacks could potentially expose E Ink to the risks of data loss and extortion but also lead to disruption in our production systems, resulting in severe operational losses. And as such, prudent management of information security has become more important than ever. In light of the application of emerging technologies, personal information, IP protection and moral hazard and so forth have become even more difficult to prevent.

Due to such risks of information security, E Ink has already established a dedicated unit responsible for information security and an emergency response taskforce while appointing responsible custodians for various information systems in accordance with equipment systems and functional needs to take charge of relevant daily maintenance. These measures are intended to create a real-time monitoring system and daily inspection mechanism to ensure normal operation for all systems.

E Ink has planned to establish a dedicated unit for information security as per laws and regulations in 2022 to comprehensively strengthen the group's information security management framework. We will also continue to promote relevant training to raise the employees' awareness of information security and enhance our information control mechanisms for stakeholders such as our advisors, customers, and suppliers.



Information Security Emergency Response Taskforce

E Ink has established a seamless information system security protection network that encompasses the management of server rooms, network equipment, network connection, personal information equipment (i.e. PCs, notebook PCs, tablet PCs, smartphones, and so forth) in order to ensure adequate protection of sensitive information such as employees' personal information, the Company's confidential information, information of our customers/suppliers, etc. In order to implement an effective information security management mechanism so that we can ensure the confidentiality, integrity and availability of information assets, E Ink has established a PDCA (plan, do, check and act) cycle to establish, implement, maintain and improve its information security management system.



Risk impact

Cyberattacks and data theft may disrupt the Company's operating systems and result in the leakage of the Company's business secrets, which in turn will impact the Company's operation and competitiveness in development.



Impact to E Ink

Inappropriate use or leakage of the Company's secrets will lower the Company's competitiveness. In severe cases, such incident may result in major operational risks or financial loss to the Company.

Given existing trends of emerging technology, information and data have been extensively used in all sorts of applications. Consequently, such change makes it easier for hackers to launch cyberattacks through specific information or IoT device to steal, sabotage, extort or defraud their victims.



Diverse countermeasures

Employee education and training

- E Ink promotes the concept of information security and provides relevant education and training on a regular basis, and clearly informs the employees of their duties to maintain information security and confidentiality through the contracts, thereby raising the awareness of information security for all the employees and IT personnel.

Network security control

- We have implemented the information security control system for the end point and wireless network to prevent the access to the Company's intranet by any information equipment that does not belong to the Company.
- We entrust an external unit to monitor the network risk exposure and perform external vulnerability scans, update the firewall equipment firmware periodically, and fix the information security vulnerability of software at any time to prevent hackers from stealing the Company's confidential data or damage the data.
- We have combined the Windows AD certification to further identify different internet surfing behaviors of different users and malicious threats, which helps to ensure good network identification and audit tracking records.
- We have integrated cloud big data analysis and machine learning with malware community databases to implement joint-defense measures across the globe against all known and unknown attacks.

Device security

- Functionally sound anti-virus software has been installed on all PCs and servers at the Company.
- Importing the terminal equipment management and control system to effectively manage and control external equipment and network or cloud services, reducing the risk of the company's confidential information leaking to private equipment.

E-mail security control

- The Group's email protection system, which is protected by advanced features such as external message evaluation and sandboxing, strengthens the Group's ability to filter and protect against new forms of business fraud, multi-level URL phishing, and diverse malicious email attachments.

Information system backup, verification and recovery

- Applicable backup system and monitoring mechanism have been adopted to regularly back up all the information systems and make relevant reports.
- The Company has developed good system disaster recovery exercise and data validation mechanism to ensure the correct data backup and the personnel's familiarity with operations.
- There are also off-site backup systems for important information systems, such as SAP ERP and important databases.

Emergency handling for abnormalities

- Good management regulations have been established so that the employees know how to report and react when any information system anomalies or major information security incidents occur.



Improvement

Setup of an information security management system that meets the international standards

- E Ink has planned to implement the ISO27001 certification in 2022 to set up an information security management system that corresponds to the international standards, which would enable the Company to elevate its capacity for information security management and protection.

2-3-3 Status of Audit Mechanism Operation

E Ink has set up an internal audit unit directly under the Board of Directors to audit the four operational and management systems (including finance and sales) of E Ink and the subsidiaries. Our Audit Office periodically assesses the risks to the Company and develops audit programs. The office performs relevant audits in accordance with the audit programs and reports the results regularly/periodically to the directors at the meetings of the board and the Audit Committee, so that the management can understand and achieve the management objectives, and the continual effective implementation of internal control system can be reasonably ensured.



Annual report

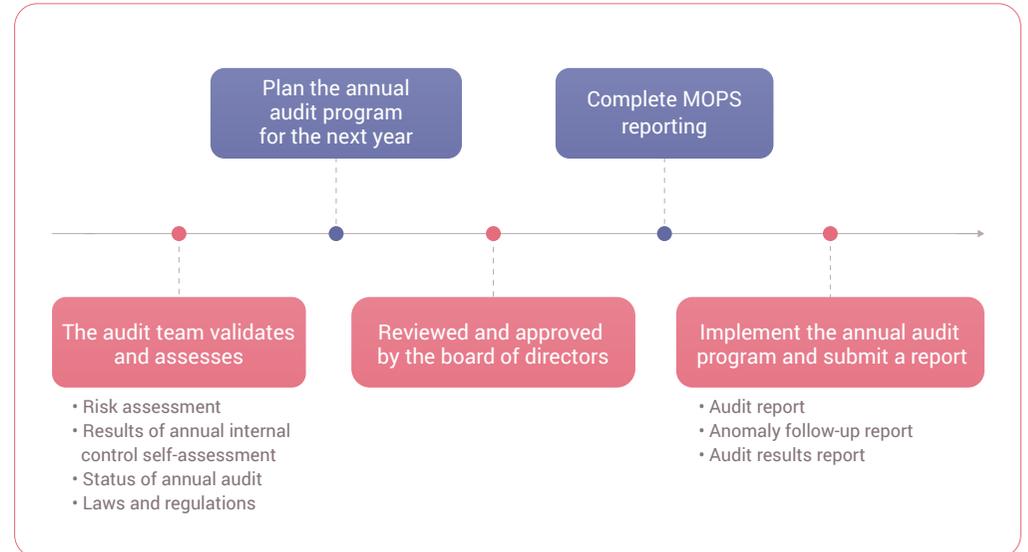
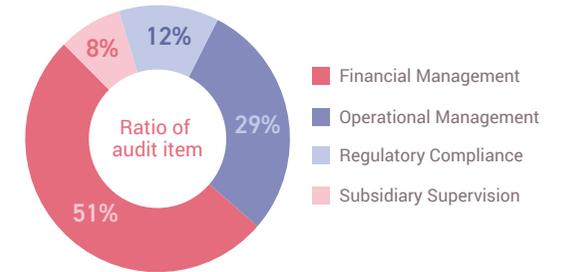
Communication between the Independent Directors and Chief Internal Auditor

In 2021, a total of 6 communication meetings were held. Please refer to the Annual Report or our website for the focuses of communication and results of implementation. All the meeting results have been completed and put into practice.

1. Every month, E Ink checks the defects of the previous month, performs follow-ups to the improvement and correction status, and prepares a written report accordingly. The report is then submitted to the independent directors for review, and the independent directors will provide handling instructions/reports or other suggestions for the report.
2. The Company's internal chief auditor presents the conducted audit operations, audit results and follow-ups to the independent directors regularly at the quarterly Audit Committee meeting.
3. E Ink holds the board meeting on a quarterly basis. The independent directors and the chief auditor will all attend the board meeting, and the chief auditor reports the internal audit operations at every board meeting.
4. When the semi-annual and annual financial statements are under review, the CPAs will attend the Audit Committee meeting to explain the process of auditing the Company's financial statements, the scope, and relevant latest regulations. They will further have a full discussion with the independent directors. The CPAs also attends the board meeting to explain the related matters for and communicate with all the directors.
5. The chief auditor/ CPAs and independent directors may directly contact each other through smooth communication channels if necessary.

Internal Audit Status in 2021

In 2021, E Ink has performed a total of 49 audits in Taiwan sites and Yangzhou Site. During the internal audit for the four main systems, a total of 25 defects or suggestions have been pointed out; the subsequent improvement percentage has reached 88%. In the future, E Ink will continue to follow up the improvement status of the defects or suggestions to further reduce the possible risks during the operation.



Note: Yu-Ying Yuan is the director of audit office



CHAPTER 03

PRODUCTS SUSTAINABILITY

Innovative and sustainable low-carbon products

3-0 Performance Results

Green revenue weights more than **99%**

Completion of more than **60** new technology innovations and new product developments

50 times less CO₂ emissions from eReader than those from Thin Film Transistor Liquid Crystal Display (TFT-LCD) tablets

More than **66%** of the year's revenue come from the latest new products

12 thousand times less CO₂ emissions from 10" ESLs than those from TFT-LCD electronic label counterparts

200 thousand tons less CO₂ emissions from ePaper bus stop signs than those from TFT-LCD

12 new representative products in the 4 aspects of Sustainable Product Design – Power Savings, Carbon Reduction, Recycle, and Innovation

419 additional patents acquired;
a total of more than **6,000** effective patents across the world thus far

513 R&D employees worldwide, of whom, **59%** have master's degree.
The number of global R&D employees makes up **25%** of the total personnel.

10 forward-looking technological **prospects**

Investment of NT\$ **2.65 billion** in R&D, accounting for **14%** of the operating revenue

7 collaborative innovations with external organizations and companies

Headquarters in Taiwan certified the **Class-A** of **Taiwan Intellectual Property Management System (TIPS)**

12 new technical representative products

Carbon Footprint (CFP): 3.30KgCO₂e/pc on 6.8" eBook module and 0.59KgCO₂e/pc on 2.9" ESL module

3-1 Eco-friendly Sustainable Technologies and Products

3-1-1 Energy-saving and Carbon-reduction Technology

ePaper, our core product, has well featured the advantages of ultra-low energy consumption, outdoor readability, backlight free, blue light free, and easy on the eyes. All these superiorities are accredited to the innate characteristics of reflective display technology" and "bi-stability".

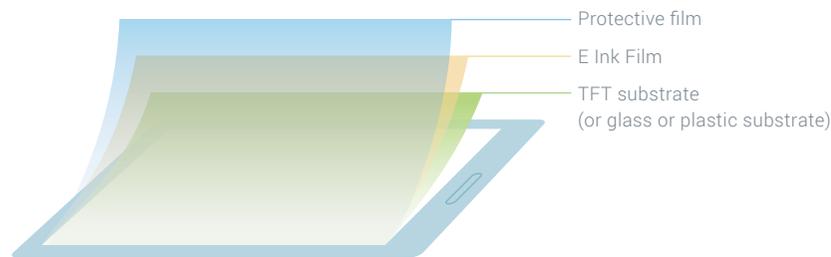
The "reflective display technology" utilizes ambient and/or external light sources and does not call for backlight sources that consume energy relentlessly. In addition to the beneficial reduction in the energy consumption and the friendliness for of the environment, it also provides the effect of blue-light free and less eye strain. Unlike the other ordinary display technologies demanding tremendous backlight to ensure the legibility in the sun and, thus, consuming more energy and harmful to the eyes, the ePaper characterized with the reflective display technology will have better display effect when the stronger external light sources are given.



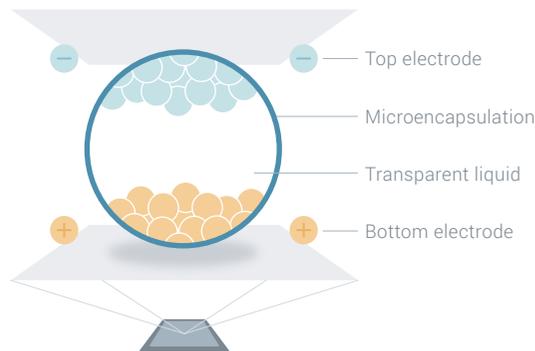
The bi-stability drives the black and white (or other colors) pigments of the ePaper to the expected position via the changing the electronic field and holds them in place without consuming electricity any further. In other words, bi-stability enables a screen to maintain its state without the need for power and would only cause the minimal power consumption upon the frame changing. This makes ePaper more energy-saving and environmentally friendly compared to other conventional displays.

ePaper: a display like paper

A formation of E Ink Film,
TFT substrate and protective film (PS)



Operating principle of E Ink Film



3-1-2 Products Friendly to Environment and User

The ePaper technology has green and low-carbon environmental benefits with a goal to replacing the one-off paper. It aims at manufacturing blue light-free and eye protecting ePaper module products featuring paper-like texture, flexibility and ultra-low power consumption. The ePaper is used a medium to present the images, texts, and the other data, which were printed on the traditional paper, in the fashion of digitalization and paperlessness so as to make It able to can be used repeatedly but also updated with information in a timely manner. In the era when hundreds of millions of IoT devices are installed, ePaper is turns into the best human-machine communication interface with its environment-friendly features.

E Ink is dedicated to the R&D and improvement of "electronic paper", our core product. We have developed ePaper products from the black and white version to the tree-color version of black, white, red and black, white, yellow. 2019 is the first year when we entered the color ePaper world and announced the start of a new era by presenting the E Ink Gallery™ (Advanced Color ePaper) and E Ink Kaleido™ (Print Color ePaper). With the maturity of the technology and mass production of the print color ePaper in 2020, a variety of color eBook readers and color ePaper notebooks were launched in the end market, making them the best display solutions for the eBook and the education industries. We further introduced E Ink Kaleido™ Plus and E Ink Spectra™ 3100 on the market in 2021. The color of these products was improved to provide more options for the customers.

ePaper can help users all over the world in their digital transformation. The color, eye protection and bluelight-free features, ultra-low power consumption, and real-time digitized integration of the product can meet the requirements for improvement of overall operational efficiency and facilitate the achievement of the global sustainable goals of zero carbon emissions in different application areas.

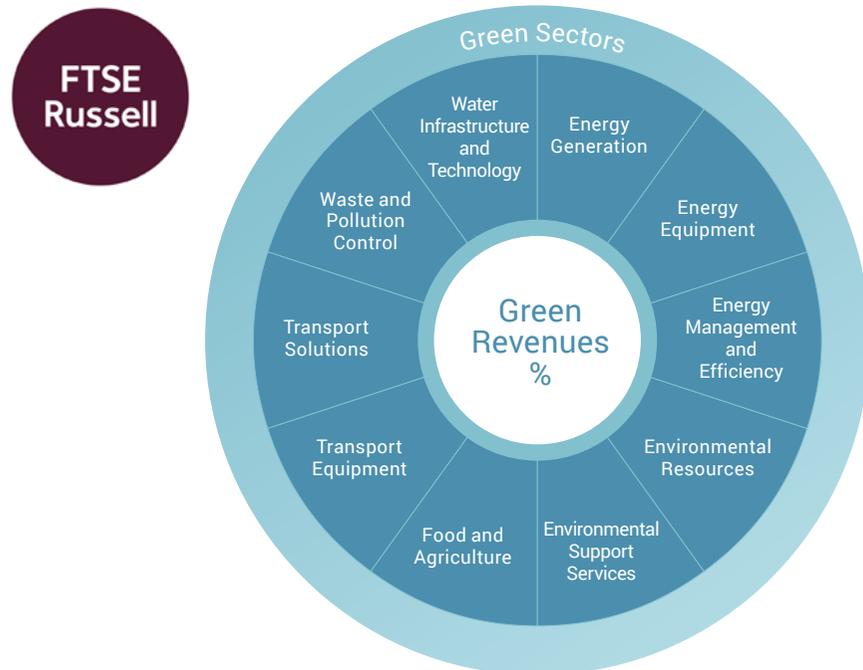


Green revenue

E Ink's ePaper technology focuses on the products of higher energy efficiency with lower carbon emissions. As FTSE Russell indicates with its green revenue data model, the green revenue of E Ink occupied 99.93% of the total operating revenue in 2020. This has a positive effect on the environment and shows the benefit of the ePaper to the environment.

FTSE Russell's green revenue data model is used to measure the ratio of the contribution from the environment-friendly products and services to the operating revenue of a company, and provides a reference for the sustainable investment. In the green revenue data model, industries are classified into 10 sectors, 64 subsectors, and 133 micro sectors. The revenue of E Ink is classified to the IT Process under the Energy Management & Efficiency sector. The definition of this sector includes the following:

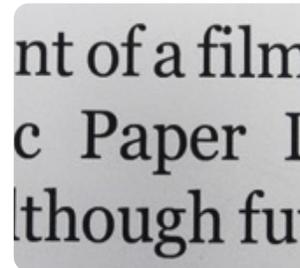
Information products and services coming from design, development and production or those introduced with respect to energy efficiency. Our ePaper products have higher energy efficiency than ordinary TFT-LCD displays. Hence, the operating revenue from ePaper products is deemed as green revenue in the green revenue data model.



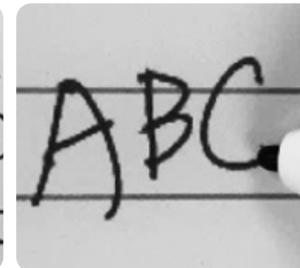
Eco-friendliness

The digital transformation facilitates the presentation of the images, texts and other data printed on paper traditionally are presented in a digital and paperless manner. This is helpful to reduce the use of one-off paper, save the consumables such as ink and toner, minimize the consumption of the resources on the planet, and reduce carbon emissions in favor of the environment. The light-emitting display consumes more power and produces more harmful light when they are used more frequently. The bi-stable and reflective technologies of the ePaper are different from the light-emitting technology. It displays the same image without power consumption and features "read like paper", "write like paper", and "touch like paper" thanks to the thinner, lighter, and more flexible display. ePaper products are helpful for the green digital transformation. In addition to avoiding excessive consumption of power and generation of more light pollution, it can bring significant benefit in the reduction of power consumption and carbon emissions after being used on an ongoing basis.

Read like paper



Write like paper



Touch like paper



Green technology read more save more

E Ink is dedicated to the replacement of paper with digital display for reading. In the past five years, there were about more than 130 million eReader products with a built-in ePaper module. Assuming that an eReader contained 50 eBooks, there were a total of 6.5 billion books in the eReader products and about 100 million trees were exempt from felling. Equivalently, this made a contribution to the absorption of 57.2 million tons of CO₂ on the planet. Using ePaper-based reader of eBooks can reduce CO₂ emissions 106 thousand times those generated by reading paper books. Likely, using ePaper-based reader of eBooks can reduce CO₂ emissions 50 times those generated by reading with Thin Film Transistor Liquid Crystal Display (TFT-LCD) tablets, or equivalently a reduction of 27 thousand tons of CO₂.

If **130** millions sets are used in five years **E-reader**



ePaper Reader
5-year energy consumption
540 tons CO₂ emissions

TFT-LCD Tablet
5-year energy consumption
27 thousand tons CO₂ emissions

Paper Book
5-year energy consumption
= 100 million trees X 550KgCO₂/tree
57.2 million tons CO₂ absorption



Smart retail enabled by green technology

If 300 million 10" eLabels are installed on the market and each eLabel updates the display four times a day, about 300 million pieces of paper can be saved in the same period and about 160 million trees are spared from felling. Equivalently, this made a contribution to the absorption of 8.6 million tons of CO₂ on the planet, or a reduction of CO₂ emissions by about 57 thousand times in comparison with traditional paper labels. Using ePaper ESLs can reduce additional 1.80 million tons of CO₂, equivalent to a reduction of CO₂ emissions by about 12 thousand times in comparison with TFT-LCD labels.

According to statistics, the penetration rate of ePaper ESLs (Electronic Shelf Labels) in the global shelf label market is less than 5%, and the future market growth is still large. It is expected that the growth rate of 20-30% will be maintained in the next few years, and replacing traditional paper labels with more ePaper shelf labels will reduce the use of paper and help the sustainable development of the environment.

If **30** million labels are used in five years **10" ESL**



ePaper Label
5-year energy consumption
150 tons CO₂ emissions

TFT-LCD Label
5-year energy consumption
1.8 million tons CO₂ emissions

Paper Label
5-year energy consumption
= 160 million trees X 550KgCO₂/tree
8.6 million tons CO₂ absorption

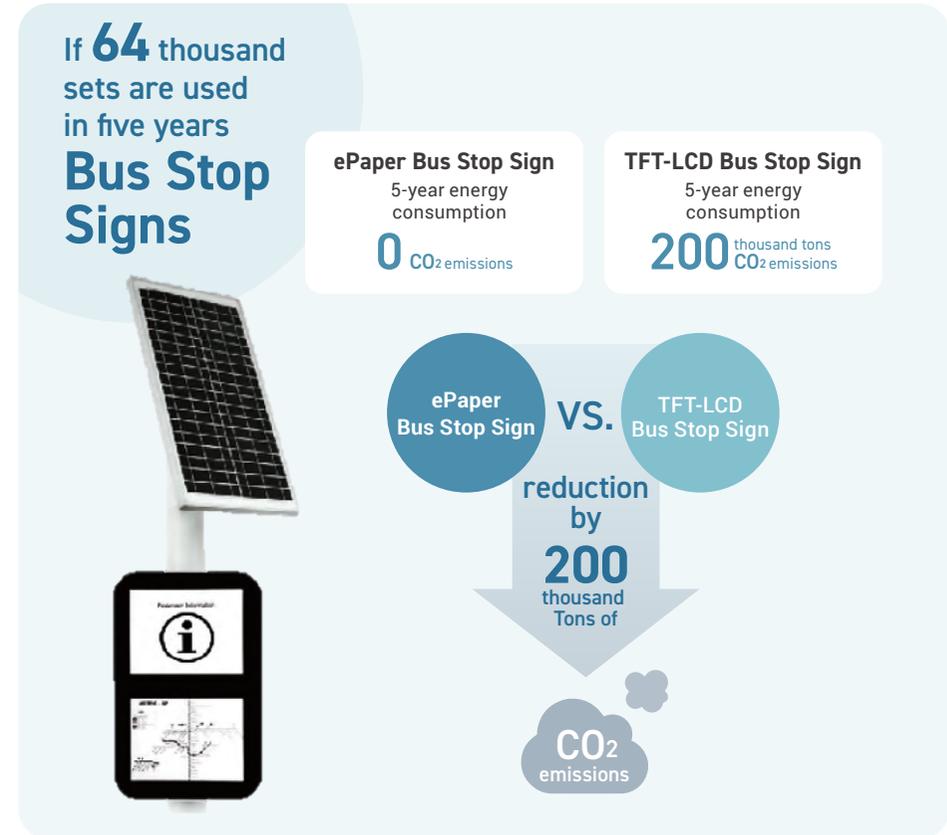


Smart city transport enabled by green technology

Among the IoT devices used in a smart city, the devices in the applications of transport and public display are exposed to demanding environment. Though TFT-LCD bus stop signs are eye-catching with their dynamic audit and video displays, they consume much power, are not ideal in cooling and outdoor visibility, and may bring about light pollution in the night. These are the problems difficult to solve for the TFT-LCD bus stop signs. The reflective ePaper of E Ink is not light-emitting and features ultra-low power consumption. The ePaper signage can be used in combination with a power supply of solar or renewable energy without the need to connect to the mains. It can be set up at any places without been restricted by wires and can ensure zero carbon emissions from the operation of the electronic signage. E Ink's ePaper provides a digital signage that does not cause light pollution, ensures zero carbon emissions, are friendly to the mankind, environment and ecology. Based on the estimated 64,000 bus stop signs in Taiwan (including 22 counties and cities), if 32" ePaper signages are used as the interface of the smart bus stop signs, additional 200 thousand tons of CO₂ emissions will be reduced in five years (the minimum service life of the product) in comparison with the 32" TFT-LCD bus stop signs. The reflective ePaper of ultra-low power consumption is not light-emitting and shows a clear display outdoors in the sun. It is helpful for reduced carbon emissions and low light pollution, and facilitates building a smart city toward net zero carbon emissions jointly.

According to research institutions, the global parcel volume in 2019 had exceeded 100 billion pieces. It is estimated that by 2026 the global parcel volume will be increased substantially to about 260 billion pieces

A large number of trees will be cut down worldwide for the production of cartons for e-commerce logistics and distribution. Assuming that the global parcel volume is 120 billion pieces every year in the most recent three years, if 1% of which used reusable circular packaging box as an alternative to traditional paper cartons and supposing each paper carton weighs about 250g on average, we could save almost 220,000 metric tons of pulp. That amount is roughly equivalent to approximately 7,200,000 trees saved in a year, equivalent to the sum of the trees in 1200 Da'an Forest Parks. Using green technology enabled ePaper as the information display interface for the circular packaging and plastic boxes can reduce the consumption of paper labels effectively and solve the problems of the traditional printed labels, including vulnerable to damage, easy to come off, difficult in digital transformation. The circulation and reusability of green packaging boxes and smart labels in the logistics industry can be realized by combining the smart green packaging, information technology, digitization platform, and other green packaging solutions. A sharing logistics business model can be derived from these solutions to make a contribution to the reduction of the cartons and the goal of the cyclic utilization.



User-centered brand-new experience

Because of its unique characteristics of close resemblance to paper, easy-on-the-eye even with an extended period of exposure, ePaper is well suited for applications in reading and education

ePaper features ultra-low power consumption and paper-like texture and is suitable for extended reading, coupled with digital handwriting technology, it is now possible to achieve authentic handwriting experience on ePaper, making it an ideal carrier as a student's "e-school bag" and the display device for their homework. ePaper has effectively evolved into a prime medium for smart learning and teaching experience, minus the potential threat to students' vision. The display principles of the ePaper are different from the light-emitting technology (such as LCD and OLED). It is not light-emitting. The ePaper screen does not blink under an extended period of exposure and, thus, does not lead to eyestrain or produce blue light that may increase the risk of eye disease or physical health. On the contrary, the light-emitting uses Pulse Width Modulation (PWM) in combination with the visual persistence of the eyes and the repeated glittering of high frequency. This may lead to eyestrain and the blue light generated may increase the risk of the eye disease that more and more young users have suffered from. In 2021, TÜV Rheinland conducted scientific tests and assessments in both visual comfort and health, and proved that ePaper is a technology most similar to paper and does not bring about damage to the eyes after an extended period of exposure.



Remote education



Work from home

ePaper technology has been very popular and highly valued on the consumer and education markets for a long period of time. The E Ink Kaleido™ Plus demonstrates improved color performance and find a good sale on these markets E Ink Kaleido™ Plus can present more vivid charts when being used in conjunction with the pen-writing function and different color pens. The pen used to write on the eNote is an electronic stylus. It does not need ink and thus environmental pollution due to disposal of the stylus after use-up of the ink is out of the question. Using styluses is also an action for de-fossilizing, environmental protection and sustainability.

New trend of healthcare in the post-epidemic era and the application of the ePaper to the decentralization in the healthcare ecology

The COVID-19 pandemic and its variants remained spreading all over the world in 2021. The insufficient manpower in the medical care services was a challenge in many countries. According to a WHO report in 2020, the development trend of aging populations in the world worsen the problems of shortage in medical resources. The smart medical services in conjunction with the IoT, Big Data, and AI technologies can simplify the administrative processes, improve the efficiency of the medical services, reduce the burden of the medical care personnel and provide support to medical decisions. These are also favorable to telemedicine and distance health care services and extend them to the families or communities, developing a user-oriented health and medical care system.

The smart medical and health system will be transformed to a decentralized ecology which extends the medical care services beyond the hospitals. Medical centers and hospitals only take care of critical patients, the treatment of common diseases is the responsibility of district clinics, and the health care of chronic diseases relies on long-term care and hospital at home services. To maintain the operation of this great healthcare system, medical personnel need different digital medical display products and wearable devices in combination with the IoT, Big Data and AI technologies to understand the status of the patients. In addition, professional teams of telemedicine, home medical and health care, and hospital at home services are needed to build a decentralized medical and health care ecosystem.

Smart displays find their opportunities in the medical devices used at different stages, including diagnosis and treatment of diseases, health care and rehabilitation after illness, and promotion and prevention of diseases. In contrast to TFT-LCD and OLED displays, ePaper is energy saving and can display information continuously in case of power failure. It is not light-emitting, does not generate blue light, or affect the patient who are taking a rest. The product is easy to install, good in visibility, lightweight, and drop and detergent resistant. It is ideal to be used as a display interface for IoT medical products or wearable and portable smart medical devices.

In addition to being used as bedside cards, room cards, health care information signages, ID cards, mobile epidemic prevention information signages, electronic medical records, and ICF signatures, ePaper is applicable to telemedicine or wearable medical devices such as blood glucose meters, physical information monitoring watches, AI digital stethoscopes, and fall prevention systems.

Application of ePaper in the Decentralization of the Medical Care Ecosystem



ePaper in smart logistics

The goal of smart logistics is to monitor the flow and preservation of products throughout the entire transit process, be it from the factory to warehouse, or from the order-picking warehouse to retailers/end users. Since it involves constant updates on the products' latest status while they are in transit, the application has higher requirements for low-power consumption.

ePaper is a passive display product and can keep displaying without power consumption. Update of the display on the ePaper is driven via Near Field Communication (NFC) or Ultra High Frequency (UHF), and no additional power is needed. Batteryless solution coupled with EPD makes it possible to achieve a clear and visible display of relevant logistic information and bar codes. This solution is an ideal match with smart logistics tags as it enables the real-time update of information to reduce manpower costs, lower error rates, and boost operational efficiency.

By utilizing wireless transmission and batteryless ePaper technology coupled with flexible ePaper, E Ink was able to create luggage labels for the aviation industry and created a new model for smart logistics, which brought added values of safety and improved efficiency. Although the global aviation industry has faced significant challenges due to COVID-19, E Ink and its ecosphere partners have been actively developing relevant software and hardware to achieve more technological breakthroughs to make early deployment before the aviation sector recovers from its current slump.



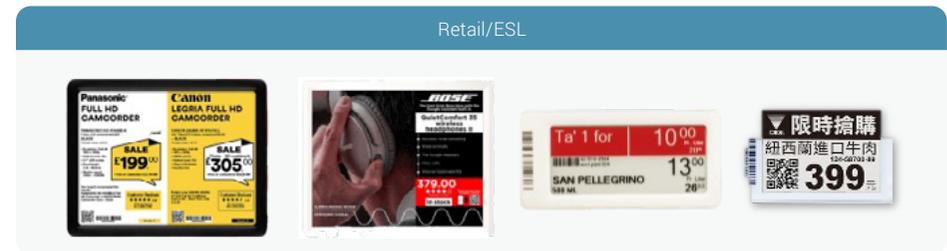
Ongoing efforts in containing the COVID-19 pandemic have propelled growth in e-commerce business. The strong demands for e-commerce and logistics services further drove the demand for product packaging and relevant packaging materials. But as the demand for packaging material grows, it also meant a proportional increase in waste created, resulting in a greater burden on the natural environment. The governments and consumers of many countries were encouraged to use circular logistics boxes or share boxes in recent years to reduce the use of one-off packaging materials and the hazards to the natural environment. Using green technology enabled ePaper as the information display interface for the circular packaging and plastic boxes can reduce the consumption of paper labels effectively and solve the problems of the traditional printed labels, including vulnerable to damage, easy to come off, difficult in digital transformation. The circulation and reusability of green packaging boxes and smart labels in the logistics industry can be realized by combining the smart green packaging, information technology, digitization platform, and other green packaging solutions and using the environment-friendly and ultra-low power consuming ePaper as the display interface for the electronic forms. A sharing logistics business model can be derived from these solutions to make a contribution to the reduction of the cartons and the goal of the cyclic utilization. To illustrate, E Ink has collaborated with our partners in Europe to create a reusable packaging solution that can be used up to 1,000 times. Not only that, this packaging solution is built with recyclable materials, featuring ePaper as the primary display interface for the product. The ePaper is used to show the information of the sender/recipient and it is both reusable and recyclable. We are looking forward to find more customers in the e-commerce and logistics sectors to adopt this solution.



ePaper in smart retail

The retailers all over the world speed up their digital transformation to cope with the changes in the consumption as a result of the improved network technology and e-commerce business. The epidemic accelerated the integration and launch of the Omni Channel retail solutions. In the meantime, retailers were planning to achieve the goal of net zero carbon emissions more quickly to cope with the international trend of sustainability. ESLs have dynamic price display features. With the ePaper-based shelf labels, there is no need to make one-off paper labels or change them manually, and the environmental protection, labor efficiency, and accuracy are improved sustainability as a result. These assist retailers in achieving the goal of net zero carbon emission in a shorter period.

ePaper can display for an extended period of time without consuming power. The devices with an ePaper-based display can save significant power in comparison with other technologies in the same applications. Taking the 10" signage in a retail store as an example, the total power consumption of a LCD signage being used for five years is almost 12,000 times that of a ePaper signage. The ESL in conjunction with the price management system is helpful to effectively overcome the challenges of manpower shortage, increasing customer service requests/inquiries, product shortage, increasing volume of online orders and so forth for retail business customers. More and more stores in foreign markets including Europe, U.S., Japan, China have adopted ESL, and other emerging markets in Southeast Asia are also beginning to adopt ESL solutions and the outlook for the global market definitely appears to be positive.



E Ink has launched an assortment of color ePaper-based labels and advertising signages for event promotion at shopping malls, delivering diverse applications to the smart retailing market. The rich colors and clearly displayed consistent information can give retailers more opportunities of interaction with consumers to improve the operational efficiency of the store. The "zero contact" mode for containing the COVID-19 pandemic is helpful for retailers to keep their stores running under low crowd control. The color and large-size ePaper provide multiple real-time product information. The advertising benefits are increasingly favored by brick-and-mortar retailers. By combining our ecosystem partners' hardware and software systems, we have created a solution that can synchronize the electronic shelf label and ePaper signboard at the front desk with the update system at a remote site from wireless to enhance the shopping experience for consumers.



ePaper in smart transportation

With the ongoing development of smart cities, how to protect the ecological environment and ensure balanced urban aesthetics while providing people with more instant information and comfortable smart communication experience is a key challenge to sustainable smart cities. Cities are dedicated to the guarantee that people can acquire information through safe and correct modes. However, the carbon footprint generated along with the solutions raised for smart cities and the power consumption in lighting must be taken into account.



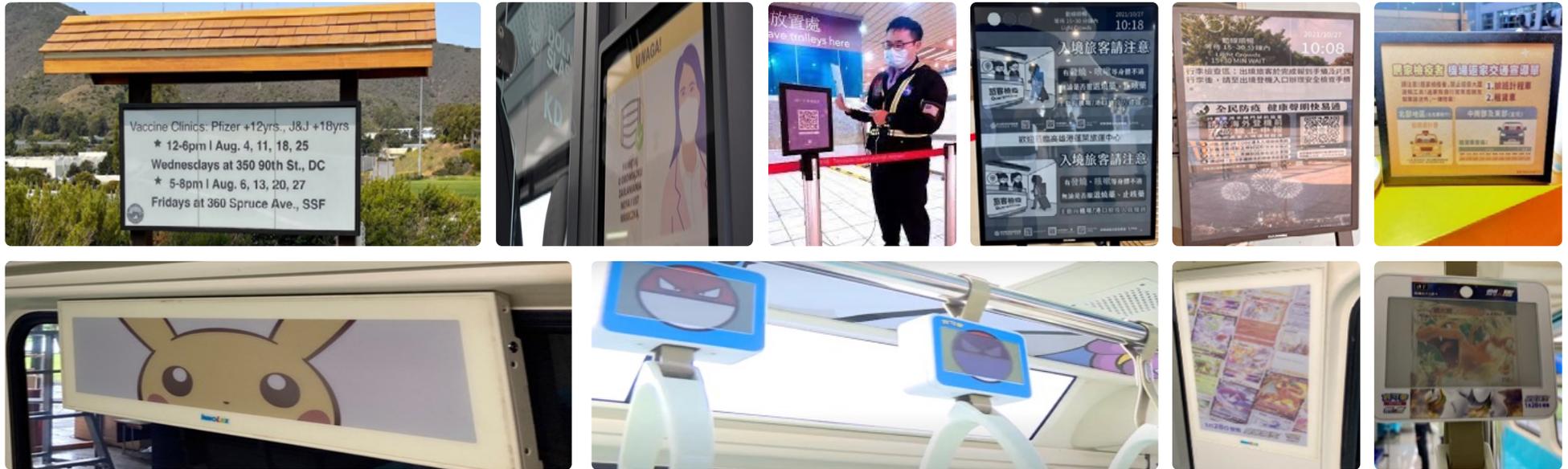
The reflective ePaper of E Ink is not light-emitting and features ultra-low power consumption. The ePaper signage can be used in combination with a power supply of solar or renewable energy without the need to connect to the mains. It can be set up at any places without been restricted by wires and can ensure zero carbon emissions from the operation of the electronic signage. E Ink's ePaper provides a digital signage that does not cause light pollution, ensures zero carbon emissions, are friendly to the mankind, environment and ecology. The products of this kind have been applied in thousands of transport and public areas in the world, including smart bus stop signs, public information signages, parking meters, parking signs, oil price signs, information signages in MRT and hybrid train cars, and the smart crowd control display in international cruise liner service centers. A multiple indoor public and advertising ePaper display can be set up by making use of its features in continuous display without power consumption and high energy saving characteristics, such as the handles with color ads and full-color ePaper and signages in a train car.

In addition, using ePaper to display epidemic dissemination information, such as public information signages and home quarantine taxi signages at airports, is helpful for improvement of the epidemic control efficiency.

Building the ePaper ecosystem, creating values, and setting up sustainable low-carbon ePaper ecosystem with supply chain partners

As the ePaper technology and products continue to innovate and extend, we hope to team up with hardware and software developers and both upstream and downstream supply chains of all application industries to build a complete ePaper ecosystem and resolve the problems of end-users more quickly to achieve smart application diversity and continue to steer the development of ePaper application in smart lifestyles and sustainable cities.

The E-paper Industry Alliance (EPIA) was established in December 2020 to speed up the applications of the ePaper and its multiple development and there were more than 100 members up to the end of 2021. The Alliance is a new milestone of the ePaper industry and demonstrates the consolidation and coherence of the companies in the industrial ecologic chain. With the green and low-carbon ePaper as the core, the Alliance meets the requirements for the development of the digitalized economy and drives the growth of the industry. It will be dedicated to the development of the applications in the eReader, new retail, education, transport, medical service, industrial, civil aviation, logistics, office, and many other fields.



E Ink received various technological and product awards around the world in 2021

Best Choice Award - IC & Components: E Ink Spectra™ 3100 Integrated Chip

E Ink worked with IC design partners to develop E Ink Spectra™ 3100 Integrated Chip Series. The chip integrates TFT Source/Gate drive, power supply and ePaper timing control functions, and is suitable for the multi-color ePaper image drive of the E Ink Spectra™ 3100 black, white, red and yellow up to eight colors.

As for the display effect, the E Ink Spectra™ 3100 Integrated Chip can improve the fineness and sharpness of the display on the ePaper to ensure legibility of even finer and smaller fonts. The Spectra 3100 Integrated Chip provides high information security. The encryption function that the drive waveform manifests can prevent the alteration of the displayed data to secure the price displayed on the shelf and avoid damage to the information security, which may lead to consumer complaints due to inconsistent prices. The Retail 2.0 emphasizes the interaction in addition to the update of the displayed information and saving of the manpower for changes of the labels.



News



Color-painted ePaper for smart new retail

Silver Award at the 2021 Taiwan Excellence Award: E Ink Kaleido™ Plus Print Color ePaper Display

E Ink Kaleido™ Plus is developed with our Print Color ePaper Technology). The product uses Color Filter Layer in lieu of the Glass Color Filter to make the display thinner and lighter with better optical performance of colors.

E Ink Kaleido™ Plus has 4,096 colors similar to printed paper and passes TÜV Rheinland's paper-like display verification to ensure that readers can enjoy digital reading with a visual experience of reading a physical book. The product reduces the effect of blue light and protect the physical and visual health of the reader.

In addition, E Ink Kaleido™ Plus can be used with the pen-writing function to give colors to digital notes. This facilitates the applications of the ePaper-based notebook in the education, research, office and other fields and help ePaper-based digital reading and writing enter the color era.



Kaleido™ Plus Color ePaper Notebook

Hsinchu Science Park Innovative Product Award: Battery-free ePaper Smart Credit Card

E Ink's Battery-free ePaper Smart Credit Card won the Hsinchu Science Park Innovative Product Award. Subject to the existing credit card transaction mode, the product uses the Near Field Communication (NFC) technology to communicate with the reader and only very little power is needed to update the display on the ePaper. After the update, the last information display keep showing on the ePaper without consumption of additional power. The smart card is designed without the need for supply or storage of battery power and is more favorable to the sustainable development of the environment.



Award

Important exhibitions in 2021 and innovative applications and results of ePaper in different smart fields

Touch Taiwan 2021 (Smart Display and Touch Control Exhibition)

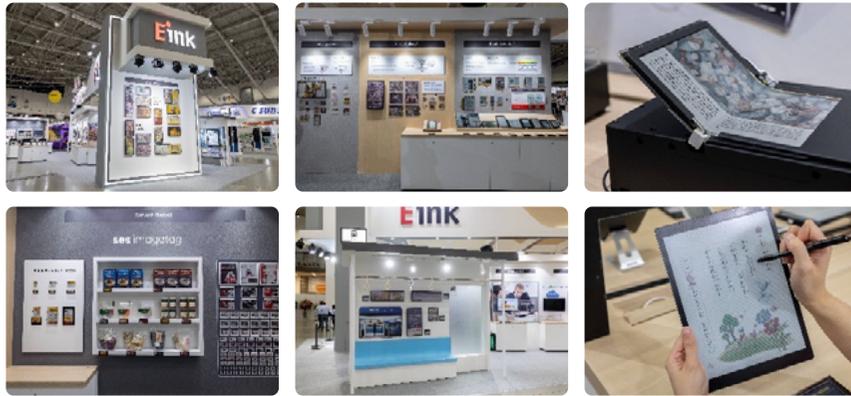
With the "We Make Surfaces Smarter" as the theme, E Ink exhibited the full-series applications of three color ePaper technologies and the flexibly foldable and rollable ePaper products in Touch Taiwan 2021 from April 21 to April 23, 2021. We worked with our partners in the retail, transport, factory, healthcare, banking, logistics, reading and writing, and other smart application fields and ecosystems to exhibit ePaper solutions for smart cities and IoT applications.

Full-series three color ePaper technologies:

- E Ink Gallery™ Advanced Color ePaper: This product uses E Ink ACeP™ Full Color ePaper Display Technology. The full color ePaper display is achieved with four color electronic ink pigments of cyan, magenta, yellow, white.
- E Ink Spectra™ 3100 Four Color ePaper: This product is developed with the ePaper ink of four warm and high saturated black, white, red and yellow colors.
- E Ink Kaleido™ Plus Print Color ePaper: This product uses Color Filter Layer technology based on the principles of RGB mixing, enabling black and white ePaper to display an impressive gamut of 4096 colors.



E Ink@ Touch
Taiwan 2021 video



ePaper to the Future: A Meeting for Sustainability and Co-prosperity 2021

E Ink held the "ePaper to the Future: a Meeting for Sustainability and Co-prosperity 2021" to draw a blueprint for our sustainable supply chain by integrating the resources of our supply chain partners. The purpose of the meeting is to achieve the RE 100 goals of using 100% of renewable energy by 2030 and the goals of net zero carbon emission by 2040. We follow the "SDG 17 Partnerships for the goals" under the SDGs and work with our suppliers for carbon reduction with respect to the goals of "SDG 13 Climate Action" and "SDG 15 Life on Land".

In addition to working with the suppliers to formulate the goals and plans of energy and conduct carbon footprint and emission inventories, we enhance our supply chain management to build a shared sustainable ePaper ecosystem of co-prosperity.



FLEX Taiwan 2021 (International FHE Forum)

At the FLEX Taiwan 2021, we exhibited displayed various PI roll and varnish materials. These materials can meet the process requirements of LCD, Mini/Micro LED, and PMLOED flexible display technologies, including the features of protection, high penetration, and high temperature resistance. PI is applicable to handheld devices, touch panels, X-ray devices, and so on.



Creative thinking in the "paperless" realm - Online Video: Science popularization ePaper technology and product applications

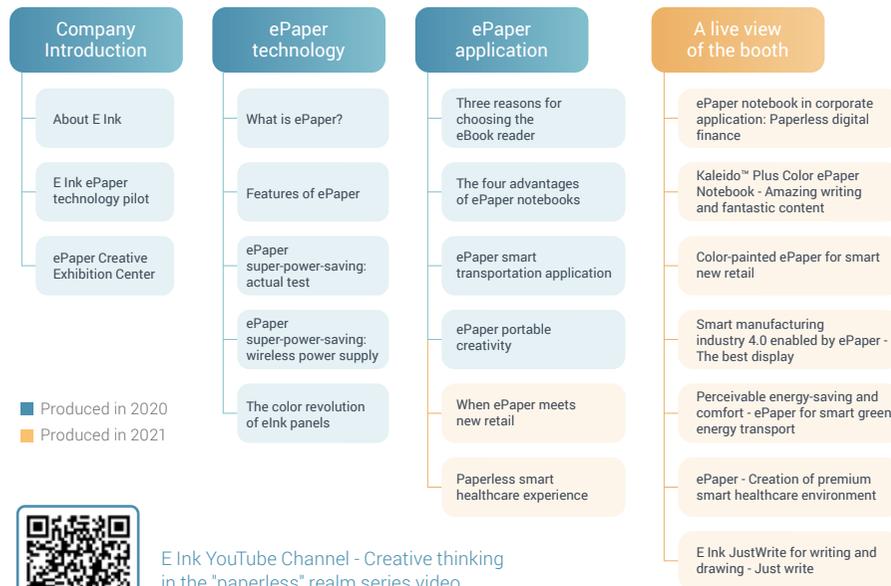
The world was still affected by the COVID-19 pandemic in 2021. As a result, city lockdown, quarantines, and bans on gatherings remained to prevent the spread of the epidemic. Though physical activities were recovered gradually in Taiwan in 2021, the business professionals around the world could not be present at the exhibition in person to understand the latest ePaper technologies and products.

To ensure that the customers and professionals interested in ePaper in other regions could understand our latest ePaper technologies and innovative applications, help us find more opportunities for ePaper, and learn more about the unique i-stable and reflective features of the ePaper in the education market, we produced a series of videos with ePaper as the theme and played them on the social media all over the world, such as Facebook, YouTube, WeChat and bilibili, to spread the knowledge of ePaper.

E Ink, The "Creative thinking in the "paperless" realm - Online Video" series extended from 2020.



We worked with our partners in the ecosystem to shoot ePaper application videos in 2021. In addition to two Chinese and English videos on multiple ePaper applications in the retail and healthcare fields, we produced additional seven English ePaper application videos on the site of the Touch Taiwan exhibition, including the application of ePaper to digital finance, Industry 4.0, and smart transport, helping our prospects who could not visit our booth in person have a clearer idea about the unique advantages and multiple applications of the ePaper.



E Ink YouTube Channel - Creative thinking in the "paperless" realm series video

- ▶ Creative thinking in the paperless realm series video
- ▶ The creative thinking in the "paperless" realm series video had accumulated 119,543 views as of December 2021.

元太EP13 當電子紙遇見新零售
 觀看次數: 1.8萬次 · 1年前
 字幕

元太EP14 無紙化的智慧醫療體驗
 觀看次數: 3649次 · 1年前
 字幕

元太EP15 電子紙筆記本企業應用: 數位金融無紙化
 觀看次數: 2988次 · 10個月前
 字幕

元太EP16 Kaleido™ Plus 彩色電子紙筆記本-寫出驚艷讀出...
 觀看次數: 7921次 · 9個月前
 字幕

元太EP17 智慧新零售 電子紙彩繪新商機
 觀看次數: 4347次 · 9個月前
 字幕

元太EP18 電子紙致能智慧製造 工業4.0最佳顯示器
 觀看次數: 2481次 · 9個月前
 字幕

元太EP19 看得到的節能與舒適 電子紙助攻智慧綠能交通
 觀看次數: 2730次 · 9個月前
 字幕

元太EP20 電子紙-創造優質智慧醫療環境
 觀看次數: 2887次 · 8個月前
 字幕

元太EP21 E Ink JustWrite 隨寫隨畫 寫就對了
 觀看次數: 2854次 · 8個月前
 字幕

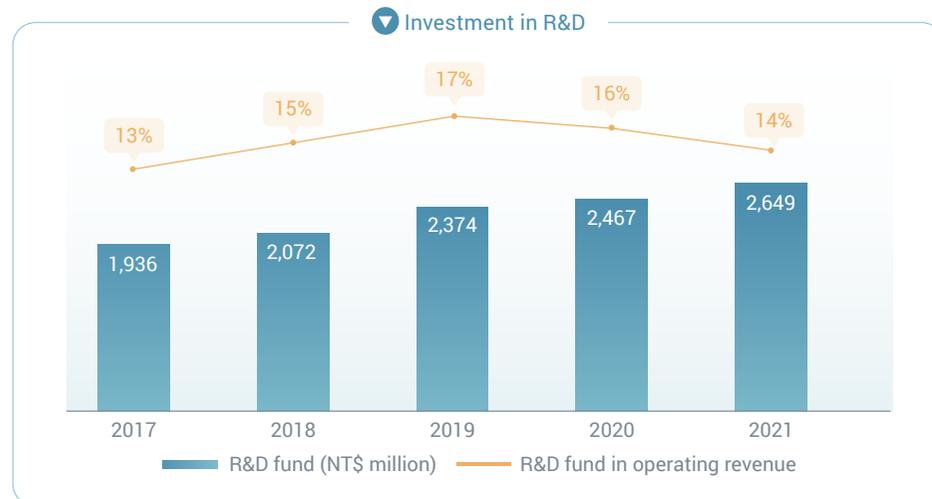
3-2 Technology and Innovation

3-2-1 R&D in Technology and Development of Patents

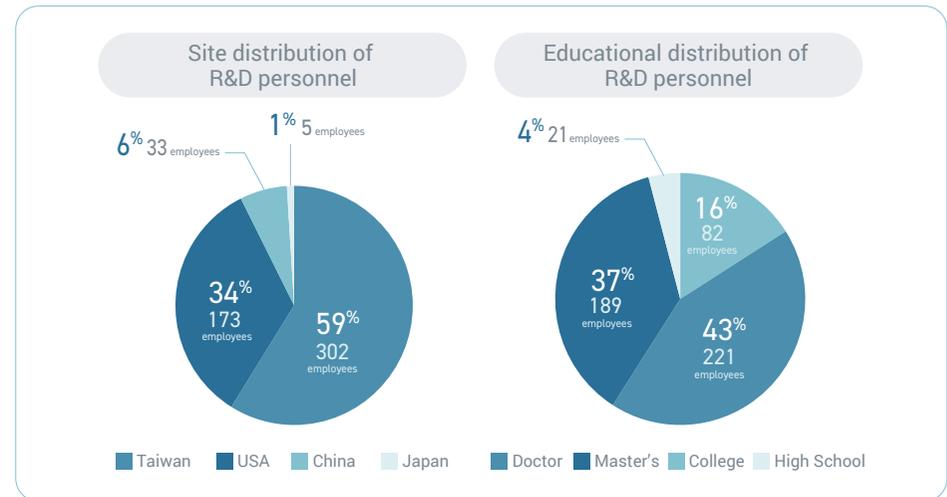
Investment of R&D resources

In 2021, we continued the research and develop of ePaper-related products and technology. Apart from optimizing the original black and white ePaper module, we aggressively engage in commodifying color ePaper applications by combining with (Must define what ESL is before using the acronym) ESL, flexible display, roll-able display, and touch functions. Increasing new products in the ePaper field have won good market feedback. In addition, by actively expanding the capacity to fortify our leadership in the ePaper market, we managed to maintain sustainable and leading development in the highly competitive display industry.

Development and innovation of technologies are our core competitive strength that ensures the growth of E Ink. Hence, the R&D funds grow every year. In 2021, we invested approximately NT\$2.65 billion in R&D, accounting for 14% of our revenue. We understand that only a continuous investment of R&D resources can achieve our goal of sustainable development. The R&D funds in the coming year will expectedly still occupy a specific percentage of the operating revenue.

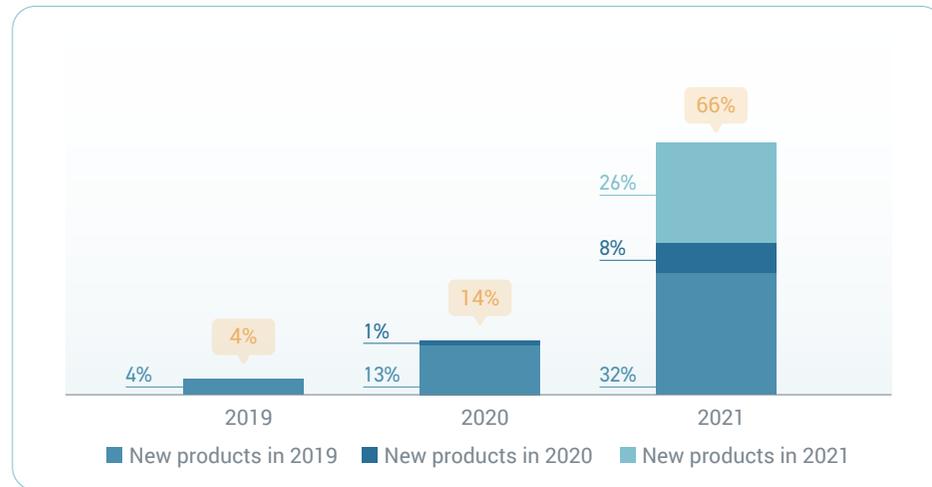


We had 513 R&D staff around the world in 2021, occupying 25% of the total employees. They were distributed in Taiwan, the USA, China and Japan, and made contributions to the global R&D synergy with their specialties. As for their educational background, 16% of the employees has a Doctorate's degree and 43% has a Master's Degree. The excellent talents led the development of outstanding technologies.



Contribution to the development of new products

The development of new products is vital to the growth of E Ink. They make significant contributions to the operating revenue. In 2021, 66% of the operating revenue came from the new products developed within three years (contribution level: 32% from the new products developed in 2019, 8% from the new products developed in 2020, and 26% from the new products developed in 2021). Hence, we must make investment in the R&D resources continuously, create new applications together with the customers, and develop new markets to stimulate the growth of our operating revenue.



Patent deployment

With the development of new technologies and products, technical patents become an important basis for our technical competitiveness. For the global patent management, E Ink has set up a patent committee formed by senior management of the R&D unit above director level, which formulates the measures for rewarding patents and trade secrets, holds regular patent review meetings to screen out high-value patent and trade secret proposals, offers incentives to those that are approved, and files patent applications externally through the assistance of our patent agencies. The sites in Taiwan passed the Class-A certification of Taiwan Intellectual Property Management System (TIPS) in 2021.



The number of additional patents granted in 2019, 2020 and 2021 were 431, 380 and 419 respectively. In addition to the number of patent proposals maintained at a great level every year, E Ink have accumulated more than 6,000 effective patents in the fields of Basic Principles, Optical Layers and Imaging Films, Electrical and Layers, Display Module Design and Manufacturing, Driving Algorithms and Waveforms, and Devices and Applications. The robust patent deployment helps us keep leading in the field of ePaper products.

Newly Added Patent Number for the Year	2018	2019	2020	2021
Domestic	38	29	26	28
Overseas	404	402	354	391
Total	442	431	380	419



3-2-2 R&D Results, Openness and Innovation

Important technologies and R&D results

E Ink developed more than 60 new technology applications and products in 2021. Some of the technology bases required incessant substantial investments for one to five years, or even collaboration with customers to turn them into practical applications. The new products that were developed in 2021 and that are representative in technology are listed below with a description about the important developments of each individual technologies and applications.

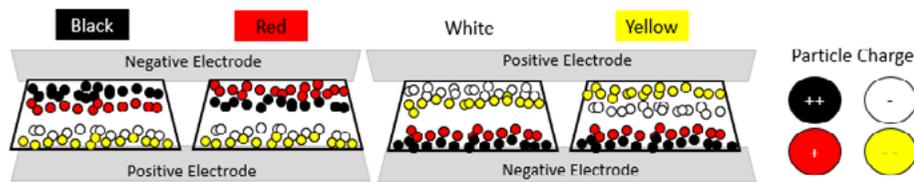
Item no.	Product	Application	Technical feature	Product Picture
1	E Ink Spectra™ 3100 Four-color FPL	ESL, retail promotion signage	Four-color pigments mixed to produce color ePaper of next generation	
2	25.3" E Ink Spectra™ 3100 Electronic Signage	Indoor color signage, signage in meeting rooms	E Ink Spectra™ 3100-based color signage	
3	E Ink Kaleido™ Color ePaper Notebook	ePaper notebook	E Ink Kaleido™-based electronic color ePaper notebook	
4	ePaper Laptop	Secondary display for laptop	Black-and-white ePaper integrated in a laptop as a secondary display	
5	Logistics box eLabel	Circular logistics	Passive ePaper label that features wide temperature and low-voltage drive to enable circular logistics	

Item no.	Product	Application	Technical feature	Product Picture
6	4.01" E Ink Gallery™ Palette	ID badge	Flexible and light color display with low-voltage drive	
7	25.3" monochrome display	Desktop display	Monochrome ePaper for dynamic operation and display	
8	E Ink Kaleido™ Plus On-Cell Touch Display	E-reader	A combination of the E Ink Kaleido™ Plus Print Color ePaper with better color display and the On-Cell touch module	
9	3.7" baggage label	Baggage transport	The low-power passive eLabel integrated with E Ink's timing control technology	
10	4.01" E Ink Gallery™ Palette	Ads on the handles in MRT cars	Flexible and light color display with low-voltage drive	
11	42" Color Film Display	Information signage	An integration of the vivid color film and monochrome ePaper	
12	0.9" Round Display	Wrist watch	A combination of the traditional watch hand and the monochrome ePaper of higher resolution and reliability	

Four-color FPL and display (E Ink Spectra™ 3100)

FPL (Front Plane Laminate) is a display film coated on the conducting layer with millions of microcups (Microcup®). The microcup structure is a specifically arranged array filled with electronic ink. A microcup has a length approximately equal to the diameter of a human hair. Charged electronic ink with different colors can be filled in the microcup depending on the applications to display three, four or more colors. The operating principles of the ePaper is described below with the latest four-color FPL (E Ink Spectra™ 3100) developed in 2021 as an example.

The millions of microcups on the conducting film layer (PET-ITO) are filled with transparent liquid with positively charged particles and negatively charged color particles. The black and red particles are given large and small positive charges respectively while the yellow and white particles are given large and small negative charges respectively. Different voltages are applied to the conducting layers on the top and bottom of the microcup at a specific frequency. The electric field form by the voltage difference moves the charged color particles in the microcup up and down to a specific location to present black, white, red or yellow on the surface of the microcup. The driver IC on the TFT substract to which the FPL is attached drives the electric fields of individual pixels to present required colors and form an image on the ePaper display.



The four-color FPL (E Ink Spectra™ 3100) presents a more vivid and amazing visual effect in comparison with the previous three-color FPL (E Ink Spectra™ 3000). It is better than the product of the previous generation in the following aspects:

1. Innovative technology: The product integrates two three-color products (black, white, red and black, white, yellow) into a single product to present four colors (black, white, red, yellow) simultaneously on an ePaper display in high resolution.
2. Energy saving: The update speed on the ePaper display is increased by 20% to 30% to save more power during the driving process.
3. Fewer raw materials and optimized processes: The depth of the microcup is reduced to save the electronic ink by 20%. The coating speed is improved to increase the output efficiency.
4. Compliance of the product with environmentally-friendly regulations: The product meets the requirements of the Restriction of Hazardous Substances (EU RoHS) for green products.

In addition to the aforementioned advantages, the larger operating temperature range (0°C~40°C/ 32F~104F) and the outstanding extended bi-stability status ensure that the E Ink Spectra™ 3100 can present stable, consistent and clear fonts in high color saturation to satisfy the demands of the retailers for various label applications.

Product	Spectra™ 3000 Black, white, yellow	Spectra™ 3000 Black, white, red	Spectra™ 3100 Black, white, red, yellow
Color particle arrangement			
Image display			
Color particle	3 colors (black, white, yellow)	3 colors (black, white, red)	4 colors (black, white, red, yellow)
Feature	High color contrast	High color contrast	<ul style="list-style-type: none"> • High color contrast • High resolution (144ppi) • Quick update
Major applications	Electronic shelf labels / Logistic labels / Retail information / Medical information		

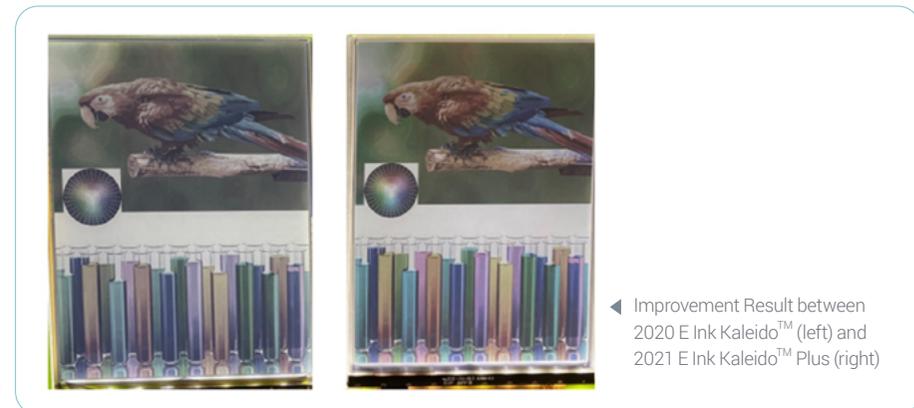
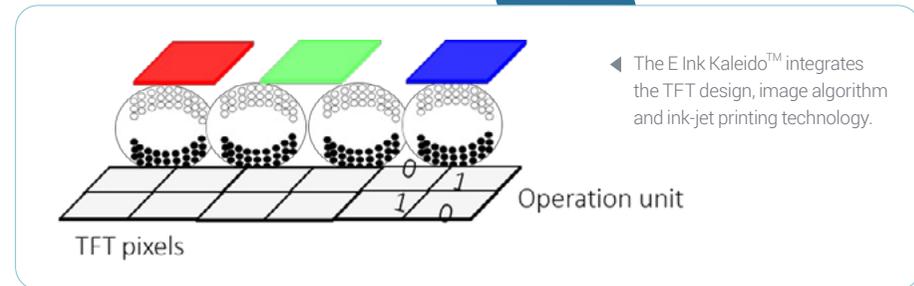
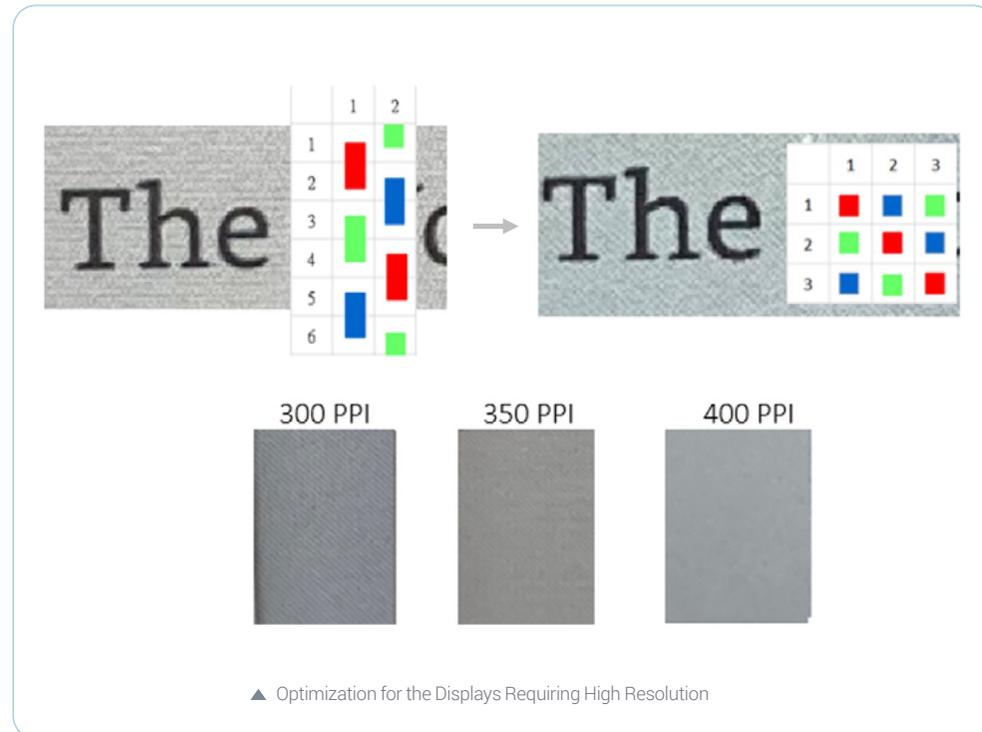


◀ 8.14" Color Electronic Shelf Label (Spectra™ 3100)

Print Color ePaper and Display (E Ink Kaleido™)

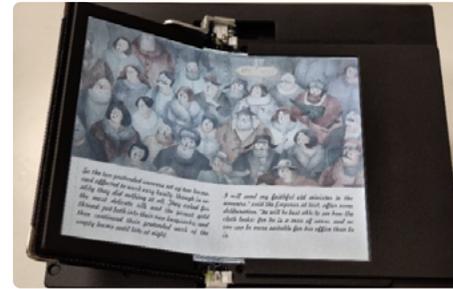
E Ink's print color ePaper (E Ink Kaleido™) integrates printing technology, image algorithm, TFT design, optical stack and color resist image to form a color display and provide legibility like a physical book. The improved technology in 2021 provided optimized and finer jet-printed color resist images to realize a display of high resolution (300-400ppi). The E Ink Kaleido™ has the advantages of a wider viewing angle and low blue light and receives the paper-like display certificate from TÜV Rheinland.

In addition, the integration of the technologies in the E Ink Kaleido™ reduces the use of materials and shortens the development period, helping us focus on the ongoing improvement of the product technology. The ink-jet printing technology corresponds to the precision of the pixels on the TFT substract. The ink is injected to the substract directly to ensure 100% of utilization without waste of the ink. The commonly used glass color filter only has a 10% utilization of photoresist material and needs a development period on a monthly basis. In contrast, E Ink Kaleido™ reduces the waste of material and the sample can be developed within a few days.



Foldable ePaper display

With the increasing demand for portable electronic devices, the foldable ePaper technology allows a flat panel-sized ePaper display to be folded to the size of a cell phone through thinner ePaper, new material development, stress simulation, and mechanism design. This greatly enhances the portability of ePaper display and combines large display with portability. The foldable ePaper display has a paper-like texture, writing and touch functions, and can be used in eReaders, eNotebooks, or other innovative applications to enhance product value and differentiation. The technology was further improved in 2021. The 10.3" Print Color (E Ink Kaleido™) Foldable ePaper Display with built-in front light and the 10.3" Monochrome Rollable ePaper Display were developed for more ePaper applications.



▲ 10.3" Print Color (E Ink Kaleido™) Foldable ePaper Display with built-in front light

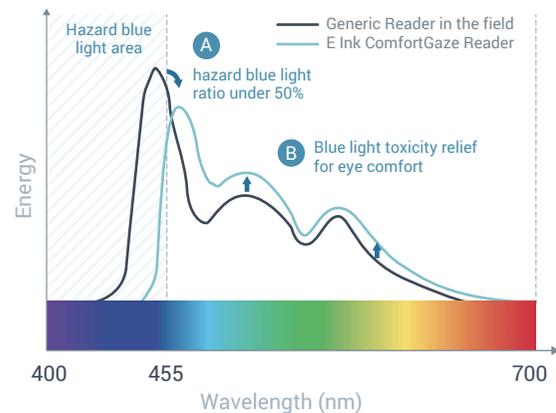


▲ 10.3" Monochrome Rollable ePaper Display

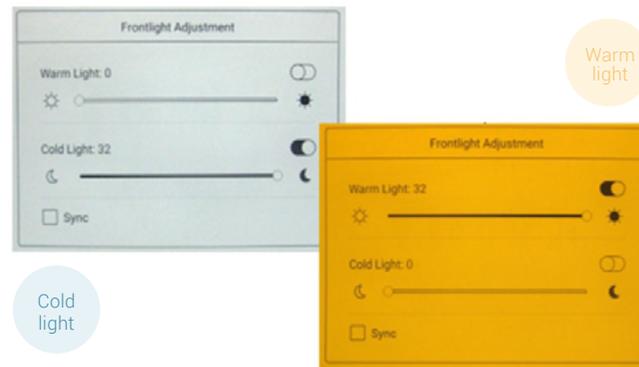
Front-light ePaper display with illumination design for vision health (E Ink ComfortGaze™)

In the digital era, people spend more time using mobile phones, tablets, TVs, and other digital displays in their everyday life. As the research points out, many of these displays have an illumination design that lets out emissions of harmful blue light (High Energy Visible Light, HEV) with a wavelength between 380~460 nm. With frequent usage of these devices without protection from blue lights, sleeping patterns may be affected or even worse, bring about Reactive Oxygen Species (ROS) arising from the resultant damage to the cells of human beings. These findings draw the attention of the consumers in the selection of the displays and many products with eliminated harmful blue light make their debut on the market one after another.

E Ink's ePaper products ensures comfortable reading and writing. They use our unique patented illumination design for vision health (E Ink ComfortGaze™) that allows adjustment of the LED color temperature (white cold light and yellow warm light) whenever needed during the reading to reduce the blue light and ensure the comfort of the reader. Our products meet the requirements of the American National Standards Institute (ANSI). The blue light ratio (BLR) is designed less than 50% and the blue light toxicity factor (BLTF) is lower than 8.5%. The products receive the paper-like display certificate from TÜV Rheinland, which contains the assessment of low blue light, comfort to eyes, safety, and vision health.



▲ ComfortGaze Blue Light Wavelength Variation



▲ ComfortGaze White Cold Light and Yellow Warm Light LED Adjustment



T1000 ePaper timing control chip and E Ink Spectra™ 3100 integrated chips

The T1000 ePaper timing control chip that won the COMPUTEX TAIPEI 2019 Best Choice Award-IC has a standard LCD interface (MIPI Display Serial Interface) and is integrated with E Ink's unique ePaper image algorithm and driver waveform to drive E Ink Gallery™ Full Color ePaper, E Ink Kaleido™ Print Color ePaper, and other ePaper displays. The T1000 chip can simplify the communication protocol between the system chip and ePaper timing control. It also supports various system architectures such as Android, Windows, Linux, etc. It also integrates with e-paper power management chip (Power Management IC, PMIC) to optimize power efficiency for customers' system use. In addition, the T1000 chip is widely used in Android APP designs. It can use the native development software under Android OS to achieve rapid development of the system and related hardware and software of ePaper, providing opportunities for innovative applications. Currently, more than 10 types of ePaper products, including eBook readers, ePaper notebooks, ePaper cell phones, interactive ePaper whiteboards, and ePaper signage have been implemented.

E Ink Spectra™ 3100 Integrated Chip won the COMPUTEX TAIPEI 2021 Best Choice Award-IC. The ePaper display for medium and small ESLs usually uses the low-cost integrated chip. With the integrated chip, the timing control and the HV generation function are integrated in the EPD driver IC. For the development of the eLabel system, it is one needed to use low-cost Microcontroller Unit (MCU) and control the data display and command on the ePaper integrated chip via the Serial Peripheral Interface Bus (SPI).

The E Ink Spectra™ 3100 Integrated Chip has a design of corresponding functions for ESL applications. The new material contains more color particles and more drive voltage levels are needed on the driver IC to ensure different voltages are generated at the source of the Thin Film Transistor (TFT) to form different electric fields for display on the ePaper. Since the pixels are increased every inch, a parallel electric field is generated between adjacent TFT LCD pixels and moves the color particles horizontally to bring about disturbance of electric field. This problem can be solved by adding the ePaper image algorithm in the IC design. This way, the finest fonts or the ESL barcodes can be displayed clearly.



- ▲ ePaper Notebook
- ▶ ePaper Cell Phone



E Ink MeeNote™ ePaper Notebook

In 2020, the self-developed E Ink MeeNote™ (Mobile Expandable ePaper Notebook) application won the Excellent New Product Innovation Award from Hsinchu Science Park. The product is designed to be connected to smartphones running Android OS and PCs running Windows systems via USB connectivity. Users will be able to project the display onto the ePaper screen, which serves as an additional interface for comfortable reading and intuitive handwriting for smartphone/PC users. E Ink MeeNote™, an ePaper notebook in continuous development, supports multiple screen operation modes including standalone, mirror and extended screen.

The E Ink MeeNote™ software supports smart services and, depending on the applications, is used in conjunction with the clear mode (reading), smooth mode (animation), and writing mode to achieve the best display results. We continue developing new software to support both large (42") and color versions of the E Ink MeeNote™ ePaper notebook.

In 2021, we developed the applications for use of the ePaper notebook in the mirror mode. It is used in this mode as the mirror screen of a Windows PC via USB or wireless transmission. The data are shared between the PC and ePaper notebook via the cloud. Hence, a mail can be written on an ePaper notebook, shared to the PC, and sent via the Outlook software. Or, a PDF file can be dragged to an ePaper notebook for reading. It can be read offline even though the smart connection is interrupted.

The large-sized E Ink MeeNote™ is applicable to mirror elnk panels. The product is formed with two 42" mirror elnk panels on the top and bottom. It is a mirror and a personal electronic information system. The user can read emails and electronic newspaper by showing gestures before the mirror. We are planning to have it control household appliances via IoT.



▲ E Ink MeeNote™ ePaper Notebook

Constantly accelerated technology and product innovation

Rapid advancement of color technologies

Building on a solid technology foundation, E Ink has improved and carried forward the color technologies in a rapid manner to satisfy the urgent demand for color products in the market. Based on the improvement and development of the existing innovated technology, our latest color ePaper technology includes:

E Ink Spectra™ 3100/Spectra™ 3100 Plus

The four-color electronic ink system, which utilizes black, white, red and yellow pigments, provides vivid and saturated colors, and is able to display diverse information and contents; it is applicable to quality retail locations and shelf labels. Spectra 3100 shortens the screen refresh speed and increases the temperature range suitable for yellow and red, which meets the need for multiple applications in retail stores. Moreover, the E Ink Spectra 3100 ePaper module goes with the latest all-in-one driver IC, so it can support electronic shelf labels of high quality and resolution in various sizes. E Ink Spectra 3100 Plus, integrated with the driver waveform of a brand-new structure, provides the fifth vivid and saturated color "orange". The E Ink Spectra series can go with the E Ink Sparkle™ technology applied to partial icons to create an eye-catching effect. This makes the message of an advertisement more noticeable when advertising promotion posters are displayed in turn, helping the retail stores enhance the effectiveness of their product's promotional activities.



▲ E Ink Spectra™ 3100 Plus

E Ink Kaleido™ Plus/Kaleido™ 3

The E Ink Kaleido Print Color ePaper series, exclusively developed and launched by E Ink, uses the Print Color Technology. With the electronic ink technology and Color Filter Array and based on the principles of RGB color mixing, it enables monochrome ePaper to display an impressive gamut of 4,096 colors. After the launch of E Ink Kaleido Plus in 2021, E Ink has continued to improve the display effect and further introduced E Ink Kaleido 3 in 2022. Through the improved print color technology, E Ink Kaleido 3 achieves better color performance and printing effects with clearer display of words and more vivid colors. It makes printed color filter array more similar to E Ink Film and adjusts the front light to minimize the possibility of color mixing caused by scattered light, providing a finer and more comfortable color digital reading experience. It is applicable to devices displaying various kinds of infographic, such as tables, maps, figures, textbooks, advertisements, etc. Aside from the improvement of color performance, Kaleido 3 is applied with "E Ink ComfortGaze™," the front light designed by the E Ink Front Light Design Team. The E Ink ComfortGaze™ technology can reduce the amount of blue light reflected from the display surface and thus guarantee a more enjoyable reading quality. Compared to the previous front light design, the Blue Light Ratio (BLR) and Blue Light Toxicity Factor (BLTF) are significantly reduced by up to 60% and 24%, respectively.

► E Ink Kaleido™ 3



E Ink Gallery™ Plus/Gallery™ 3

The E Ink Gallery series, using the four color electronic ink pigments of cyan, magenta, yellow and white, achieves full-color display through the dynamic pigment combination and mixture via voltage control. After the launch of E Ink Gallery in 2019, two new members joined the full-color ePaper series in 2022: "E Ink Gallery Plus" and "E Ink Gallery 3". E Ink Gallery Plus utilizes the brand-new color ePaper driver Waveform, boosting the color contrast by around 40% compared to the original E Ink Gallery. E Ink Gallery Plus is aimed at retailers, department stores and restaurants for indoor commercial signage application, and aimed at MRT stations, airports, etc. for public information signage application. It enhances the color contrast of full-color ePaper and makes the image more stereoscopic, thereby producing a dynamic print color effect with greater visual influence. As for E Ink Gallery 3, it focuses on the technology improvement of flipping speed and higher resolution. It has faster flipping speed of 350 milliseconds for black and white words. Also, the update speed of color display has been considerably increased: the update speed is 500 milliseconds in the quick color display mode, 750-1,000 milliseconds in the standard mode, and 1,500 milliseconds in the optimal color display mode. Compared to the 1st generation which requires 2 seconds to update for monochrome displays and 10 seconds to update for color displays, the speed has obviously been improved. The resolution is enhanced from 150ppi to 300ppi, and the operating temperature range is 0°C~50°C (32f~122F), which corresponds to the environment of use and product specification of the eReader using monochrome ePaper. E Ink Gallery 3 supports digital handwriting function as well, with a minimum lag time of only 30 milliseconds. In addition to black and white, the user can also write in several other main colors when using this function. Meanwhile, E Ink Gallery 3 also adopts E Ink's latest front light technology—E Ink ComfortGaze™. By reducing the amount of blue light reflected from the display surface, it provides a vision-friendly digital reading experience with low-blue light. E Ink Gallery 3 is suitable for the eReader and eNote markets.

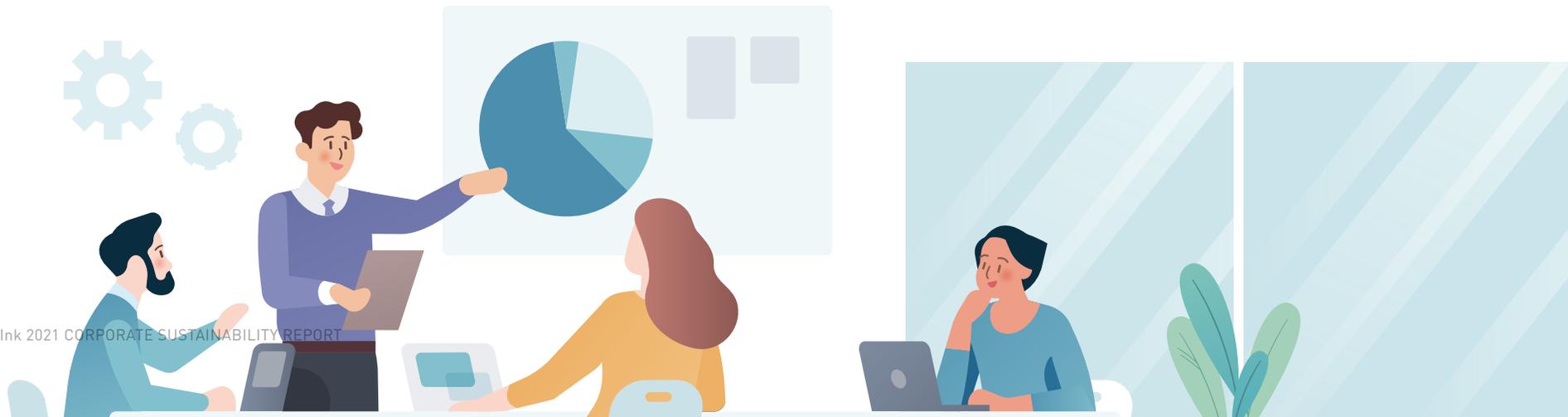


▲ E Ink Gallery™ 3

Open Innovation

In addition to investing internal R&D resources, E Ink collaborates with external organizations using our core technology strength in hope to keep innovating with the support of external innovation resources. The results in the respect over the past years are described below.

Cooperation Partners	Project Title	Result
Domestic academic institutions	Technological Development of Proximity Sensors of High Resolution with Organic Semiconductor	In addition to eliminating the need for the touch module and stylus, the targeted contactless touch technology can increase the service life of the product because no contact is needed anymore.
	Optimization of the Color Filter ePaper Image Algorithm and Development of Light Source Control Technology	Optimization of the algorithm for adjustable images can improve the display quality and reduce power consumption.
	Application of ePaper on Smart Campus	ePaper can be used in outdoor glass curtains. The feasibility and weather resistance of the product for this application is confirmed.
	Innovative ePaper Device in Combination with Intelligent Service Applications	The developed wireless power supply architecture can improve the energy conversion efficiency and thus facilitate the application of the ePaper display to logistics labels.
American academic institutions	Research on the Effect of ePaper Products on the Safety of Eyes leads to The Development of Eye Safe eReaders	The measurable indicators for the light source and blue light of displays and their relation to the eyestrain are studied and confirmed, it enables the development of eReader which equips patented front-light design (E Ink ComfortGaze™) concerning eyestrain for reading comfort.
Japanese academic institutions	Development of Flexible TFTs	The innovated technology is favorable for reduction of material consumption, simplification of the process, shorter manufacturing duration, and reduction of the energy consumption during the production.
A private company in UK	Development and Transfer of DMF (Digital Microfluidics) Technology	We make use of our core technology capability in the ePaper sector to extend the applications to the biotechnology and promote the strategic collaboration between both parties.



Prospects of technology

We will be dedicated to the innovation of the technology on an ongoing basis and further development of the reflective display technology of low power consumption. The FPL is our original technology on the global market and the core of the technology development. We further integrate the components in the ePaper ecosystem including TFT substrate, EPD driver IC, and ePaper driver waveform under the joint development with our partners. The products are transformed from monochrome to color ePaper for more newly developed applications.

E Ink will develop new technologies and products continuously. The major technology development items in the coming three years are described below.

Item no.	Goals	Description	Planning	Application
1	Development of the FPL business	Work with our partners in the ePaper module ecosystem to develop more applications	Develop various FPL reference designs to assist partners in the optimization of the FPL	Retail, logistics, signage
2	Improve the performance of monochrome ePaper displays	Monochrome ePaper remains the mainstream and is also applicable to the E Ink Kaleido™. The performance of the product needs to be improved on an ongoing basis	Integrate monochrome FPL, TFT substrate and other components in the design and further optimize display products	eReader, eNote, retail, logistics, signage
3	Improve the performance of the E Ink Spectra™ Four-color ePaper	In addition to the existing application in the retail field, improved product performance can meet the demand of the electronic signage	Integrate E Ink Spectra™ color FPL, TFT substrate and other components in the design and further optimize display products	Logistics, signage
4	Improve the performance of the E Ink Gallery™ Color ePaper	Improved product performance can meet the demand of the electronic signage and subsequent new applications	Integrate E Ink Gallery™ color FPL, TFT substrate and other components in the design and further optimize display products	eReader, eNote, signage
5	Improve the performance of the E Ink Kaleido™ Print Color ePaper	Apply existing monochrome ePaper technology to fast colorized technology	Make monochrome ePaper thinner and optimize ePaper driver waveform continuously to have better color performance	eReader, eNote, logistics, signage
6	FPL with LV drive and low-temperature operation	Suitable for passive driving and low temperature freezer	Optimize the FPL operation characteristics continuously	Retail, logistics, IoT
7	Improve the performance of the outdoor E Ink Kaleido™ Print Color ePaper	Develop the ePaper suitable for outdoor wide temperature display environment	Integrate E Ink Kaleido™ color FPL, TFT substrate and other components in the design and further optimize display products	Signage
8	Improve the performance of display modules	The multi-stack structure of the display has effect on the display of the product	Integrate and simplify the stack structure of the display module with narrow frame design	eReader, eNote, retail, logistics, signage
9	Improve the performance and cost of flexible displays	Improve the performance of the product and reduce the cost to help development of the market	Improve the material, product structure, and manufacture process	eReader, eNote, signage
10	Develop foldable ePaper displays	The display easy to carry	Development of materials and structures	eReader, eNote

3-3 Sustainable Products Design

3-3-1 Sustainable Products

Environment-friendly products design

In addition to developing innovative products for ePaper related applications, E Ink establishes and updates environment-friendly product design regulations. In the "New Product Development Procedure" and the "Environment-Restricted Substances Management Procedure", E Ink defines that selection of the materials for design of new products must meet the standards of environment-restricted substances to ensure the compliance of the products with the environment-related regulations in each market region.

Product life cycle and carbon footprint

To reduce the impact of our products on the environment, we conduct verification and assessment of the GHG emissions in terms of the product life cycle in accordance with the concept of LCA (Life Cycle Assessment) and the ISO 14067:2018 Carbon footprint of products" standard. We conduct carbon footprint verification to check the GHG emissions from the raw materials and production processes and understand the impact of the carbon emissions on the environment. By doing so, we establish comparison and improvement bases, and find solutions together with the supply chain partners and stakeholders.

The 6.8" eReader module (3.30KgCO₂e/piece), 2.9" ESL module (0.59KgCO₂e/piece) has finished the carbon footprint inventories. The framework of our carbon footprint inventories is used as a reference for the performance indicators of sustainable product design and the reduction of carbon emissions from the products.

3-3-2 Sustainable Product Design

While our ePaper display products have been classified as environment-friendly and favorable for energy saving and carbon reduction, constant improvements on an ongoing basis is one of our utmost priority to provide more environment-friendly premium products to not only the public, but also to big corporations with adopting green technology as one of their recent business motives for better marketing. In addition, "innovation" is one of our core spirits and we are committed to producing "innovation-based environmentally-friendly ePaper products". This is an important goal of the design. With the 12 product design technologies based on four facets of "energy saving", "carbon reduction", "circulation", and "innovation", we continue reducing the carbon footprint of the products and improving the energy efficiency.



Energy saving

Energy-saving design that can improve the performance of the products



Improvement of the product performance of adoption of energy-saving design can improve the energy efficiency of the products.

Product Technology	Description	Benefit
Passive driving technology	ePaper display features ultra-low power consumption. With the support of the NFC and UHF technologies, the micro power generated during the wireless transmission process drives and refreshes the display to realize the passive driving technology without the need of batteries.	The display can be driven in passive environment and almost no power is needed.
Touch panel in idle mode	The design of the idle mode and sleep mode for the touch panel can reduce power consumption.	10% to 70% energy consumption is reduced for consumer electronics.
HGD low voltage gate drive	The driving process is displayed. Use of the gate drive technology at lower voltage can reduce energy consumption.	20% to 30% energy consumption is reduced depending on products.

Carbon reduction

Low-carbon design for reduction of carbon footprint



The simplification and improvement of the product design can reduce the usage of the materials and their carbon footprint.

Product Technology	Description	Benefit
Slim border design	The FPL is sensitive to the ambient moisture. Hence, a layer of water protection film and edge seal must be coated. The slim border design is favorable for the reduced usage of the edge seal.	8% to 32% edge seal consumption is reduced depending on products.
Integrated power control IC	The functions of electronic components are integrated in the power control IC to reduce the usage of the components.	The number of the system components is reduced from 274 to 98 pieces (or 65% in proportion) for consumer electronics.
Integrated test jigs for module products	The system boards of the jig used for testing the ePaper display module during the production are integrated to a single system board.	4 system boards are integrated to a single system board with a reduction of 75%.

Circulation

Recycle



Use recyclable materials to reduce the impact on the environment.

Product Technology	Description	Benefit
Recyclable plastic plates	The upper cover, light guide and touch panel are made of recyclable plates such as PET, PC and PMMA.	Recyclable materials are favorable for reduction of the impact on the environment.
Recyclable tray	Recyclable trays are used for EPD driver IC.	Recyclable materials are favorable for reduction of the impact on the environment.
Reduction of packaging material	The design of the packages and trays is optimized to produce the same protection effect with thinner material.	The consumption of the packages and trays is reduced by 13%.

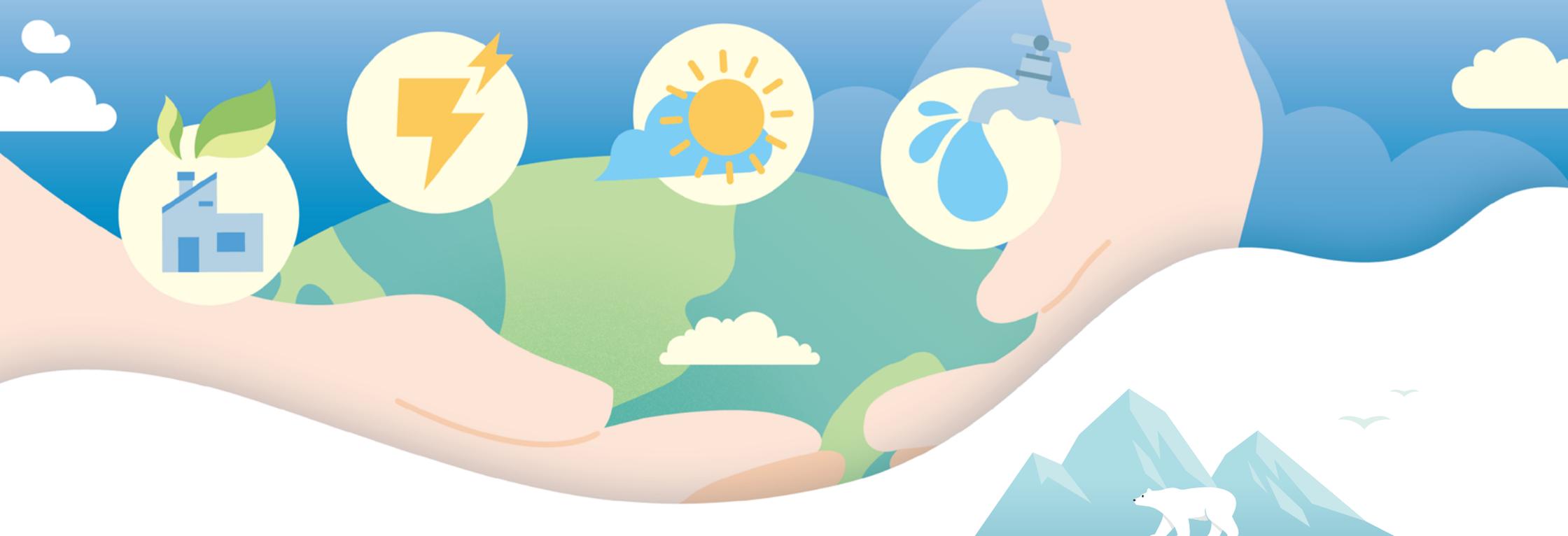
Innovation

Technological innovation



Improve the operating and manufacturing efficiency using innovative ideas and reduce the energy consumption and personnel cost to achieve the goal of sustainable environment.

Product Technology	Description	Benefit
Innovative FPL microcup structures	The depth of the FPL microcup structure and, thus, the consumption of the ink are reduced to minimize the carbon footprint of the products.	The depth of the microcup is reduced by 42% from E Ink Spectra™ 3000 to E Ink Spectra™ 3100 product lines.
Improvement of the microcup FPL	The coating speed of the microcup FPL is improved, resulting in an increased unit output and reduced unit production energy consumption.	The coating speed is increased by 33% and the output is increased by 30% to reduce the unit production energy consumption.
E Ink Kaleido™ technology integration	The usage of OCA (Optical Clear Adhesive) is reduced by optimizing the TFT, print color technology and related materials. As a result, the carbon footprint of the materials is minimized and the utilization rate of the jet ink is nearly 100% with high ink jet performance. There is no waste.	The usage of OCA with the E Ink Kaleido™ technology is 33% of that for the commonly used glass color filter. The utilization rate of the jet ink is 10 times the usage of the photoresist material for the glass color filter.



CHAPTER 04

GREEN PRODUCTION

Low-carbon and Energy-saving Operation and Production

4-0 Performance Results

Energy consumption-to-revenue intensity decreased **18.2%** from a year before, with the use of renewable energy reaching **181,995 kWh**.

The inventory and verification for the emissions of indirect emission sources (Scope 3) have been carried out.

Water consumption-to-revenue intensity decreased **20.6%** from a year before.

The waste recovery rate was



We have declared that the Company will achieve net zero carbon emissions by 2040, and have been committed to **the Science Based Targets initiative (SBTi)** by setting objectives for carbon reduction based on a rise of 1.5°C in the global climate. We are the first display manufacturer in the world to join **The Climate Pledge** and become the **TCFD Supporter** that signed the initiative for achieving net zero carbon emissions by 2040.

GHG emissions-to-revenue intensity decreased **17.4%** from a year before.

In response to climate change: Joining the global renewable energy initiative, RE100, we have declared that the Company will attain the goal of a **100%** use of renewable energy by 2030, and expect to have a **10% use of renewable energy** in 2022.

4-1 Goal Management for Green Production

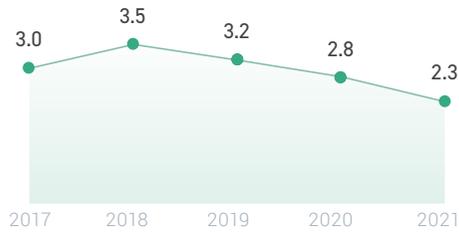
Due to the rapid growth and the increase in capacity of E Ink's ePaper business, the use of related energy and resources have increased. Thus, we have selected appropriate environmental indicators to control the consumption of energy and resources, and set targets for energy conservation, water saving, waste reduction, thereby laying a key foundation for environmental performance management.

By defining the environmental indicator of intensity for "GHG emissions," "energy consumption," "water consumption" and "waste production" corresponding to revenue, the Company monitors performance year by year and set annual goals and the mid-term goals up to 2025. The revenue intensity of our GHG emissions, energy consumption and water consumption has been reduced year by year. There is also a significant decrease in the ratio in 2021 compared with the previous year. However, the total amount of waste generated in the current year will increase significantly because the general household garbage will be included in the calculation of Yangzhou site from 2021, so it is not compared with the decrease of previous year.

Intensity indicator (indicator/NT\$ 1 million of revenue)	Actual performance in 2021	Performance in 2021 (compared to 2020)	Goals for 2022 (compared to 2021)	Mid-term goals for 2025 (compared to 2021)	Management measures
GHG emissions	2.3 tCO ₂ e	A decrease of 17.4%	A decrease of 5%	A decrease of 20%	<ul style="list-style-type: none"> • Use of renewable energy, including outsourcing and the installation of solar panels based on the assessment of self-generated electricity, etc. • Reduce energy consumption for business operation and increase efficiency of energy use. • Adopting product designs with low energy consumption. • Developing low-carbon supply chain. • Planning the path to net zero carbon emissions at the same time with the expectation of achieving net zero carbon emissions by 2040 and a 100% use of renewable energy by 2030.
Energy consumption	16.6 GJ	A decrease of 18.2%	A decrease of 5%	A decrease of 20%	<ul style="list-style-type: none"> • Enhancing the energy efficiency of facilities and equipment of the sites. • Optimizing the operating parameters of process facilities and equipment. • Continually replacing the tube lights in public areas with LED. • Making plans for the new building based on green architecture.
Water consumption	25.6 m ³	A decrease of 20.6%	A decrease of 5%	A decrease of 20%	<ul style="list-style-type: none"> • Increasing the recovery rate of process water. • Optimizing the operating parameters of water treatment facilities and equipment of the sites. • Carrying out the diversion of wastewater and liquid waste, cutting the production of wastewater, lowering the concentration of pollutants, and reducing the use of drugs for water treatment.
Waste production	85.1 kg	-	A decrease of 5%	A decrease of 20%	<ul style="list-style-type: none"> • Implementing precise waste sorting and replacing resource recycling with resource recovery treatment to enhance the recovery rate of resources. • Recycling and reusing the packaging materials from suppliers. • Saving raw materials during the production process. • Entrusting external units to refine the wastes for reuse.

GHG emissions-to-revenue intensity

(tCO₂e/NT\$ 1 million of revenue)



Energy consumption-to-revenue intensity

(GJ/NT\$ 1 million of revenue)



Water consumption-to-revenue intensity

(m³/NT\$ 1 million of revenue)



Waste outputs-to-revenue intensity

(kg/NT\$ 1 million of revenue)



4-2 Environmental Protection

Starting from 2002, several of our sites have passed the ISO 14001 certification. With the ISO 14001:2015 version change, our sites in Taiwan have passed the third-party external verification and acquired the new certificate in 2017.

In addition, both the Hsinchu Site and Yangzhou Site have obtained the Verification Statement of Greenhouse Gas Assertions through ISO 14064-1 GHG inventory and external verifications since 2005. Although our Linkou Site is not an EPA-required GHG inventory site, it implemented voluntary GHG inventory and external verifications to review the effectiveness of in-house energy conservation and emission reduction and use it as a basis for future progress.



	Taiwan - Hsinchu Site	Taiwan - Linkou Site	Yangzhou Site	USA Sites
ISO 14001 Environmental Management System	✓	✓	Still in the process of implementation; expected to pass the external verification in 2022	In the process of planning
ISO 50001 Energy Management System	✓	✓	In the process of planning	In the process of planning
ISO 14064-1 GHG Inventory	✓	✓	✓	In the process of planning
ISO 14067 Product Carbon Footprint	We have passed the external confirmation. The product design, procurement logistics, etc. are handled by the headquarters in Hsinchu, while the production bases include USA Sites (E Ink FPL), Linkou Site (E Ink FPL), and Yangzhou Site (modules).			



ISO 14001 Environmental Management System



ISO 50001 Energy Management System



ISO 14064-1 GHG Inventory



ISO 14067 Product Carbon Footprint

ESHE (Environmental, Safety, Health and Energy) Policy

Environment First, Safety First, Full Participation, Sustainable Operations

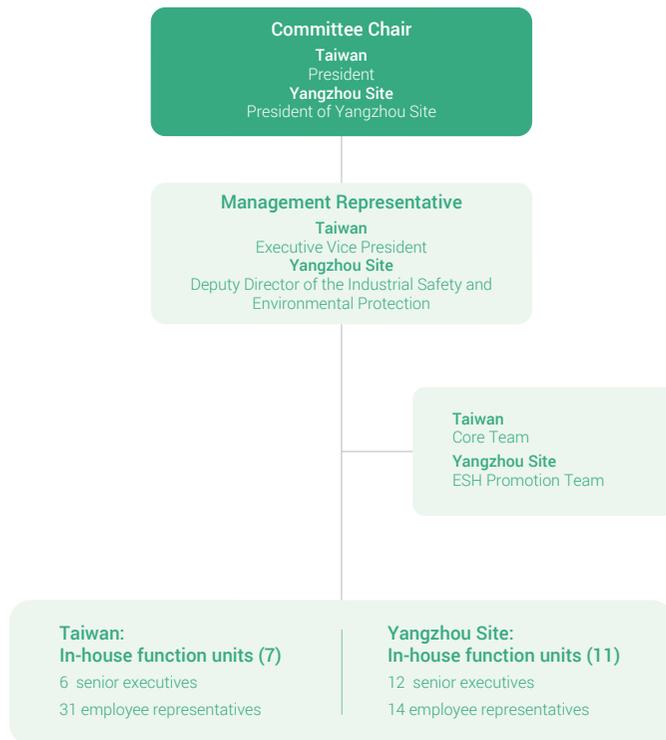
As the world's leading developer and supplier of ePaper display technology, E Ink develops various advanced technologies for revolutionary products, better user experience, and better environmental benefits. In addition to attaching great importance to employee safety and health and environmental energy topics, E Ink's management firmly believes that environment, safety, health, and energy (ESHE) to be the foundation of its business operations. Through appropriate assessment of ESHE with the right tools, management plans are put forward and implemented in daily operation control to achieve the goal of safe operation, clean production, environmental protection, and energy conservation so as to achieve sustainable operations. Based on the above recognition, we are committed to making continuous improvements to our ESHE management system and to:

1. Comply with domestic ESHE-related laws and regulations, build a healthy and safe work environment, prevent occupational injuries and diseases, and fulfill our corporate social responsibilities;
2. Implement risk management, pollution control, and energy conservation there are the direct responsibilities of managers at all levels and all workers. Strengthen existing employee consultation and participation mechanisms to encourage full participation through communication and coordination;
3. Provide adequate and necessary education training and resources and introduce new international ESHE concepts in order to stimulate the participation of all employees in ESHE issues (including subsidiaries and joint venture) and thereby improve their awareness and management efficiency;
4. The research and develop of new processes and the use of new equipment and new materials should be evaluated by ESHE assessments, so as to minimize hazard risk, environmental impact, and energy consumption;
5. Manage hazardous chemical substances in compliance with international protocols and customer requirements to follow global environmental trends and enhance product competitiveness;
6. Reinforce process waste reduction, energy conservation, risk control, and hazard elimination/prevention to improve ESHE performance;
7. Conduct GHG inventories and verification in compliance with international standards and take effective controls to minimize GHG emissions;
8. Proactively collaborate with the partners in the ecosystem, such as customers, suppliers and outsourcers, to build the green logistics and sustainable supply chain from design, manufacturing to product and services;
9. Make efforts to conduct due diligence and cautious assessment before acquisition during the process of investment assessment, and incorporate environmental, social and governance considerations into risk assessment with reference to guidelines and standards of international organizations;
10. Uphold the concept of ESHE and organizational development to achieve sustainable operations.

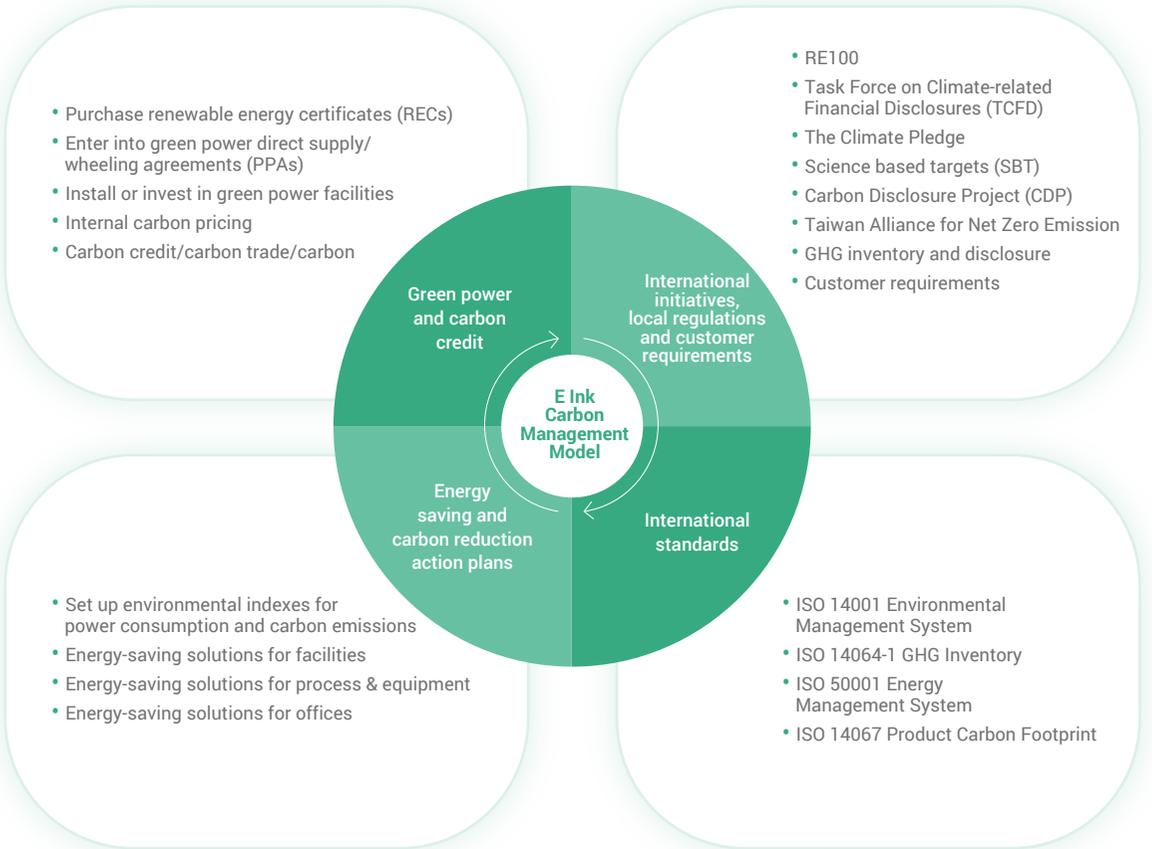
Promote Organization Structure with ESHE Management System

To effectively promote and implement ESHE management, we have established the ESHE Management System Promotion Committee in Taiwan sites and the ESHE Promotion Team in the Yangzhou Site to take charge of ESHE-related promotions, inter-departmental communication and coordination and management. Also, in response to the management system promotion structure above, the GHG Inventory Team has been established to take charge of the annual organizational GHG inventories and external verifications of each site, and the Product Carbon Footprint Inventory Team has been organized to be responsible for the carbon footprint inventories and external verifications of assigned products.

Composition of E Ink ESHE Management System Promotion Organization



4-3 Climate Change



4-3-1 Goals Related to Climate Change

RE100 2030 and Net Zero 2040

Our carbon management model has demonstrated how we value the global climate change and carbon-related issues and develop countermeasures. Since 2005, we have been carrying out GHG inventories and third-party verifications, and internally promoting the ISO certifications relevant to environment and energy management systems at the same time. Since 2019, we have been disclosing our climate-related financial information in compliance with the TCFD framework. Also, we have been proactively participating in international initiatives since 2021; in 2022, we joined the global renewable energy initiative, RE100.

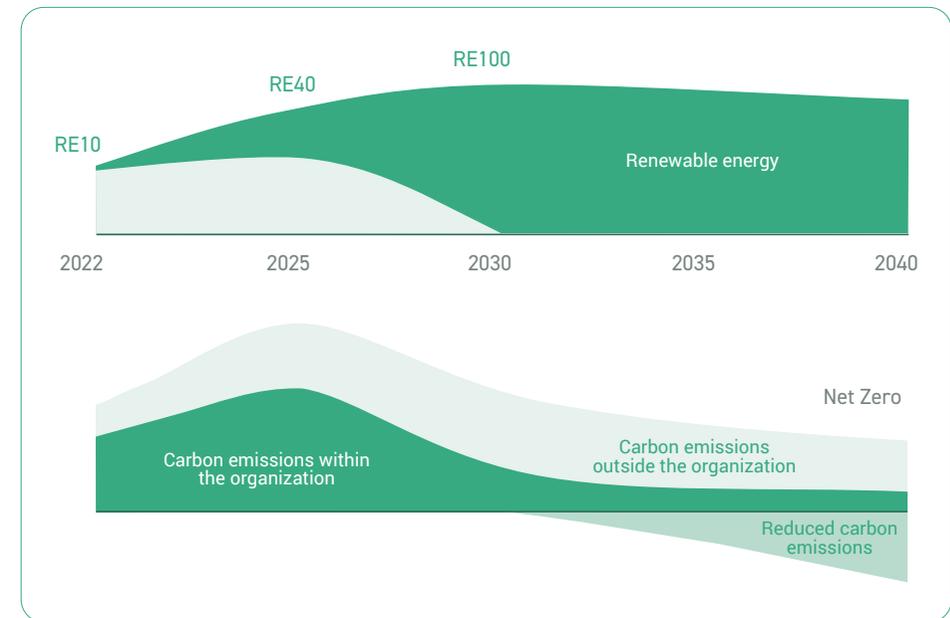
Energy saving and carbon reduction plans have been promoted in our sites for years, including replacing the old facilities and equipment of the sites, optimizing the parameters of existing machines and equipment, improving manufacturing process to reduce energy and resource consumption, and replacing the lighting of office areas. With these actions, the power consumption in each site has gradually fallen.

After cutting down the power consumption of main production bases, we still have to get sufficient green power according to the power consumption of each site. To conform with the local government policies and regulations, supply methods and pricing of green power which vary from region to region, different green power strategies have been adopted. We mainly enter into power purchase agreements (PPAs) of green power direct supply/wheeling for the sites in Taiwan while purchasing green electricity certificates (GECs) from China's green power certificate voluntary trading system for the sites in China. As for the USA sites, we purchase the local renewable energy certificates for the early stage, and will make assessments to see if signing PPAs of green power direct supply/wheeling is feasible so that stable and long-term supply sources of green power can be guaranteed.

Our climate and carbon management approaches have been continuously disclosed. We will subsequently take the senior management into account, such as associating the performance indicators of CEO and other senior management with GHG reduction performances, or reporting to the Board on and having a designated director for the supervision of the implementation for climate-related goals, etc. This way, the policies and goals related to climate change can be properly pursued by all the operating units of the Company and gradually put into practice according to our targets.

While we devise plans for the mid-term goal RE100 and set annual objectives to make progress year by year, the long-term goal—net zero carbon emissions by 2040—is another challenge. We will actively develop plans for the operation model of carbon credit and carbon trade so as to make early preparation for the carbon-related challenges of the next decade.

Currently, we are not only engaged in RE100 but also proactively taking part in other initiatives regarding climate change, such as attending the Science-based Targets initiative (SBTi) and The Climate Pledge launched by important customers in 2022. In addition, we also join regional initiatives of the places where our important production bases are located at in an active manner, and work with the ecosystem partners to bring about changes with our influence and achieve zero net carbon emissions step by step with major well-known enterprises in the world.



RE 100

To strive for the goal of fully using renewable energy by 2030, the Company has officially become one of the members of The Climate Group and taken part in RE100, the global renewable energy initiative led by the Carbon Disclosure Project (CDP). We have thus become the first display company committed to achieving RE100 by 2030!

All humans are faced with the challenges of the environmental impacts caused by the fiercer climate change, and should be responsible for taking actions. As a leader of green display products, E Ink has been duty-bound to join the RE100. Aside from the gradual implementation of renewable energy and reduction of carbon emissions from the manufacturing and operating aspects, we also aggressively enhance the R&D of ePaper technology and product designs to contribute from the very beginning of our process. New technologies that require lower energy consumption and less use of materials are developed to ensure that our low-carbon and power-saving ePaper products provide greater environmental benefits.

With a view to reaching the goal of the 100% use of green renewable energy at all our sites around the world by 2030, we will purchase renewable energy certificates (RECs) or enter into power purchase agreements (PPAs) with electricity retailing enterprises for renewable energy through our sites, and annually increase the use of renewable energy at our sites. It is expected that the use of green energy can exceed 10% (RE10) by the end of 2022, reach 40% (RE40) by 2025, and come to 100% by 2030 (RE100), namely all our sites use 100% renewable energy. These achievements will help demonstrate the Company's leading role in energy transition.



Declaration in December 2021 of the goals of 100% use of renewable energy by 2030 and net zero carbon emissions by 2040



Joining the global renewable energy initiative, RE 100, in March 2022

RE100 is a global initiative that gathers the most influential enterprises around the globe which are committed to 100% use of renewable energy. The organization is jointly led by the international non-profit organizations, The Climate Group and Carbon Disclosure Project (CDP). Its members, more than 340, are enterprises from different places in the world and from different industries, including fashion industry, biopharmaceutical industry, food and beverage industry, manufacturing industry, material industry, retail industry, and transportation service industry.



Product Carbon Footprint

We know full well that energy conservation and carbon reduction are only achieved through a long period of gradual implementation, and hope that corporate sustainable development can, instead of being a mere slogan or words for image promotion, become a real mindset, a managerial philosophy, and the goal of a campaign attended by all our employees. Hence, we put product carbon footprint inventory into practice, providing information about the carbon emissions produced by our products, taking such information as a reference to our future plans for energy saving and carbon reduction, and certainly taking actions to fulfill our responsibilities as a citizen of this planet.

Background and Benefits of the Project



The carbon footprint methodology for E Ink EPD/FPL has been developed to

- Calculate the carbon footprint of existing products on our own, or
- estimate the carbon footprint data of new products.

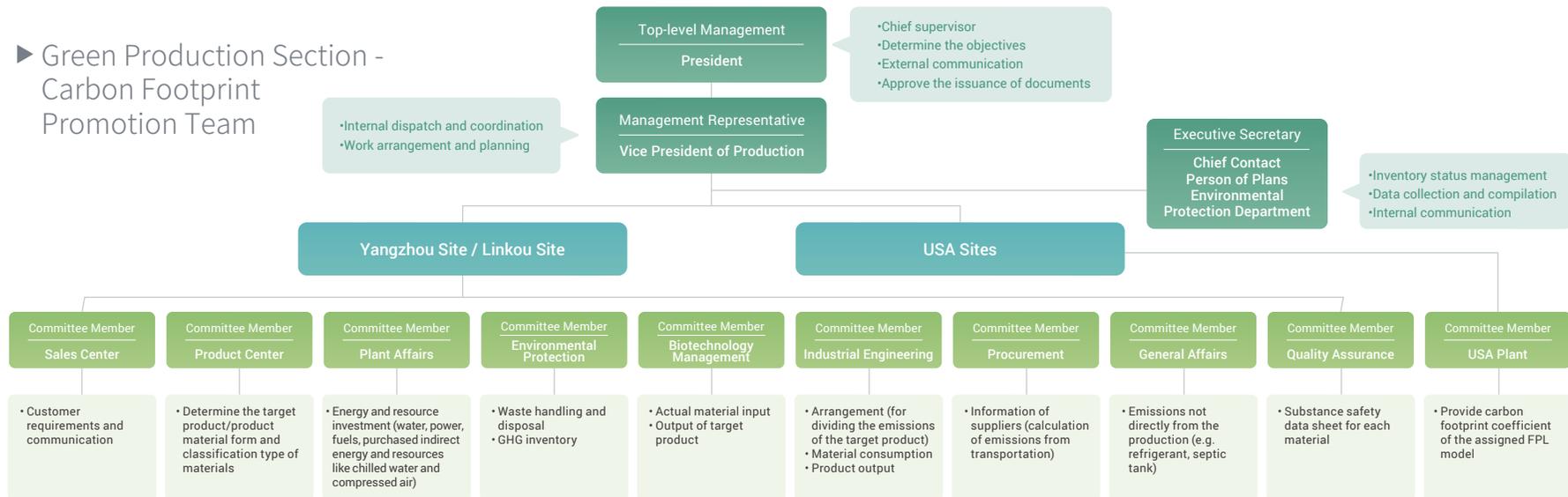
We review the product designs and manufacturing processes and identify hotspots to discover opportunities for improvement.

- Stage of raw materials (including transportation)
- Stage of manufacturing (including transportation and waste produced via the manufacturing process)

Promotion Team

Regarding the Company's GHG-related promotion organization, our President serves as the top management to carry out promotion plans. The organizational structure is shown below.

Green Production Section - Carbon Footprint Promotion Team

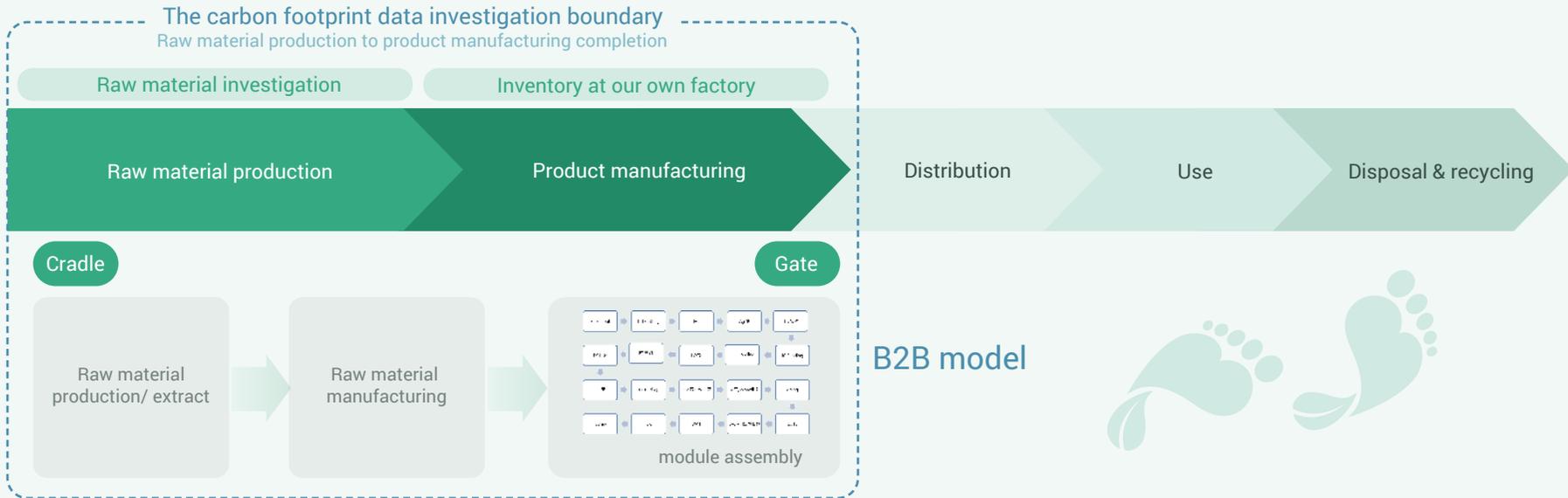


Product Carbon Footprint

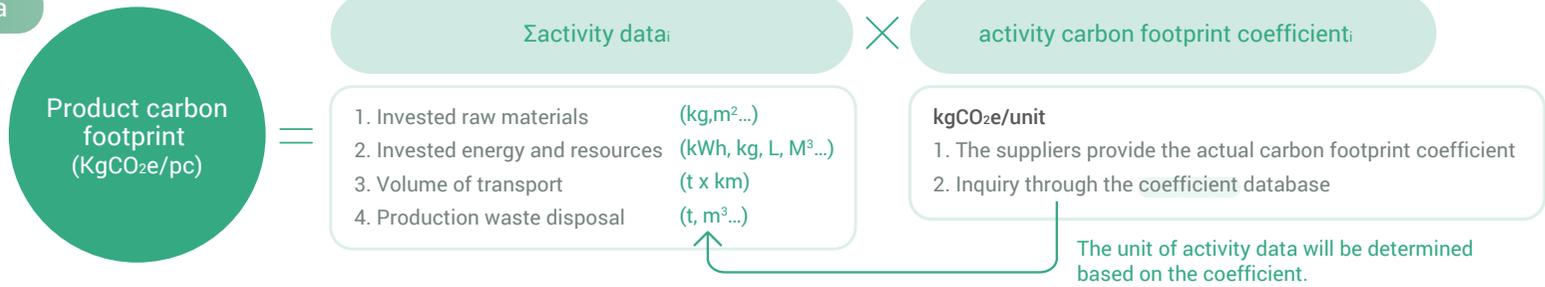
Methodology and Scope of Inventory

In accordance with the ISO 14067:2018 standard: We compile information based on the principles of completeness, consistency, accuracy, relevance and transparency, set thorough regulations on the GHG emissions throughout the product life cycle, and make impact assessment.

The target products of the carbon footprint inventory this time were 6.8" EPD and 2.9" ESL. The inventory focused on all the GHG during the material receiving and manufacturing stages, etc. throughout the life cycle of the target products made within December 1, 2020 to November 30, 2021.



Calculation formula



Product Carbon Footprint

Results and Third-party Assurance

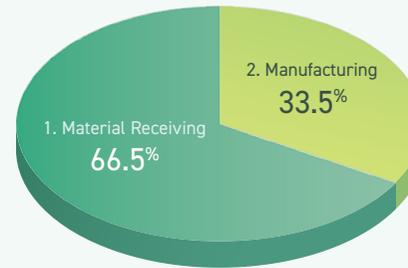
The data and supporting materials of this inventory were verified and assured by the external third party, British Standards Institution (BSI), in compliance with the ISO 14067:2018 standard in March 2022, and the verification statement of reasonable level of assurance has been obtained.

During this product carbon footprint inventory and the verification process, we found that the TFT substrate of the material receiving stage and the electricity and energy use of the manufacturing stage are the major hotspots of salient issues. The Company accordingly incorporates the development of specific carbon reduction projects and objectives into the long-term improvement strategies in the hope of continuously enhancing the environmental management performance with the joint implementation in the value chain. Our carbon footprint is expected to decrease gradually in the future, and we will steadily work towards the goal of 40% use of renewable energy by 2025, 100% use of renewable energy by 2030, and net zero carbon emissions by 2040.

6.8" ePaper Display

ED068KC5 Carbon Footprint

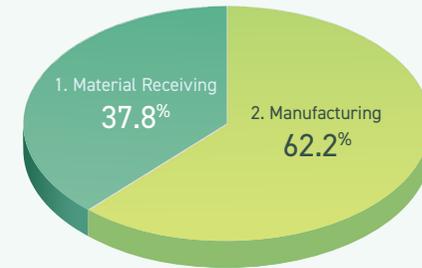
3.30 kg CO_{2e} / piece



2.9" Electronic Shelf Labels

ESL(EL029TR3) Carbon Footprint

0.59 kg CO_{2e} / piece



ISO 14067:2018 Product Carbon Footprint Verification Statement



4-3-2 Task Force on Climate-related Financial Disclosures (TCFD)

Each year, the World Economic Forum publishes the Global Risks Report, which identifies the key risks that the world may be exposed to. From the latest report, apart from the apparent impacts of COVID-19 around the world, the potential risk from climate change is something that we cannot afford to overlook. The fact that "Extreme weather events" had remained the risk that has the greatest likelihood of occurrence for five consecutive years speaks volumes to the universal anxiety that people worldwide share. In light of the uncertainty from climate changes and the impending transition in global energy structures, E Ink has been aggressively implementing projects of energy and water conservation and carbon reduction in conjunction with the Company's policies for economic development, environmental protection, and sustainable development. We strive to boost our resilience against climate change and build a culture of environmental sustainability through the identification and mitigation of climate change-related risks and developing energy-saving products and services.

In 2019, E Ink referred to the Task Force on Climate-related Financial Disclosures (TCFD) as published by the Financial Stability Board (FSB) in our identification of climate risks and opportunities. Becoming a TCFD Supporter in October 2021 and further exploring the potential impacts of climate change, we have analyzed hypothetical scenarios with specific impacts in the foreseeable future and established effective management measures that would strengthen the Company's resilience against climate change.



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Company	Sector	Industry	Location	Region	Date
E Ink Holdings Inc.	Information Technology	Technology Hardware & Equipment	Taiwan	Asia Pacific	October 2021

Governance

The Board of Directors is entrusted with establishing the Company's overall climate change strategies and relevant annual goals. In addition, the Board is also responsible for the supervision of adherence to said strategies and the Company's progress towards the established goals, while the ESG Sustainability Committee is responsible for relevant promotion and execution. Our ESG Sustainability Committee is headed by CFO Le-Chun Chen and the Committee reports to the Chairman. Under the ESG Sustainability Committee, the Green Production Division is primarily responsible for climate change governance and risk management. The Division will evaluate and manage the impact of climate change on the Company's operation and arrange for relevant departments to take part in meetings to discuss the items of implementation and promote sustainable development-related affairs on a yearly basis.

Strategy

With regards to the threats and potential opportunities that climate change may bring, E Ink has already incorporated the TCFD framework to identify the risks and opportunities of climate change. For details, refer to E Ink's CSR Report for 2019. In 2020, from the major climate risks identified through the TCFD framework, the Company analyzed various scenarios that may result from the risks of major climate changes. Results of the analysis revealed the risks to be changed in renewable energy regulations, increased severity of extreme weather events and uncertainty in market signals. After appraising the potential impact of these risks on the Company's operation, the Company has analyzed the physical and transition risks for the scenarios of increased severity of extreme weather events and uncertainty in market signals. In 2021, we will further develop a clearer direction for the opportunities, indicators and objectives.



Risk Management and Assessment

Climate Change Risk Management

Risk category	Source of risk	Risk description	Financial impact	Duration of impact	Counter measure for the risk
Physical risks	Disruption of day-to-day operation	Severe disasters such as typhoons, floods, storms and so forth have caused our sites to flood, disrupted power supply and led to disruption of operations.	Increase in operating cost	Short-term	For physical risks that may result from extreme weather events, the Company has established relevant disaster response plans and standard prevention procedures to achieve operational continuity that would effectively reduce the potential damages of disasters
	Disruption of supply chain	Severe natural disasters and drastic rainfall could lead to collapsed roads or flooding at customers' sites, which would disrupt the Company's operation. Consequently, our suppliers will not be able to make punctual delivery of goods and it would lead to a disruption in supply chain operation.	Increase in operating cost	Short-term	Regarding supply chain disruption that may be caused by natural disasters, we have also formulated a relevant response plan based on our "Procedure Governing Operational Continuity Management". Apart from predicting and controlling our own deliveries, the plan also involves assisting customers in troubleshooting to mitigate potential risks to the supply chain.
Transition risk	Change in national policies	In light of the latest international trends, the current power market is strongly promoting renewable energy generation. Domestically, the government has legislated a clause for "high-energy users", which requires energy-heavy industries to achieve an installed capacity of 10% for renewable power generation within 5 years; industries that fail to achieve this requirement will face a significant surcharge for their power consumption.	Increase in operating cost	Medium term	E Ink has proactively planned for the use of renewable energies. Due to considerations for the diversity of renewable energies and distributing their sources, the Company has considered incorporating rooftop solar power, inland wind power, or even biomass power generation as potential renewable energy sources.
	International trends in carbon reduction	With nations around the world formulating their respective carbon pricing to achieve reduction and control of carbon emission so that they can achieve the goal of net zero emission, our government has also quickened its pace in the formulation of a pricing mechanism to achieve effective control of Taiwan's carbon reduction goals.	Increase in membership fees	Long-term	The Company has analyzed hypothetical scenarios involving potential carbon pricing in the future. Through preemptive evaluation of potential impacts, the Company will be able to take relevant actions to mitigate the impacts of carbon pricing in the future. In the meantime, the Company will continue to adopt more low-energy consuming equipment to achieve effective reduction of power and energy consumption while reducing our GHG emissions so that we can achieve our goal of effective carbon reduction.

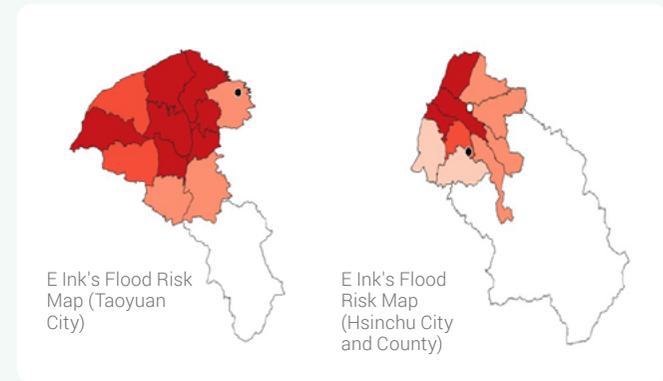
Assessment of physical risks: Disruption of day-to-day operation and disruption of supplychain

According to a study conducted by Taiwan Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP), the formation of typhoons is expected to decrease in frequency in the future. However, the intensity of rainfall brought by typhoons will become significantly greater. Such drastic volume of rainfall would expose the Company to greater impact from typhoons, which could cause our sites to flood, disrupt the power supply, or indirectly lead to personnel injury/casualty. In terms of logistics, such weather events could potentially cause roads to collapse or even landslides, which would impede the delivery of parts and components. Such disruption in supply chain operation would in turn disrupt our operation.

In light of the potential of climate changes that could lead to extreme weather events, the Company has implemented an assessment of physical risks of disruption to its operations resulting from such events in order to evaluate the feasibility of relevant preventive measures. The specific scenario of climate change in the hypothetical future was constructed based on the concept of Representative Concentration Pathways (RCPs), which symbolize the trajectory of GHG emission presented in the Fifth Assessment Report (AR5) published by the Intergovernmental Panel on Climate Change (IPCC). An RCP of 8.5, which represents the worst-case climate change scenario, has been chosen as the basis for potential disruption of operation in conjunction with relevant information taken from the TCCIP. The analysis involved an evaluation of the potential risk of climate disaster on three dimensions (i.e. Disaster Risk, Vulnerability and Exposure) to gauge the potential impact of extreme climates on our day-to-day operations. The analysis was performed for our main operational centers in Taiwan and specific locations of our key customers. We also evaluated potential sites of new office buildings and sites the Company may construct in the future.

Climate Change Risk Management

Based on the outcome of the analysis, neither of our two main operational centers in Taiwan is situated in a high flood risk area. Both our Hsinchu HQ and sites are located in areas of moderate risk, while our Linkou Site is in a low risk area. In addition, the site which we have chosen for our new office building in the near future is also located in a moderate risk area near our Hsinchu Site. In light of the potential disruption to the operation that could be caused by flooding, E Ink has already formulated specific disaster response plans for incidents such as typhoon or chemical leakage that could have a major impact on our operations. By standardizing relevant procedures and exposing employees to routine training, we will mitigate the risks of operation disruption that may occur during relevant contingencies. With regards to supply chain risks, we have also extended the analysis to cover our major customers in Taiwan. We found said customer to be situated in a high flood risk region in the hypothetical scenario and to reduce the likelihood of supply chain disruption caused by drastic rainfall volumes, we have also formulated a relevant response plan based on our "Procedure Governing Operational Continuity Management". The plan involves a number of specific measures such as controlling product delivery versatility, establishing an emergency response taskforce to assist customers in troubleshooting and so forth to mitigate potential risks in our supply chain.



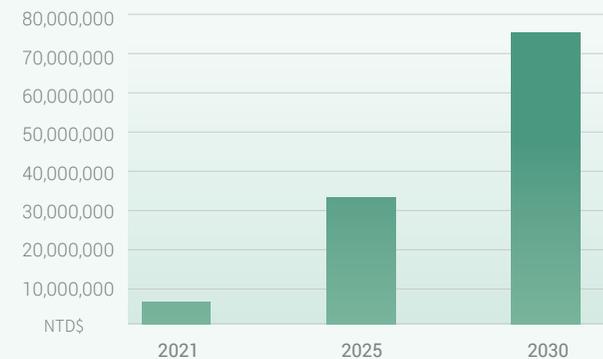
Assessment of transition risk: International trends in carbon reduction

Many countries around the world have pledged to achieve carbon neutrality (net zero) by 2050 in order to achieve the goal that was adopted in the Paris Agreement. Consequently, our government has also initiated relevant assessments of feasible paths to achieving net zero carbon emission and amended relevant regulations. Towards the end of 2020, the EPA proposed the draft for amendments to the Greenhouse Gas Reduction and Management Act. The details on effective carbon pricing unveiled in the draft became the focus of attention for all relevant spheres.

In 2020, the Company assessed potential carbon pricing in the near future and analyzed the potential impact of said pricing on the Company's operations. The hypothetical scenario involves the adoption of NDC in Taiwan and the impact of carbon pricing on E Ink's operations. From the result of the analysis, we sought to determine the direction of our carbon reduction plans in the future in order to mitigate the potential impact of carbon pricing that might become a reality in the future. For the analysis, we adopted the carbon pricing options for Taiwan as published by Grantham Research Institute on Climate Change and the Environment. The options were formulated specifically based on Taiwan's existing policies, regulations and sector characteristics. We estimated our carbon levy to have a starting price of NT\$ 280 for each ton of carbon dioxide emitted. With this starting price, we plotted the foreseeable changes in our future revenues and carbon emission and deduced the carbon levy that the Company would have to pay over the next decade.

Our estimates suggested that our carbon levy would have a relatively insignificant impact on the Company in 2021 alone from a short-term perspective. However, as our operations and production capacity continue to grow, our GHG emissions would grow at a proportional rate. If we do not implement aggressive carbon reduction measures, our forecast for carbon levy in 2025 suggests that the levy would increase by a factor of 5.46 times compared to that of 2021. E Ink's carbon levy is estimated to show substantial growth over the years and by 2030, our carbon levy might grow as much as 11.71 times compared to that of 2021.

In light of the potential impact from substantial carbon levy we might face in the future, with regards to production process energy management, we will continue to introduce more energy efficient and low-power consuming equipment and carry on with various carbon reduction projects to effectively reduce our power and energy consumption during production. As for energy consumption, the Company will continue to purchase green power and consider increasing the installed capacity of solar panels at our facilities to increase the ratio of our renewable energy consumption so that we can reduce carbon emission while mitigating our impact on the environment at the same time.



▲ Forecast of E Ink's carbon levy in Taiwan

Climate Change Opportunity Management

Opportunity category	Opportunity	Opportunity description	Development of financial opportunity	Duration of impact	Counter strategy
Resource use efficiency	Enhancement of equipment energy efficiency, improvement of resource utilization rate of raw materials	The Company can make old equipment replacement with the update of new equipment with high energy efficiency.	Decrease in operating cost and energy use	Medium and long-term	<ul style="list-style-type: none"> By boosting the production as well as energy and resource use efficiency, we can not only reduce our medium and long-term operating cost, but also achieve the goal of carbon reduction. We will implement plans for the recycling and reuse of waste, circular economy, etc.
Product and Service	Growth potential for low carbon products	The Company may benefit from the growing market demand and anticipation of low-carbon products and continue to develop and manufacture low-carbon products.	Increase in operating profit	Medium term	<ul style="list-style-type: none"> Thanks to its unique bistable state and low power consumption, ePaper has become a popular product in the global market. And as such, E Ink shall continue to expand the domain of potential applications for ePaper, recruit more R&D talents, and expand our production capacities in the U.S. and Taiwan in order to accommodate the growing market demands.

Indicators and Goals

E Ink set annual objectives based on the scenario of a rise of 1.5° C announced by the International Energy Agency or a more severe temperature. Such annual objective planning was aimed at the Taiwan sites at first, and was later conducted for the other major production bases around the world as well to mitigate the impact of climate change through international efforts. The scope of the planning covered only the Taiwan sites at the early stage, and was further expanded.

Reduce emission intensity



Goals

- To achieve 20% reduction in 2025 compare with 2020 (includes scope 1 and 2)
- To achieve 70% reduction in 2030 compare with 2020 (includes scope 1 and 2)
- To achieve net zero emission in 2040 (includes scope 1, 2 and 3)

Status of achievement in 2021

- Achieved 17.4% reduction compare with 2020

Reduce unit product GHG emission



Goals

- To achieve 15 kWh/m² unit product energy consumption at Linkou Site

Status of achievement in 2021

- Achieved 9.89 kWh/m² unit product energy consumption at Linkou Site
- Established the 2025 Phase II plan for 7.5 kWh/m²

Continue to increase the amount of renewable energy



Goals

- To enter into renewable energy direct supply/wheeling agreements for the Taiwan sites
- To join the international RE100 initiative
- To achieve 40% renewable energy use in 2025
- To achieve 40% renewable energy use in 2030

Status of achievement in 2021

- Entered into renewable energy direct supply/wheeling agreements for the Taiwan sites with 47,777 kWh green power supply
- Officially joined the RE100 initiative in March 2022

Reduce water consumption and increase wastewater recycling volume



Goals

- To achieve 70% recycling rate at Hsinchu Site

Status of achievement in 2021

- Achieved 70% recycling rate at Hsinchu Site

Strengthen supply chain management to foster sustainable partnerships with other supply chain members



Goals

- To hold the general meeting of suppliers
- To finish the product carbon footprint inventory

Status of achievement in 2021

- Convened the general meeting of suppliers in Taiwan in December 2021 to present our vision regarding energy saving, carbon reduction and sustainable co-prosperity
- Promoted product carbon footprint project and completed the carbon footprint inventory of two products; products from Taiwan, Yangzhou and the US included in the project. Passed the third-party verification in March 2022

4-4 Energy Consumption and Management

In view of global warming and the structural adjustment of domestic power supply, energy management, energy conservation, and emissions reduction have become popular topics in society and the key issues of enterprises. In addition to pursuing sustainable business, we spare no effort to practice environmental protection to create a better future for the Earth, the environment, and future generations.

At the end of 2016, our Hsinchu Site completed its third-party external verification of ISO 50001 Energy Management System and by extending the EMS promotion experience of the Hsinchu Site to Linkou Site, we were able to have Linkou Site pass its third-party external verification in 2017. We will progressively implement the system across all E Ink sites to demonstrate our determination and efforts to implement energy conservation and emissions reduction. We implemented the Energy Management System version switch in 2018 and completed our ISO 50001:2018 verification as of November 2019.

At E Ink, we implement midstream-downstream vertical integration for integrated production. Our Hsinchu Site was once responsible for the manufacturing of front-end display panels. At the same time, Linkou Site and USA Sites produce e-ink, with the assembly of terminal module products being done at our Yangzhou Site. Therefore, energy management and intensity of product energy consumption at different sites may vary significantly due to the means of energy supply in the production region and the product structure involved.

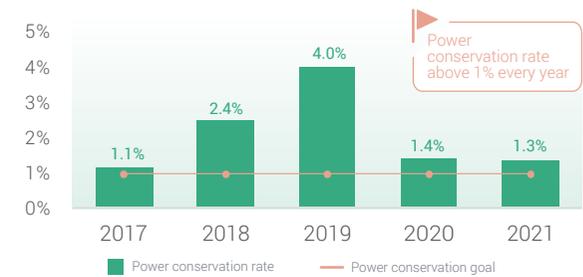
As our Taiwan sites conforms with the government energy policy, Hsinchu Site is currently subject to energy regulation. The average power conservation rate of 1% in 2015~2021 has been set as the overall energy saving objective, while the facilities and production equipment have been gradually adjusted based on the practical needs for better energy conservation in conjunction with our in-house energy-saving program. Consequently, our annual power conservation rate at Hsinchu Site has consistently exceeded 1%. Furthermore, since Hsinchu Site has transformed to a FPL manufacturing site at the end of 2021, providing data related to environmental goals for the starting year, 2022, and making comparison with the data from other sites is our priority.

For Linkou Site, after achieving the Phase I power saving target of 15kWh/m² unit product energy consumption, we aim to move on towards the power saving target of Phase II, namely achieving 7.5kWh/m² by 2025. Despite the increase in production capacity in recent years, Linkou Site has maintained a steady level of power consumption. As such, the energy consumption intensity per unit product of the site has been falling significantly each year. In 2017, Linkou Site entered the phase of mass production with significantly increased production volume and a portion of the energy-saving measures implemented in conjunction. Although the overall power consumption increased, the site's energy consumption and GHG emission intensity per unit product fell noticeably. A new model of mass production was introduced at the site between 2018~2021, with production capacity continuing to grow. At the trade-off of the modest increase in overall power consumption, Linkou Site's energy consumption and GHG emission intensity per unit product continued to fall. This reflects our success in the area of energy management promotion.

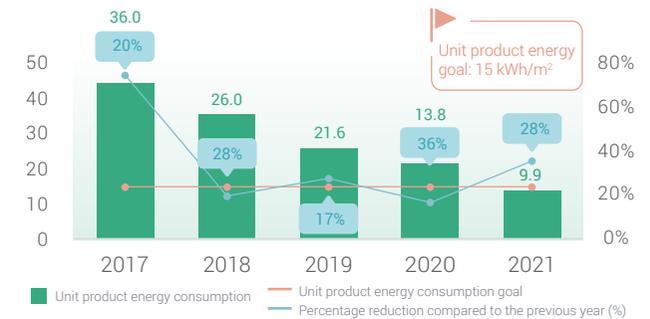
As far as Yangzhou Site is concerned, due to the multiple energy-saving that were implemented simultaneously with increased production capacity in 2015, the intensity of electricity consumption of the Yangzhou Site fell significantly compared to 2014 and has been steadily reducing after that. Nevertheless, Yangzhou Site's power consumption grew slightly in 2018 due to capacity transfer as a result of site relocation, and yet production capacity has dipped slightly due to the reduced utilization rate. Consequently, the site's energy consumption and GHG emission intensity of product increased slightly. In 2019, all machinery and facilities were properly installed for operation, and the site's capacity has been restored to a normal production schedule with adequate manpower in place. As expected, the site's product unit energy consumption promptly returned to the level of previous years. During 2020~2021, we have been able to achieve our given targets in terms of the overall production volume for the year, while the power consumption at our HQ and sites have fallen steadily. This reflects our notable success in reducing unit product power consumption.

The aforementioned GHG emission intensity of product was calculated based on the total volume of Scope 1 and 2 emissions divided by our overall production capacity.

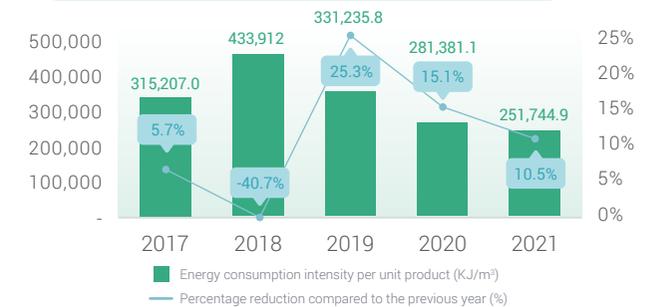
Hsinchu Site power conservation (%)



Energy consumption intensity per unit product at Linkou Site (kWh/m²)



Energy consumption intensity per unit product at Yangzhou Site (KJ/m²)

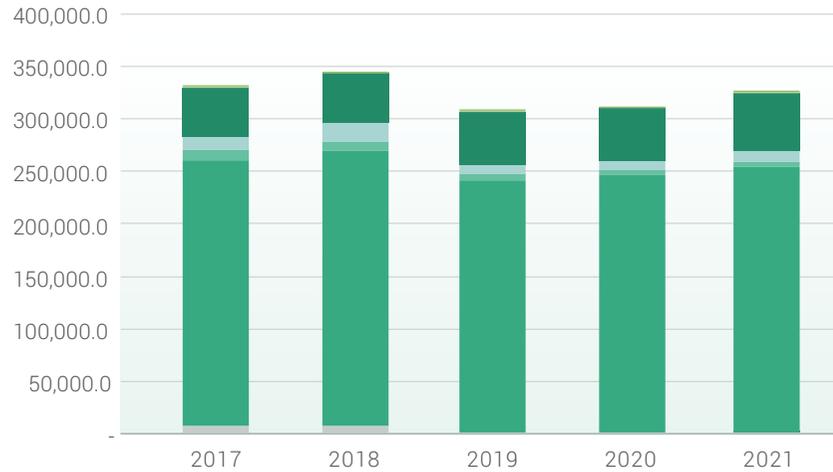


*The energy consumption intensity per unit product was mainly calculated based on the energy consumption for production, including electricity and steam consumption during production.

4-4-1 Current Energy Consumption Status

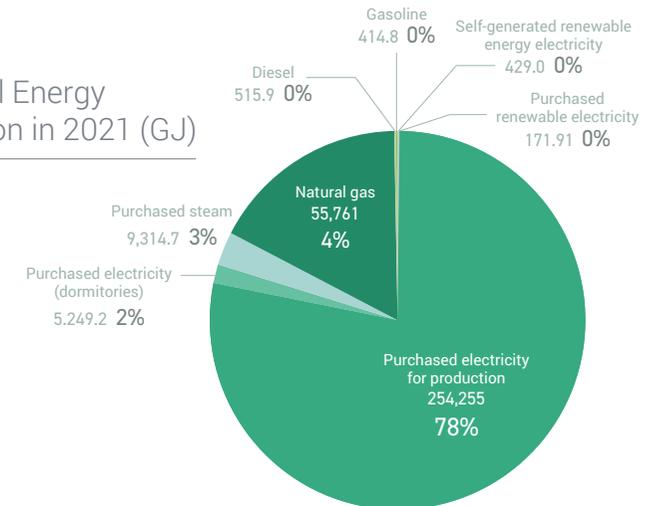
The energy consumption of our major production bases worldwide totaled 326,112.66 GJ in 2021, of which the total renewable energy consumption was 600.92 GJ and the total non-renewable energy consumption was 325,511.74 GJ. The main energy used for production was electricity (purchased electricity and self-generated renewable energy), accounting for nearly 78.2% of the total energy consumption.

▼ E Ink's Total Energy Consumption during 2017-2021 (GJ)

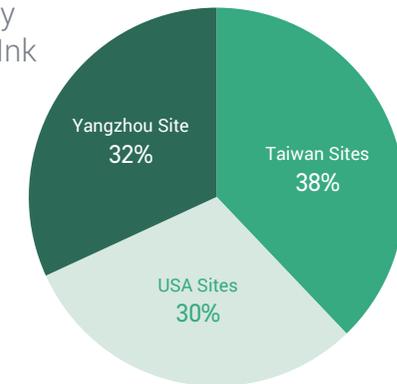


LPG	-	-	-	-	-
Gasoline	923.7	670.7	593.5	366.1	414.8
Diesel	813.0	586.5	252.3	321.1	515.9
Natural gas	46,033.0	46,629.6	50,132.0	49,180.3	55,761.4
Purchased steam	13,959.4	17,960.8	9,620.3	8,821.9	9,314.7
Purchased electricity (dormitories)	9,679.3	9,391.4	5,845.6	6,009.1	5,249.2
Purchased electricity for production	253,052.7	262,410.2	241,272.9	246,050.3	254,255.7
Purchased renewable electricity	-	-	-	-	171.91
Self-generated renewable energy electricity	7,700.2	7,016.6	431.8	395.8	429.0

E Ink's Total Energy Consumption in 2021 (GJ)



Proportion of Total Energy Consumption of Major E Ink Production Bases Worldwide in 2021



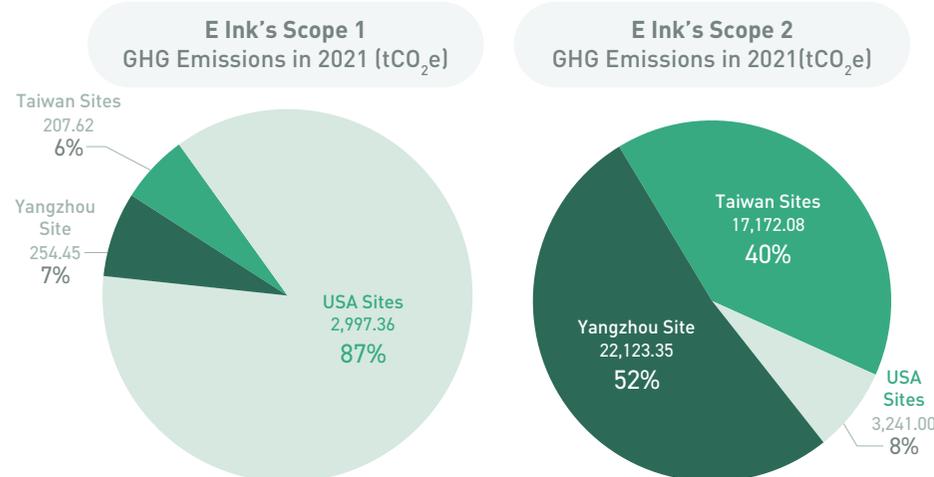
4-4-2 GHG Emissions

Reduction of GHG emissions has become an important trend of environmental protection across the globe. To implement GHG management, it is necessary to first understand the company's GHG emissions. Identification and quantification of GHG emissions are the most fundamental work for GHG inventory.

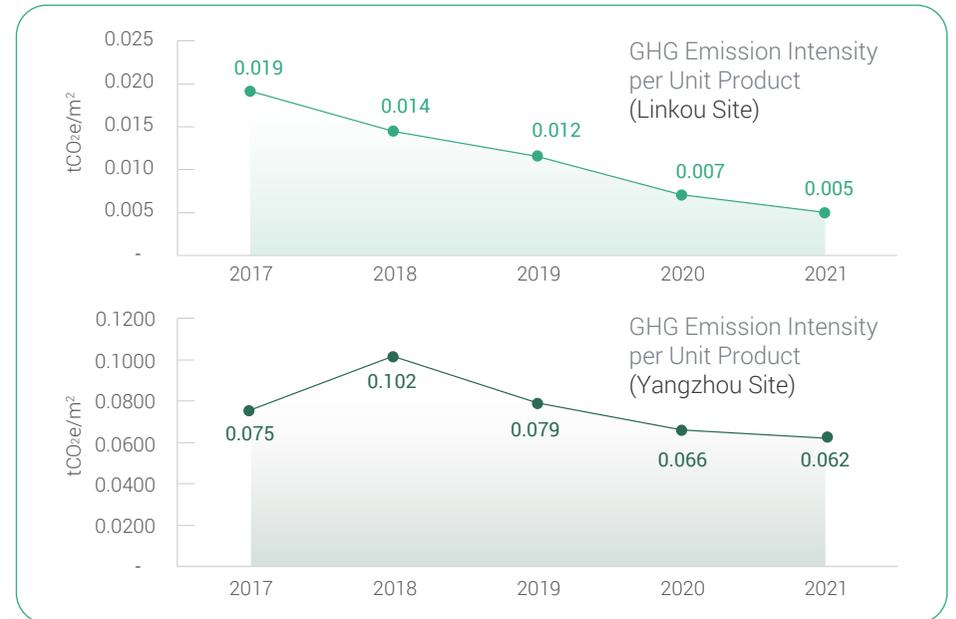
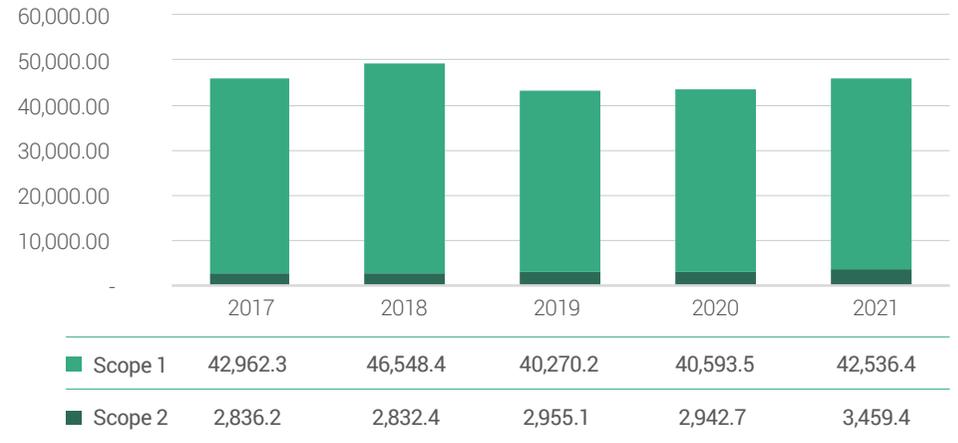
Both Hsinchu Site and Yangzhou Site began GHG inventory in 2005. We have conducted third-party verification according to ISO14064-1 in the same year, while the Linkou Site implemented GHG inventory and external verification voluntarily. Starting from 2013, Hsinchu Site became the first public and private fixed pollution source announced by the EPA to report GHG emissions. At present, the site has completed registration and reporting every year.

As purchased electricity as specified in Scope 2 remains as our main source of GHG emissions for all sites, both the pattern and trend of the unit product GHG emissions and intensity of product energy consumption of each site ended up with a high resemblance.

We introduced the latest ISO 14064 standard this year for third-party verification, so as to improve the management of other indirect GHG emissions (original Scope 3). The inventory of indirect GHG emissions from transport (employees' commutes) and from products used by the organization (good procurement, waste disposal) was completed based on the current implementation status and in accordance with the materiality principles as specified in the new ISO 14064 standard.



▼ E Ink's Total GHG Emissions (tCO₂e)



Since 2021, we have carried out the inventory and verification of indirect emissions (generally known as Scope 3 emissions) according to the ISO 14064-1:2018. For materiality principles and identification methods, we have considered using carbon management space, stakeholders' requirements, the difficulty of acquiring activity data, the accuracy of the activity data, the difficulty of acquiring emission factors, the accuracy of the emission factors, and risks and opportunities as the materiality principles for identifying indirect GHG emission sources. The identification result showed that there were three material indirect emission sources: (1) emissions from employees' commutes; (2) emissions from purchased goods; (3) emissions from the disposal of solid and liquid waste. The inventory result is disclosed as follows:

Category	Item	Description of inventory objectives	Emissions (ton CO ₂ e)
Indirect GHG emissions from transportation	Emissions from employees' commutes ^{Note 1}	Emissions generated during employees' commutes included those related to their commutes from their houses to the workplace	961.3
Indirect GHG emissions from products used by the organization ^{Note 2}	Fuel- and Energy-Related Activities	Emissions related to fuel and energy during the production (including diesel and electricity) of purchased raw fuels	3,162.5
	Emissions from the disposal of solid and liquid waste	Emissions from the outsourced transport and treatment of waste generated during processes in the sites	1,505.3
Total emissions			5,629.1

Note 1. The inventory data on GHG emissions from employees' commutes represent the total emissions of our Taiwan sites (Hsinchu Site, Linkou Site and YHMI). All the data were verified by a third party.

Note 2. The data on indirect GHG emissions from Fuel- and Energy-Related Activities and on emissions from the disposal of solid and liquid waste represent the total emissions of our Taiwan sites (Hsinchu Site, Linkou Site and YHMI) and Yangzhou Site. All the data were verified by a third party.

Note 3. We adopt IPCC-AR4 data for GHG emission potential (GWP).

Note 4. The types of greenhouse gases included in the calculation include these 7 types: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃.

4-4-3 Management of Energy Saving and Carbon Reduction

In recent years, we have made much effort in energy management. For example, we implemented many energy-saving and efficiency improvement plans on relevant site facility systems, clean rooms, and office areas. We have gradually reduced energy consumption and GHG emissions through equipment updates, system parameter optimization, and administrative measures in recent years and maintain them within a controllable range.

Increasing renewable energy use

In response to the government's promotion of renewable energy certificate trading, we have traded a total of 1,979 certificates since 2017, of which 51 acquired in 2021 were for the direct supply and wheeling of renewable energy, equal to 51,000 kWh of green power. In 2021, to follow the national green energy policy for bundled RECs and the green power obligations on energy-heavy industries, E Ink started to negotiate with private power sites for power procurement agreements (PPAs), and has obtained 47,777 kWh of green power ever since. We will keep increasing the supply of green power from PPAs to demonstrate our determination to support the development of green power, energy saving and carbon reduction with actions.

In addition, we began to build solar panels on the roof of the Yangzhou Site in 2014 to generate power for in-house productions. Coupled with our energy-saving measures at the site, we effectively reduced our Scope 2 GHG emissions to lower our electricity bills and create a win-win situation in terms of environment and economy. Our Yangzhou Site was rated as an excellent, high-salary, and eco-friendly enterprise, which came with the privilege of direct purchase of power with lower carbon emission from the power sites in 2016 to further reduce our environmental impacts.

However, due to ongoing integration at the Yangzhou Site in 2019, we could no longer use some of the rooftop PV panels at the original site. Consequently, our installed capacity and power generated fell significantly for the year.

Year	Total output capacity (kWh)	Total money saved on electricity bills (NT\$)
2014	2,202,462	1,520,000
2015	3,275,241	1,590,000
2016	2,143,751	1,267,000
2017	2,143,136	1,377,000
2018	1,952,345	1,961,000
2019	116,067	116,000
2020	114,343	114,277
2021	119,228	119,159
Total	12,066,573	8,064,436



*The total amount of money saved on electricity bills was calculated based on the electricity tariff in Yangzhou City for the year, electricity purchasing price for the Yangzhou Site, and the RMB exchange rate.

E Ink joined the RE100 in 2022. To achieve the goal of RE10 in the year, we will in consideration of the regional renewable energy supply model for our Taiwan sites, Yangzhou site and USA sites, accelerate the expansion of the renewable energy usage in these production bases with our resources integrated.

Process Energy Management

To reduce energy consumption during production as much as possible and thereby achieve the goal of energy saving and carbon reduction, our Yangzhou site has recovered air compressor heat, installed LED lighting in the factory building and set up solar panels. In 2021, our energy saving project focused on saving electricity. The estimated amount of electricity saved for this year was 839,472 kWh, equivalent to 3,022 GJ and also equal to a reduction of 678.8 tons of CO₂e.

Project	Site	Electricity saved (kWh)	Energy cost saved	Note
Air compressor heat recovery project	Yangzhou	146,017 kWh/year	Approx. NT\$449,732/year	Ongoing annually
Replacement with LED lights for clean rooms	Yangzhou	574,227 kWh/year	Approx. NT\$1,768,620/year	Replacement ongoing annually
Installation of solar panels	Yangzhou	119,228 kWh/year	Approx. NT\$83,349/year	Ongoing annually
Steam condensate recovery	Yangzhou	69,000 kWh/year	Approx. NT\$240,000/year	Ongoing annually
Procurement of waste process hot water	Yangzhou	10,600 tons of steam/year	Approx. NT\$11,700,000/year	Ongoing annually

Yangzhou Site Energy Saving and Carbon Reduction Project

Steam Condensate Recovery Project

Yangzhou Site began to recover steam condensate to replace the steam heating source to reduce the volume of purchased hot water.

Actual energy saved
Approx. **69,000** kWh/year on average

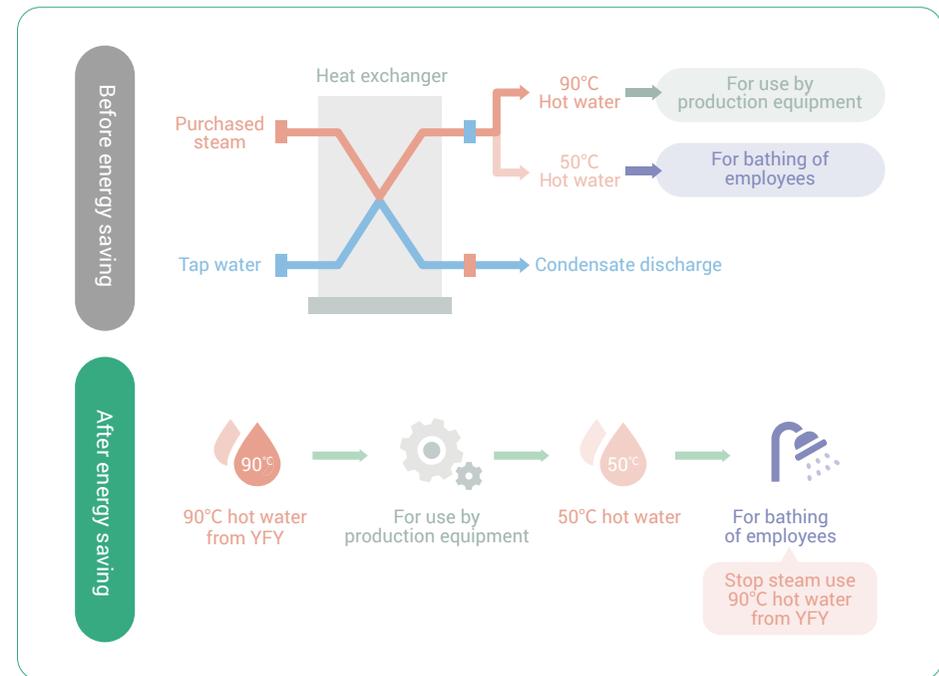
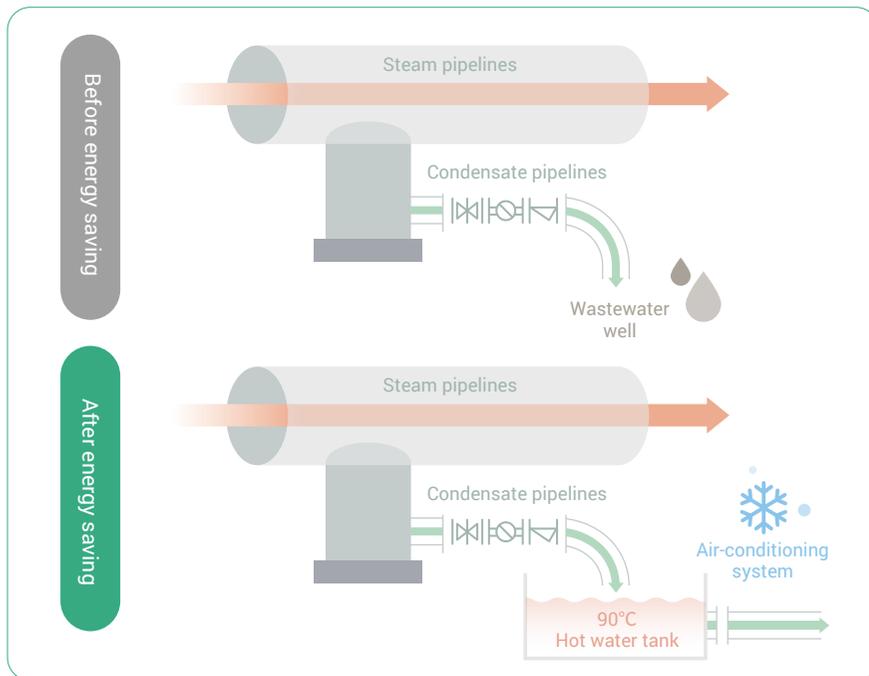
Energy cost saved
Approx. NT\$ **240,000** /year

Waste Process Hot Water Procurement Project

Yangzhou Site began to purchase residual 90° C hot water from YFY's sites for use in the production process and as domestic hot water for employees to further reduce its need for purchasing steam.

Actual energy saved
Approx. **10,600** tons of steam/
year on average

Energy cost saved
Approx. NT\$ **11,700,000** /year

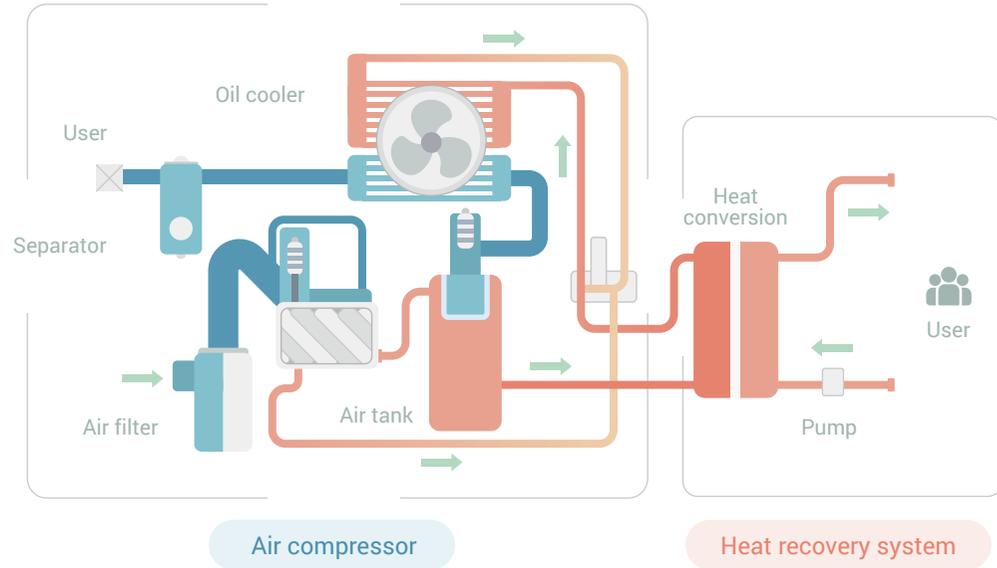


Yangzhou Site Energy Saving and Carbon Reduction Project

Yangzhou Site Air Compressor Heat Recovery Project

To discover alternative heat sources for saving energy and reducing carbon emissions, air compressor heat recovery equipment has been installed in the Yangzhou site to recover the heat generated during the operation and use it for partial production and to provide hot water in the office. This project has enabled the use of idle equipment in the site.

<p>Cost RMB 51,101</p>	<p>Energy saved 146,017 kWh/year</p>
<p>Energy cost saved RMB 102,212 /year, or NT\$ 449,732 /year</p>	



Replacement with LED lights for clean rooms

To continuously reduce the electricity consumption during the process through light replacement and thereby contribute to energy saving and carbon reduction, the lights in the clean rooms of the site have been replaced with LED tubes with the same luminance and lower energy consumption.

<p>Cost RMB 93,150</p>	<p>Energy saved 574,227 kWh/year</p>
<p>Energy cost saved RMB 401,959 /year, or NT\$ 1,768,620 /year</p>	



4-5 Resource Recycling

4-5-1 General Resource Management

With the aim of ensuring sustainable environmental development, we have set goals with respect to general resource management in the hope of facilitating the sustainable development of the environment by increasing the recycling ratio. It is also hoped that the raw material utilization rate can raise so that resource consumption can be reduced. We aim at lowering the consumption of raw materials per unit product by 20%. Since 2021, we have redesigned the recycling storage area to classify waste in order to increase the recycling rate.

Goal

20% reduction in the intensity of organic solvents used in products by 2025, compared to 2021.

Taiwan - Linkou Site	2019	2020	2021
Intensity of organic solvents used in products (ton/m ²)	0.577	0.313	0.402

Improvement measures and plans

Raise awareness about circular economy and increase recycling and reuse rates to reduce resource consumption.

1. Resource recycling: Improve the design of the recycling area to drive the resource recycling rate.
2. Organic solvent utilization rate: Recycle waste extracted organic solvent extracts to reduce solvent consumption.

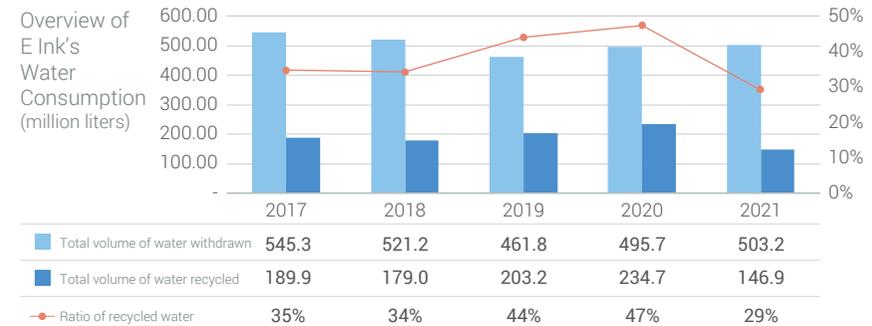


4-5-2 Water Resources Management

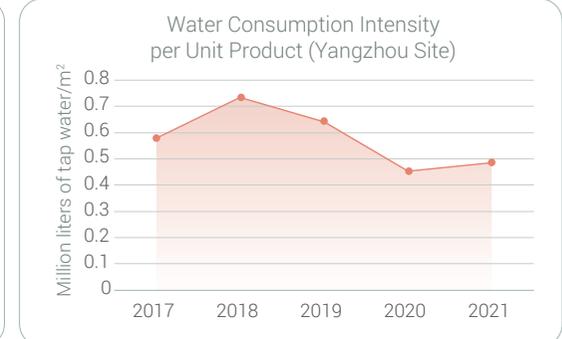
Goals and current situation for the consumption of water resources

Taiwan is a mountainous island with short and rapidly flowing rivers, making it difficult to store precipitation effectively. In addition, extreme weather events have become increasingly frequent in recent years as a result of climate change, resulting in droughts and torrential rain coming in succession one after another. Floods and droughts have also occurred frequently in China in recent years. Therefore, water resource management has become increasingly important in Taiwan, China, and even across the world. To business operations, coping with the crisis from water shortages has become exceptionally important in the past few years.

In recent years, we have spared no efforts to save and reclaim water, thus reducing the water consumption of each site, and the unit product water consumption has also been reduced. However, as Hsinchu Site in Taiwan used to be a display substrate manufacturing facility and has been transformed into an experimental site since 2017, the total volume of recycled water has fallen. The site no longer calculates unit product water consumption. In addition, water consumption at Linkou Site is mostly attributed to general-purpose water consumption. It does not relate to production capacity and as such, the site no longer discloses its unit product water consumption starting from 2017. As the operation of the pure water system and regeneration system was reduced at the Yangzhou Site as production capacity fell, the volume of recycled water also declined as a result. Ever since the site's unit product water consumption fell dramatically after 2014, it has remained fairly stable since then. Nevertheless, the relocation of the site in 2018 had led to a lower utilization rate and lower production capacity. Hence, unit product water consumption rose slightly but promptly returned to previous levels after capacity stabilized in 2019. During 2020~2021, we thoroughly implemented our water management plan and water conservation project, and managed to allow the overall water consumption and unit product water consumption to remain steady over the years.



Note 1: According to the latest information on WRI Aqueduct's database, none of E Ink's current sources of water are located in areas with water stress.



Water Saving Program Highlights

Cost Reduction through Pure/Waste Water Systems at Hsinchu Site

Hsinchu Site adjusted control logic through machines and updated old motors to enhance the operating efficiency of pure, recycled and waste water systems.



Energy saved

$(3,638.83-3,502.45) \times 30 \times 12 = 49,097$ kWh/year

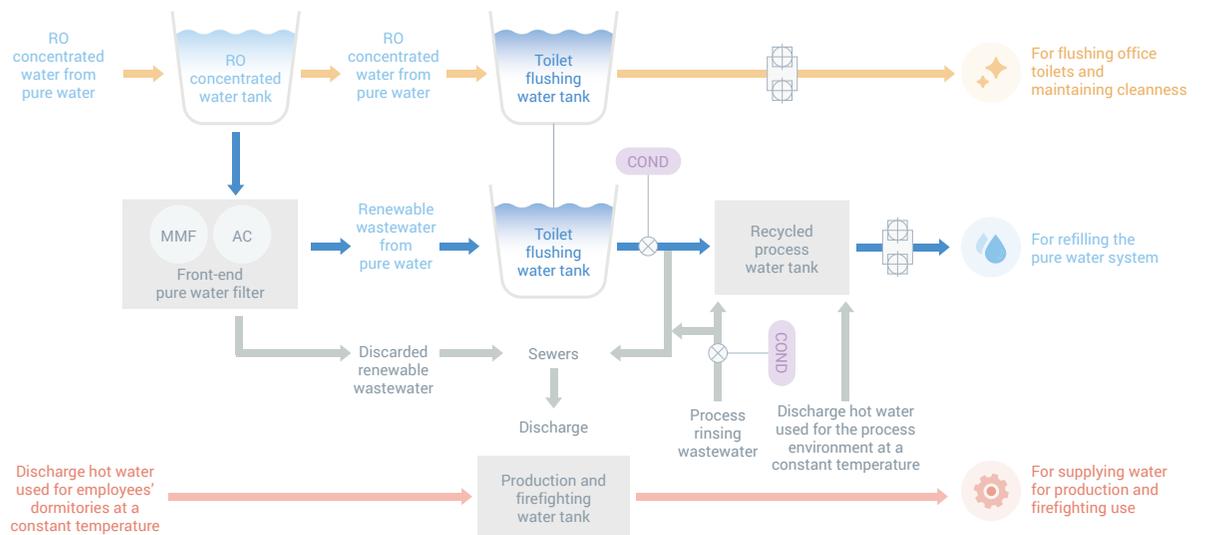


Energy cost saved

NT\$ **506,000** /year

Yangzhou Site / Construction for Recycling Discharged Water (Phase I)

Yangzhou Site integrated the layout of the water drainage network in the park into a comprehensive monitoring system for the purpose of obtaining the required information on the water quality and volume of water consumption points through integrated data, so as to establish the most reasonable recovery plans with least secondary pollution. Recycled RO concentrated water, renewable wastewater, process rinsing wastewater, process hot water, and hot water for employees' dormitories have been used for filter backwashing, toilets, refilling the pure water system, and fire safety equipment in the park. In addition, 40~50 °C recycled water can be used to recover residual heat so that the cost for heating water can be saved.

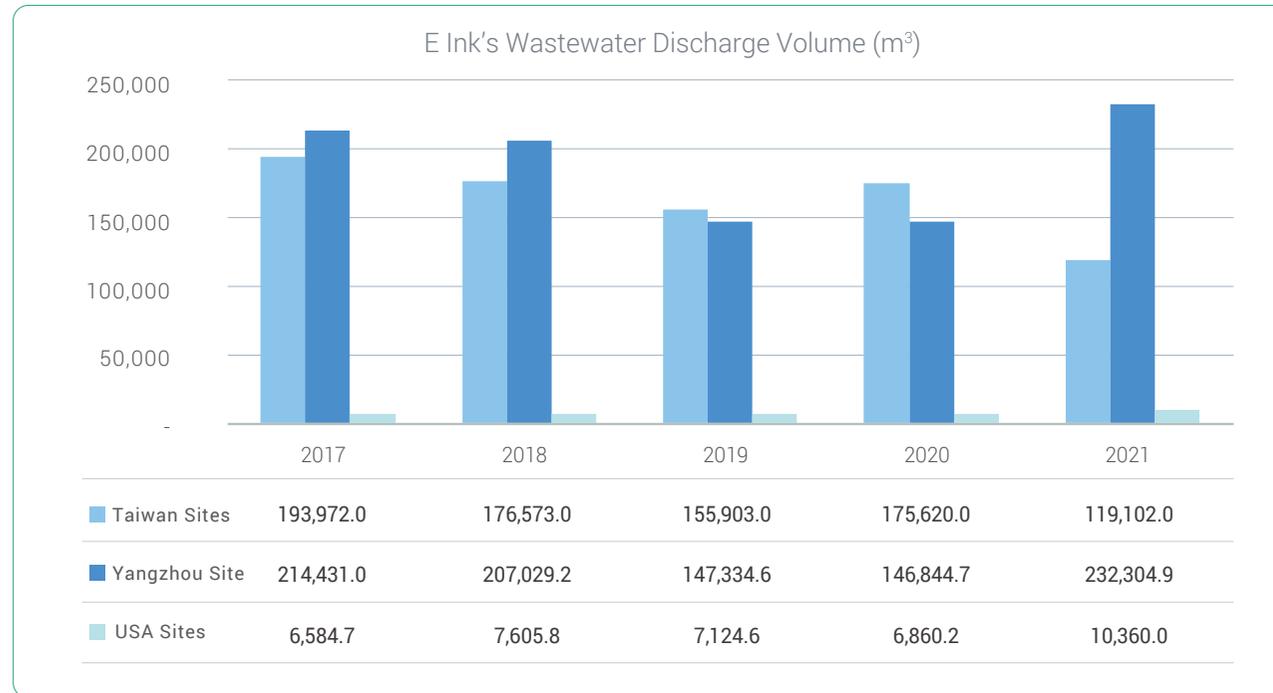


<p>Cost RMB 153,232 (Pipelines, controls and equipment renewal)</p>	<p>Water saved on heat exchange 6,132 tons/year</p>
<p>Cost saved RMB 32,000 /year</p>	<p>Water saved 41,954 tons/year</p>

In the future, we will continue to improve water resources management and plan a series of water-saving and water efficiency enhancement plans based on the sustainable development spirit.

Discharged water and water quality management

We implemented wastewater treatment and effluent quality inspections, periodic monitoring, and adjustment of wastewater discharge according to relevant legal requirements. Based on statistics from external inspection reports for effluent water quality, the quality of effluents has met the effluent standard of the locations where our sites are located in recent years.



Hsinchu site wastewater reduction program

Sodium hydroxide

Sodium hydroxide consumption
2020=42kg 2021=15kg

Reduction in sodium hydroxide consumption

64.2%

Continuous improvement

1. Replacement of old feeder and pipelines to prevent chemical leakage.
2. Modification of the PLC to prevent repetitive feeding.
3. Calibration of the pH meter in a thorough way to reduce the chance of mistaken feeding.
4. Adjustment of the regeneration method of the pure water system

Waste water

Total wastewater volume
2020=175,620m³ 2021=119,102m³

Reduction in total wastewater volume

32.2%

1. Change of the control logic of the wastewater mixer.

4-5-3 Air Pollution Management

Air pollutants products by sites in Taiwan vary as the processes differ. VOCs, hydrochloric acid (HCl), and hydrofluoric acid (HF) are the main pollutants at Hsinchu Site, while VOCs are the major air pollutants at Linkou Site. Both the intensity and volumes of emission of these pollutants fall within the legal standards. In addition, as environmental regulations in Taiwan have gotten more stringent, we have also actively invested relevant resources for relevant improvements, such as choosing high-performance pollution-control facilities and ensure stable operation of environmental protection facilities to reduce pollutant emissions and reduce environmental impacts.

	Air pollution control Total annual emission (ton)	2017	2018	2019	2020	2021
Hsinchu Site	VOCs	0.3093	0.8814	0.4323	0.3957	0.3838
	HCl	0.0053	0.00867	0.0081	0.0168	0.0021
	HF	0.00022	0.0017	0.0163	0.0058	0.0062
Linkou Site	VOCs	0.328	0.395	0.347	0.427	0.378
Yangzhou Site	VOCs	0.212	0.212	0.018	0.028	0.135
USA Sites	VOCs	6.82	6.25	8.44	7.20	7.66

Note 1: Total emissions at Hsinchu Site are calculated by multiplying the unit hourly emission intensity (from relevant test report data for the 1st and 2nd half of the year) by the annual total operating hours.

Note 2: Total emissions at Linkou Site are calculated based on the statistics of material consumption and material input by factoring in the allowable emissions in operations.

Note 3: Method of calculation for Yangzhou Site - Annual emissions = Emission rate (derived from 3rd party monitoring reports)* the number of hours of emission in a given year. The additional production lines and the new air pollution control facilities in 2021 resulted an increase of the VOC emissions.

Note 4: Method of calculation for USA Sites: calculations for Billerica Site were based on chemical mass balance; South Hadley Site had directly measured relevant stats and outsourced relevant inspections; for Fremont Site, the inspections were outsourced to obtain the emissions prior to final calculation.

A waste gas treatment facility was added at Yangzhou Site in 2021.

A new "water spray + activated carbon adsorption" treatment facility was set up for waste gas treatment in the production shop to ensure organized emission of waste gas through an 15m exhaust pipe. The facility was accepted by local experts in the field of environmental protection and could be put into service. The Company commissions external leading institutions to conduct monitoring of waste gas and environmental pollution factors on a regular basis. Only the waste gas that meets the standards is emitted.



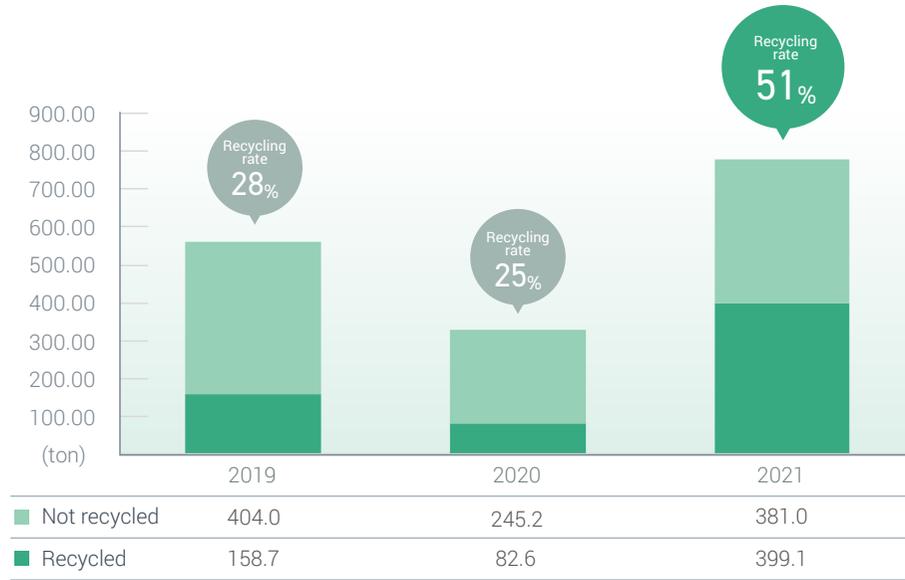
4-5-4 Waste Management

At E Ink, legal compliance and mitigation of environmental impact are the prime concerns for waste management. Therefore, the priority of waste management is: recovery of recyclable waste to achieve waste to resources and material conservation; outsourced incineration of unrecyclable waste after central storage; and landfill when incineration is impossible. Many kinds of in-house solid waste are recoverable and recyclable. By reinforcing garbage classification, we reduce the output of general industrial waste for garbage reduction and waste to resources.

For management of waste disposal service providers, the Company has scheduled an annual audit plan to manage waste disposal and processing service providers. By randomly following waste disposal vehicles to ensure that our contractors have been disposing wastes from E Ink in compliance with pertinent regulations, the Company has made a conscious effort to supervise the flow of wastes and their final disposal. Starting from 2018, the Company has also taken one step further to implement joint auditing of waste disposal service providers by joining organizations such as the Allied Association for Science Park Industries and Taiwan TFT LCD Association (now Taiwan Panel & Solution Association) and working with other members in the audits. Not only that, E Ink has also conducted onsite inspection and review of relevant documentations to evaluate waste disposal service providers in different dimensions and perspectives such as safety, hygiene, environmental protection, risk management and so forth. Based on the results of onsite visits, the Company would inform the service provider about areas for improvement and rectification. The audit reports have also been shared with other association members as a reference for contractor selection.

2021 Waste Outputs and Disposal Methods

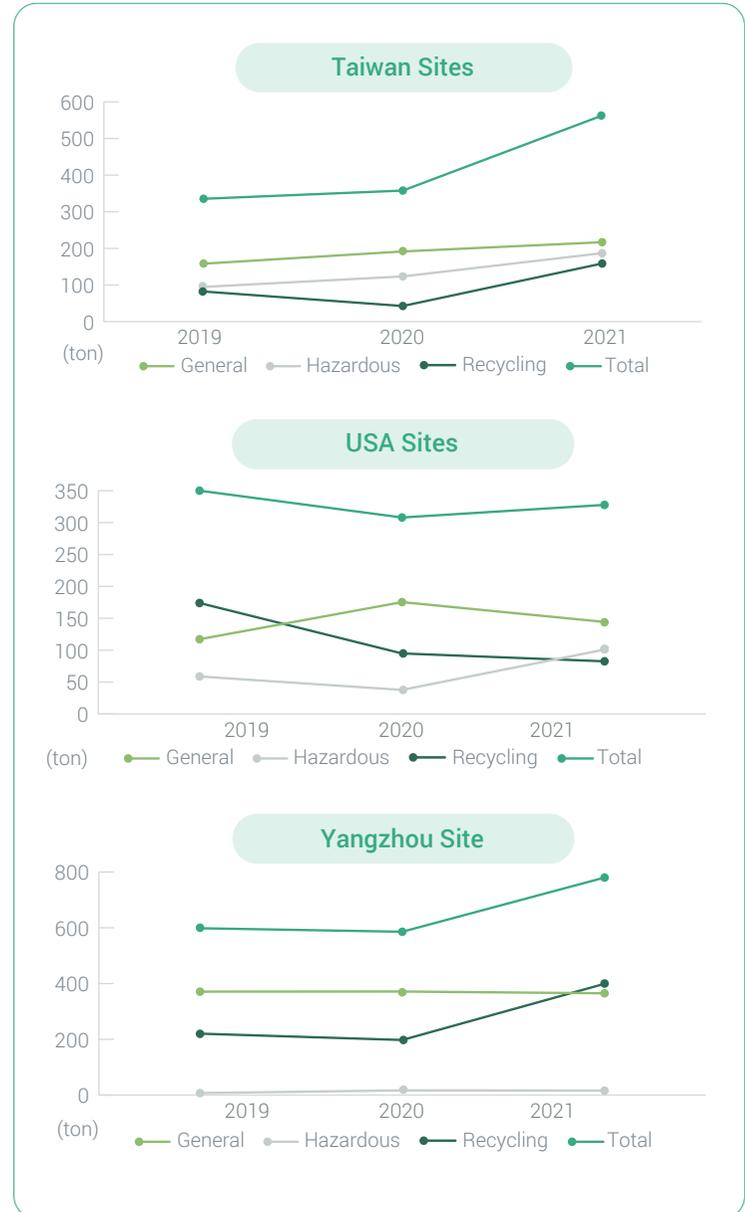
Waste category	Method of disposal	2021		
		Taiwan Sites	USA Sites	Yangzhou Site
General Waste	Total output (ton) -	351.8	225.7	763.0
	- Incineration (ton) - heat recovery	119.2	126.4	365.0
	Incineration (ton) - w/o heat recovery	97.7	0	0
	- Landfill (ton)	0	0	0
	- Recycling (ton)	134.8	81.4	398.0
	Others (ton)	0	17.9	0
Hazardous waste	Total output (ton) -	211.0	102.0	17.0
	- Incineration (ton) - heat recovery	186.9	100.9	16.0
	Incineration (ton) - w/o heat recovery	0.1		
	Landfill (ton)	0	0	0
	- Recycling (ton)	23.9	1.1	1.0
	- Others (ton)	0	0	0
	Outsourced for processing	0	0	0
Total	Total output (ton) -	562.7	327.7	780.0
	- Incineration (ton) - heat recovery	306.2	227.3	381.0
	Incineration (ton) - w/o heat recovery	97.8		
	- Landfill (ton)	0	0	0
	- Recycling (ton)	158.7	82.6	399.0
	- Outsourced or processed by other means (ton)	0	17.9	0



The total waste output of Hsinchu Site tends to reduce as a result of transformation. In recovery and recycling, the site refines electronic grade chemicals for reuse in the process. This suggests that our material management and waste management policies are effective. Linkou Site mainly produces and coats semi-finished materials by using organic chemicals that will generate organic waste liquids. The waste liquids in Linkou Site have increased in recent years as the production output rose gradually. In addition, except for household waste, the waste produced in the site is mainly plastic scraps. Some are sent to treatment plant for final disposal (by incineration or physical methods), and some are recovered for recycling,. Additionally, we have also been promoting our waste separation policy to employees and equipped kitchens and employee rest areas with trash cans for different types of garbage: trash, paper waste, plastics, aluminum foil packages, glass, and metal cans. Moreover, we labeled each trash can in both Chinese and English for local and foreign employees to identify them in order to enhance the recovery and recycling rate of household garbage.

To establish a complete waste management mechanism, Yangzhou Site has kept a full record of waste outputs since 2015 for internal reference. Recyclable packaging materials, such as paper and plastics, are the main types of waste. The recovery rate in 2021 was up to 51%. In addition, Yangzhou Site has also been encouraging employees to submit proposals for cutting expenses in production processes, such as machinery efficiency enhancement, waste reuse, used paper recycling and reuse, expanding usage frequency for consumables, and so forth.

- ▶ Note 1: Since 2021, some Class-D general wastes of the Taiwan sites have been adjusted to recoverable resources under Class-R depending on their characteristics, resulting in an increased recycling volume and rate.
- ▶ Note 2: Yangzhou Site has included the general household garbage into the waste calculation since 2021 and led to a great increase in the total waste.



Waste Management at Yangzhou Site

Use of the Life Cycle Monitoring of Hazardous Waste

1. The footprint of the waste can be tracked effectively and more accurately with substantial reduction of the errors than the manual recording operations.
2. The recording is more convenient than the traditional manual mode, by using a mobile phone to record the data and generate a QR code.



▲ Life cycle monitoring system of hazardous waste in Jiangsu Province



▲ Daily reporting of hazardous waste generation data on computer by selecting a source and providing the weight



▲ Daily reporting of hazardous waste generation data with WeChat Mini Program by selecting a source and providing the weight



▲ Printing of hazardous waste QR code and attachment to the package to provide a unique anti-fake "ID" for each solid waste

Cyber monitoring of hazardous waste and chemical storages

1. The monitoring system at Yangzhou Site is connected to the smart safe production platform of the local government to share information with government.
2. The monitoring system can execute data analysis and be helpful for instant reporting of special circumstances and implementation of corresponding procedures.



▲ Indoor warehouse video monitoring



▲ Outdoor warehouse video monitoring





CHAPTER 05

SUSTAINABLE SUPPLY CHAIN

Value-added Supply Chain for Sustainability

5-0 Performance Results

<p>60 suppliers signed the Supplier Code of Conduct Commitment.</p>	<p>The suppliers for local procurement accounted for 94%.</p>	
<p>22 suppliers finished the supplier evaluations.</p>	<p>audits with an average score of 87.8</p>	<p>The score of the Customer Satisfaction Survey exceeded 92.</p>
<p>49 suppliers signed the Declaration of Non-use of Conflict Minerals for a total of 2,879 materials.</p>		<p>The supplier ESG questionnaire survey was conducted; the critical supplier response rate was 100%.</p>
<p>77 suppliers finished the supplier risk assessments, and the result showed that 99% of the suppliers were classified in Level A.</p>		

5-1 Supply Chain Management

In Taiwan, E Ink's major sales locations are in Hsinchu Science Park and in Hwa Ya Technology Park (HYTP) in Linkou. In China, our major production base is located in Yangzhou City, Jiangsu Province. Our core product is ePaper display (EPD). In addition to the Front Plane Laminate (FPL) that we produce on our own, we still need various materials, parts and accessories such as Thin Film Transistor (TFT) Substrate, Driver IC, Flexible Printed Circuit (with or without passive components), AG Film, LGP, Light Emitting Diode (LED) Strip, Touch Modules and Optically Clear Adhesives to successfully produce the ePaper modules. Hence, suppliers have always been our major partners.

5-1-1 Sustainable Supply Chain Goals

In response to the UN Sustainable Development Goals and the impacts of climate change, E Ink has declared that it will reach the goal of a 100% use of renewable energy (RE100) by 2030 and the goal of net zero carbon emissions by 2040, and draw up the blueprint for sustainable development actions. In terms of the supply chain, we have announced the policy and goals of "creating a value-added supply chain for sustainability and co-prosperity" to move forward to sustainable development with the partners in the supply chain.

Currently, E Ink has established the sustainability strategies and goals for the supply chain. Since 2021, the Company has gradually strengthened the foundation of sustainable supply chain management, sequentially optimized the management process of critical and non-critical suppliers, and incorporated the ESG work orders into the standard procurement procedures to carry out supply chain surveys/analyses and conduct supplier ESG reviews. The Company has also implemented the supplier ESG risk assessment system, and held the general meeting of suppliers on an annual basis for official communication.

It is expected that by the end of 2024, we will continue to make relevant improvement and optimization, including enhancing the transparency of performance disclosure, making responses for the interested parties, launching improvement plans for high-risk suppliers, incorporating ESG into the supplier selection process, increasing the coverage of supplier ESG reviews and checks, implementing ISO 20400 Sustainable Procurement Guidance, and supporting the suppliers to deploy sustainable development programs.

In this changing environment, an enterprise must have the ability to resist or even avoid the impact of supply chain disruption, and the ability of rapid recovery even if in the face of the risk of supply chain disruption. By optimizing the production and strengthening the risk management capabilities through supply chain plans, a supply chain with higher operational efficiency, high productivity and low risk can be achieved.

In addition to the Company itself, we also look forward to working hand in hand with the partners in the supply chain to establish the same standards regarding ESG, create steady and sustainable partnership, and jointly promote and fulfill the goal of sustainable supply chain governance. In 2021, we assisted the partners with the ESG questionnaire survey, thereby increasing their awareness of sustainability and foundation of governance. Moreover, the "E Ink Supplier Code of Conduct" has been formulated and made visible to the public in the hope that the partners can clearly understand. The Code of Conduct is also expected to ensure that E Ink's suppliers treat all their employees with respect, provide a safe workplace, take environmental responsibility during their business operations, and comply with the code of ethics.





5-1-2 Standards for Supply Chain

The Company has, in accordance with the "Responsible Business Alliance (RBA) Code of Conduct," "United Nations Guiding Principles on Business and Human Rights (UNGPs)," "ILO (International Labour Organization) Declaration on Fundamental Principles and Rights at Work" and "Universal Declaration of Human Rights (UDHR)," developed the "E Ink Supplier Code of Conduct". Meanwhile, we have asked the critical suppliers to sign the Supplier Code of Conduct Commitment, hoping that the partners in the supply chain can jointly ensure that they respect their employees, provide a safe workplace, take environmental responsibility during their business operations, and comply with the code of ethics. So far, 60 suppliers have signed the Supplier Code of Conduct Commitment.

▶ Supplier Code of Conduct

 <p>Labor</p> <ul style="list-style-type: none"> • Freely chosen employment • Young workers • Working hours • Wages and benefits • Humane treatment • Non-discrimination • Freedom of association 	 <p>Health and safety</p> <ul style="list-style-type: none"> • Occupational safety • Emergency preparedness • Occupational injury and illness • Industrial hygiene • Physically demanding work • Machine safeguarding • Sanitation, food, and housing • Health and safety communication • Natural disaster risk mitigation 	 <p>Environmental</p> <ul style="list-style-type: none"> • Environmental permits and reporting • Pollution prevention and resource conservation • Hazardous substances • Solid waste • Exhaust emissions • Material control • Water Resources Management • Energy consumption and GHG emissions 	 <p>Management</p> <ul style="list-style-type: none"> • Company's commitment • Management duties and responsibilities • Fulfillment of customer demands • Risk assessment and risk management • Improvement of objectives • Training • Communication • Employee opinions, participation, and grievances • Review and evaluation • Correction measures • Documents and records • Suppliers' responsibilities 	 <p>Code of ethics and code of conducts</p> <ul style="list-style-type: none"> • Business Ethics • No improper advantage • Disclosure of information • Intellectual property • Fair trade, advertising, and competition • Protection of identity and non-retaliation • Responsible mineral procurement • Privacy • Strict compliance with agreements • Conformity with import/export laws and regulations
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5-1-3 Implement Supply Chain Management

Supplier Classification and Grading

To provide principles for the operations such as the development, evaluation and approval of material suppliers, and properly keep track of the quality and timeliness as confirmed by the suppliers to leverage the effectiveness of supplier cultivation, E Ink has, based on the material properties and in consideration of the difficulty levels and risks of acquisition and supply, classified the direct materials on the Bill Of Material (BOM) into three categories: general material, non-critical material and critical material. This is helpful for us to enter into cooperation agreements with the suppliers, evaluate the suppliers, and manage the suppliers. Furthermore, the definition of critical supplier grading is annually reviewed. FPL materials and Sole Source materials are planned to be included into the scope of critical materials in 2022.

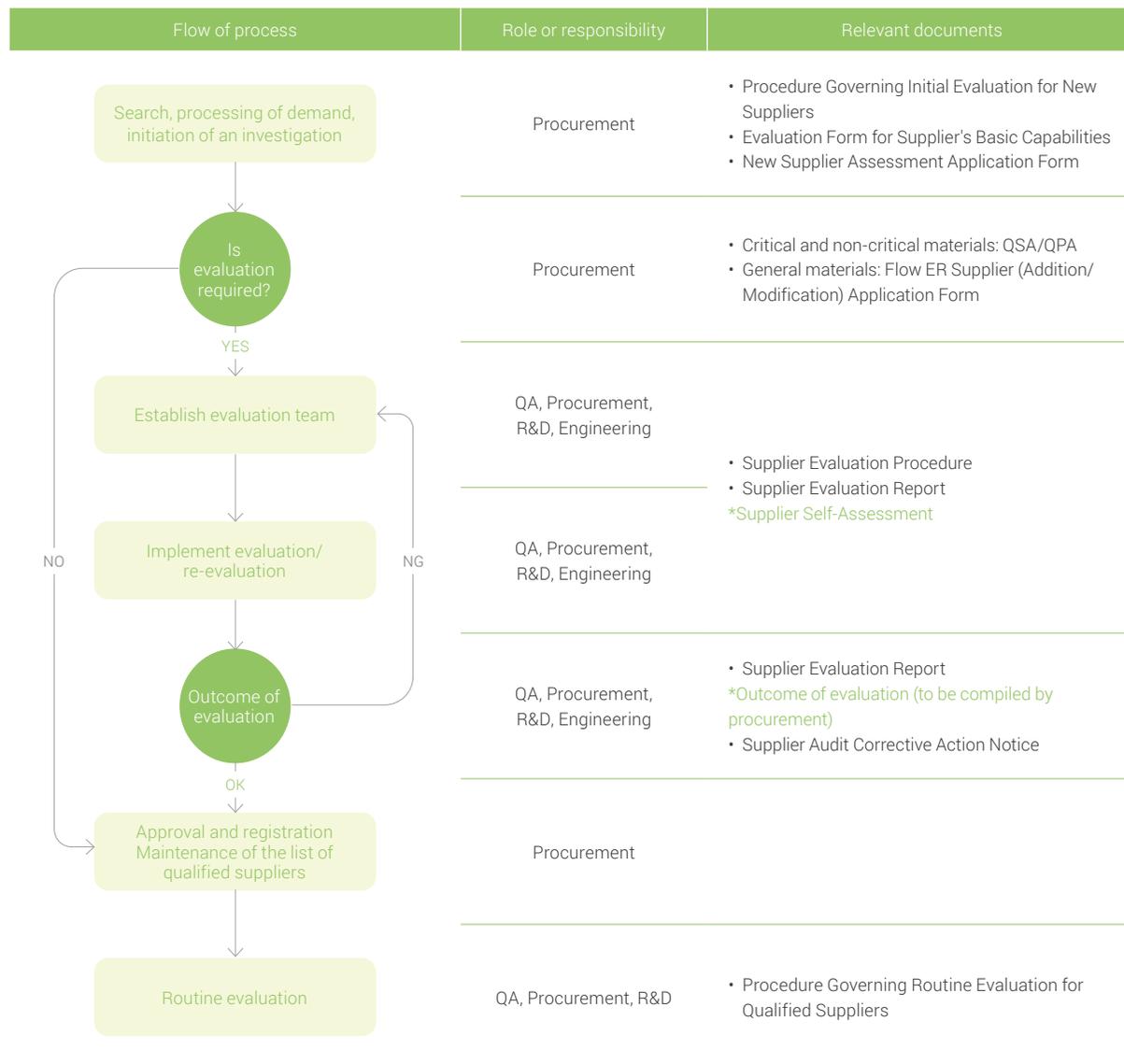
Supplier grading	Definition of grading	Evaluation and management
General	Suppliers that provide general materials such as packing materials	The procurement unit will collect the required data and complete the approval process through the supplier (addition/modification) application system.
Non-critical	Suppliers that provide non-critical materials such as plastic materials	Method 1: Go through the evaluation processes of Quality System Audit (QSA) and Quality Process Audit (QPA). Method 2: Go through only the QSA evaluation process upon the approval of the evaluation team.
Critical	Suppliers that provide critical materials such as TFT substrate, display driver IC, flexible printed circuit (with or without passive components), AG film, LGP, LED strip, touch modules and optically clear adhesives, FPL-related film materials and exclusive supply, etc.	Determine if a supplier is qualified based on the evaluation team's opinions. When a supplier is unqualified, the QA unit will inform the supplier of the result. The supplier may receive another evaluation after making improvements. If the supplier gets a total evaluation score lower than 60% and fail to pass the second evaluation, it will be disqualified from filing new applications for six months. The Application Department will present new requirements for the supplier evaluation.

5-1-4 Evaluation and Audit of New and Existing Suppliers

The Company has been duly managing its new and existing suppliers with standardized evaluation and selection processes, creating a reliable basis for operations such as supplier development, supplier evaluation and supplier approval. In terms of existing suppliers, we will carry out annual supplier audit (which covers seven main audit items of social responsibilities) and quarterly evaluation to enhance the suppliers' manufacturing technologies, quality and management capabilities. This also helps reduce the costs, ensure the steady supply of the materials needed by E Ink, and develop a win-win partnership. Moreover, we encourage our critical suppliers to get the RBA certification to make sure that our partners in the supply chain provide safe work environment, treat all employees with dignity and respect, and take environmental responsibilities during the production process. As of 2021, 2 suppliers in the supply chain have received the RBA certification.

In 2021, 22 new and existing suppliers were audited. As the impact of COVID-19 continued, we have opted to implement online and written application reviews instead of onsite evaluations for some suppliers to complete our evaluation of new suppliers. In 2021, the average score of supplier audits was 87.8, and 100% of new suppliers have passed the standard screening. However, two new suppliers were Conditionally Approved; the Company will provide guidance for them and list them as the first suppliers to be evaluated next time to ensure smooth material supplies.

▼ Supplier Evaluation Flowchart



▼ Supplier Evaluation and Audit Items

Aspect of evaluation	Criterion
Environmental, occupational safety, and health management system	<ul style="list-style-type: none"> • ESH performance certification
Assessment for impact on society	<ul style="list-style-type: none"> • Negative impact on local environment • Emission permission • Waste handling and disposal • Environment related violations and penalties
Health and safety	<ul style="list-style-type: none"> • Occupational safety and health unit and its staff • Safe workplace • Occupational disaster or dispute • Management of hazardous chemicals • Relevant qualifications for equipment operators • Health checkup/examination • RoHS instrument operator health examination
Labor practices assessment	<ul style="list-style-type: none"> • Work training • No underaged employees • Compliance with pertinent regulations on overtime work • Non-discrimination • Non-compliance with freedom of association and collective bargaining
Social evaluation	<ul style="list-style-type: none"> • Clean transaction commitment • Whistle-blowing mechanisms
Hazardous substance management	<ul style="list-style-type: none"> • System management • Documents/Records • Personnel training • Performance rating • Upstream supplier management • Incoming inspection • Process control • Product inspection
ESG	<ul style="list-style-type: none"> • Sustainable goals of supply chain • Behaviors of suppliers • Assessment of and due diligence on supply chain risks

// Clean Transaction Commitment //

Starting from 2018 onward, E Ink has been exchanging information with other competitors to review our operating status. We have thus revised and updated our Clean Transaction Commitment terms and requested all our suppliers (including suppliers of our subsidiaries) to sign the new Clean Transaction Commitment.

The key points of our Clean Transaction Commitment are as follows:

- Suppliers shall abide by pertinent laws, regulations and administrative regulations set forth for the industry by the government
- Suppliers shall endeavor to engage in integral cooperation and fair competition.
- Suppliers shall not request for or offer illegal or undue benefits from/to E Ink employees.
- Suppliers shall comply with all applicable anti-corruption laws and regulations currently in place and in the future. Suppliers shall also comply with relevant regulations applicable to counterparts in transactions established by E Ink and agree not to request, promise, accept or offer bribes and other undue or improper benefits from/to personnel and related parties or designated parties of E Ink.
- Suppliers shall actively support any relevant investigations carried out by E Ink by revealing the facts and providing relevant information.
- Suppliers are obliged to report or inform E Ink should they discover any E Ink personnel from taking bribery, accepting inappropriate benefits, or engaging in any other unethical conduct.

1. Our electronic supplier system was officially launched for operation in 2019. By 2020, a total of 144 suppliers had signed the new Clean Transaction Commitment.
2. By 2021, a total of 177 suppliers had signed the Clean Transaction Commitment.

5-1-5 Supply Chain Risk Assessment

Supplier ESG Questionnaire Survey

In order to understand the development of suppliers and the potential risks thereof, we request our suppliers to complete the ESG questionnaire (which covers three main aspects: environment, society and policy) every year, and incorporate the annual audit items to help the suppliers rapidly review their current ESG management status and increase their awareness of ESG. On the other hand, we can also keep track of the actual ESG promotion status in the supply chain based on the returned supplier ESG questionnaire to have a reference for devising the ESG implementation plans and conducting the sustainability Risk Assessment of the supply chain.

In 2021, the questionnaire response rate of critical suppliers was

100%



Supply Chain Risk Assessment

Before accepting a new supplier, the Company will first gather its information and perform a risk assessment to determine the quality and timeliness as confirmed by the supplier in order to leverage the effectiveness of supplier cultivation. We will then assess if the supplier in question can be recognized and accepted as a qualified supplier for us, and the outcome of the assessment will serve as a basis of consideration for other units in future procurements. As for the existing supplier assessment, we regularly conduct the "supplier risk assessment" for the material suppliers that have specific business dealings with us. By 2021, 77 suppliers had completed the "supplier risk assessments," and the result showed that 99% of the suppliers were classified in Level A.

▼ Breakdown of "Supplier Risk Assessment"



[The total score comes to 100 points and suppliers have been rated based on their cumulative total from the 7 aforementioned criteria]

<p>A rating a score between 90~100</p>	<p>B rating a score between 80-89</p>	<p>C rating a score between 60-79</p>	<p>D rating a score between 60</p>
<p>Suppliers receiving this rating are recognized as qualified suppliers and the Company may increase the volume of purchase depending on the demand. In addition, Suppliers with this rating may apply to be exempted from inspection. B rating: a score between 80~89. Suppliers receiving this rating are recognized as qualified suppliers.</p>	<p>Suppliers receiving this rating are recognized as qualified suppliers.</p>	<p>Suppliers receiving this rating require assistance and further observation and the Company may reduce the volume of order with such suppliers. In addition, responsible personnel from Procurement and QA shall carry out the following:</p> <ol style="list-style-type: none"> 1. They shall convene a review meeting within two weeks and arrange for the target supplier to receive assistance as outlined in the supplier assistance program. 2. The target supplier shall be chosen as the prioritized participant in the QBR meeting. Should a supplier receive C rating two consecutive times, the said supplier shall be deemed as a non-conforming supplier. 	<p>Suppliers receiving this rating are non-conforming suppliers and the Supplier Quality Engineer (SQE) shall convene a meeting for disqualification.</p>

Financial Risk



In recent years, some of our suppliers have either gone out of business or gone through restructuring due to financial issues stemming from poor management. In order to gain a more accurate understanding and control of the supply chain and stabilize material supply, we have gathered and updated the business status and financial information (including gross profit margin, net profit margin, liquidity ratio, quick ratio and so forth) of the supply chain monthly in 2020 for critical suppliers for routine prevention and risk management. In addition, we have started to collect the news and information related to the industrial chain of each material weekly in 2021 to better understand the financial status of suppliers and the market status. We also constantly check the following:

1. The operational status, liabilities and operating costs of suppliers through analysis of their financial statements
2. The status and course of action for leading suppliers and market status for a specific material
3. The assessment of various risks and opportunities

In 2021, **77 material suppliers**

engaging in business dealings with the Company were audited.

There were no new suppliers with financial risks.

Environmental Risks



In 2021, we continued to work in strategic collaboration with local suppliers to develop inks free of restricted substances for effective environmental impact mitigation and higher proportion of local purchasing. Also, we invited 45 key suppliers around the globe to the first general meeting of suppliers in 2021, advocating the continuous local procurement and use of low-carbon green materials and showing the expectation of achieving 100% green procurement by 2030.

In 2021, our **77 critical suppliers** complied with the local governments or relevant management regulations in terms of the pollutant emissions in their sites, and commissioned qualified waste clearance and disposal companies to deal with the waste. Hence, throughout 2021, there was no negative impact caused by any supply chain upon the environment.

Social Risks

None of the

77 critical suppliers

investigated in 2021 hired child laborers.



Assessment and control of second sources



The demand for seeking secondary sources of materials can be attributed to three reasons, including avoiding the risks of single source, and reducing procurement costs. Presently, through the means of product management, supply chain quality engineering, joint meetings for R&D and procurement personnel, the proposition for the need of secondary sources shall be proposed by the procurement personnel, and after the participants at the meeting have agreed, the planning of relevant testing will be entrusted to the R&D personnel while the supply chain quality engineering staff will check if the related procedures are compliant with material verification requirements. As the secondary source development has gone smoothly in 2020, the raw material costs have been brought down, which shows a considerable benefit. In 2021, the focus of our secondary source implementation was to avoid material supply disruption. We have thus expanded the production sites of TFT substrates of different generations (G3.5, G4 and G6) in Taiwan to reinforce the existing supply chain, accepted the TFT suppliers in Japan and China to deploy supply bases around the world, and established a multi-source wafer fab supply system for Driver IC. The Company has achieved risk diversification for critical component supply chain and lessened the impact of pandemic. Meanwhile, the transportation pathways of supply chain have been shortened, which further reduces the carbon footprint. The value of the secondary source platform comes from the possibility of making up for the inadequacy of the existing supply source at the product design phase and opening the door to supply chain optimization even after mass production. Not only that, the platform also serves as a source of encouragement for existing material suppliers to continue improving their quality of material and cost advantages. The control of the quality system is the key to success for the secondary source platform. With the quality system, we make our verification procedures more accurately defined and efficient. After the customers acknowledge the alternative material, we will be able to ensure the quality of mass production.

5-1-6 Enhancement of Supply Chain Sustainability

Effective supply chain management is one of the important missions of E Ink. Paying close attention to the sustainable management in environmental, social and economic aspects, E Ink has been making efforts to enhance the performance of supply chain management and take continuous actions to improve. We also foster the sustainable development of suppliers by constantly increasing the scale of local procurement, facilitating the collaboration and communication in the supply chain, and strengthening the sustainable talent development.

Local Procurement

Suppliers have been our major partners for sustainable operation. With a view to boosting the production efficiency and reducing the carbon emissions, we will give priority to local procurement with the costs, quality of supply, delivery time and risks taken into account to escalate the scale of local procurement year by year. In 2021, E Ink's suppliers for local procurement around the world reached 94%. Furthermore, in order to increase the percentage of local procurement amount, E Ink has actively verified the domestic suppliers since 2019. The Company has managed to raise the percentage of local material procurement amount in Taiwan to 76% in 2021, which was 43% higher than the percentage in 2020. As for the Yangzhou Site, the main materials for module production process are all from the US or Taiwan, while the machines are imported. Thus, E Ink has planned to develop materials and machines with local equipment suppliers to keep on increasing the percentage of local procurement amount.

Item	Materials			Parts and Accessories			Machines and Equipment			Total Purchase		
	Taiwan	China	USA	Taiwan	China	USA	Taiwan	China	USA	Taiwan	China	USA
Local procurement amount (NT\$1,000)	1,222,784	2,507,014	1,591,360	185,639	21,832	283,642	785,140	248,071	2,254,783	1,223,755	2,776,917	4,129,785
General procurement amount (NT\$1,000)	1,605,559	28,460,415	1,661,867	191,263	21,832	301,962	852,077	4,834,337	2,344,685	1,606,602	33,316,584	4,308,514
Local Procurement amount procurement amount (%)	76%	9%	96%	97%	100%	94%	92%	5%	96%	76%	8%	96%
Number of Suppliers	Taiwan	China	USA	Taiwan	China	USA	Taiwan	China	USA	Taiwan	China	USA
Number of local procurement suppliers	138	45	39	38	38	680	202	194	197	378	277	916
Total number of local procurement suppliers	153	84	41	41	38	695	209	208	201	403	330	937
Percentage (%) of procurements procurement amount (%)	90%	54%	95%	93%	100%	98%	97%	93%	98%	94%	84%	98%

Note 1: The "local procurement suppliers" are Taiwanese suppliers for the sites in Taiwan, Chinese suppliers for the Yangzhou Site, and USA suppliers for the USA Sites.

Creating a Business Model for Sustainable Development with the Suppliers

By developing materials, parts and accessories with the customers and suppliers, E Ink has built a business model for long-term cooperation and sustainable development.

Establishing diversified production bases and engaging in strategic collaboration with new suppliers to set up emergency measures of double-source procurement

In response to the impact of pandemic and the changing forms of global supply chain in 2021, E Ink has worked with the suppliers of critical parts and components to establish diversified production bases, and engaged in strategic collaboration with new suppliers to set up measures like double-source procurement for better crisis response capability. The actions include

- Expanding the production sites of TFT substrates of different generations (G3.5, G4 and G6) in Taiwan to reinforce the existing supply chain
- Accepting the TFT substrate suppliers in Japan and China to deploy supply bases around the world, and establishing a multi-source wafer fab supply system for EPD driver IC

We have successfully achieved the risk diversification for critical component supply chain and lessened the impact of pandemic. The transportation pathways of supply chain have also been shortened, which reduces the carbon footprint. Looking at the big picture of the world, E Ink has worked hand in hand with the suppliers to globally deploy production bases and jointly promote the sustainable development of value chain in the face of the newly restructured supply chain.

Co-developing low blue light LED for e-readers

As the users are paying more and more attention to the eye health, the market demand for ePaper products has significantly risen. To follow the trend of eye protection, E Ink has launched the low blue light LED to replace the general LED, so that the potential impacts of electronic devices on eyes can be reduced. Through the cooperation with the suppliers, the Company put the low blue light LED into mass production and implement the LED into e-readers in 2021.

The use of non-blue light LED has reached 20% in 2021, and is expected to be increased to 44% in 2022. In the future, we will keep on utilizing such LED for more digital display applications to produce the most comfortable and eye-protecting ePaper products for our users.



Strengthening the Supply Chain Communication

Holding the general meeting of suppliers

Placing great importance on the long-term partnerships with suppliers, E Ink organized the first general meeting of suppliers in 2021; 45 enterprises and nearly 100 suppliers participated in the event. In the meeting, we not only thanked our partners in the supply chain for their support during the past years, but also advocated the direction of our supply chain policy in front of the higher-level executives of suppliers and supervisors of enterprises who participated in the meeting. We thereby developed the three-year sustainability review and risk management system for suppliers, and set the goal of achieving sustainable data transparency by 2025 to create a supply chain with resilience and sustainability and further reach the ESG goals.

Vision of Sustainable Supply Chain

With "ePaper to the Future: A Meeting for Sustainability and Co-prosperity" as the topic of the meeting, the Company looked forward to working with the suppliers to jointly fulfill the responsibility of corporate sustainability, create a co-prosperous and shared sustainable ePaper ecosystem, and speed up the achievement of carbon reduction goals, including 100% use of renewable energy (RE100) by 2030 and net zero carbon emissions by 2040.

Appreciating the unceasing support of the partners in supply chain, we particularly presented 9 suppliers with the award of "Top Partner for Sustainability and Co-prosperity" in the meeting to express our gratitude to the partners for providing quality products and services.



Experience Sharing Regarding the Sustainable Supply Chain

E Ink has done interviews about the supply chain sustainability management services and assistance cases for seed procurement staff in 2021. Through several times of interviews and guidance, the Procurement Department has successively collected information and conducted investigations to move forward to the ESG goals. With "ESG Sustainable Carbon Reduction in Progress" as the topic, the CFO of E Ink introduced the global ESG trends to the suppliers in the general meeting of suppliers. During the meeting, the progress of E Ink's commitment to sustainability was presented, and the sustainable development goals of E Ink were also announced. In addition, the Company shared its vision of sustainability from the perspective of products with sustainable, low-energy consuming products and technologies as the focus, and shared the plans and suggestions concerning sustainable procurement with resilient supply chain and sustainability as the main points. Lastly, we specially invited the experts in the industry to share their rich experience in ESG aspects, bringing considerable benefits to the participants. In the future, the Company will internally arrange ESG-related training and sharing sessions to develop more and more ESG talents.

Organizing technical and business forums for the supply chain

Apart from the supplier feedback channels such as business visits, exchanges and supplier evaluation processes, E Ink has also organized quarterly technical and business forums for the key supply chain in 2021, not only providing the suppliers with a smoother and more objective feedback channel but also fostering the partnerships with the suppliers.

Developing Sustainability Literacy

In order to increase the procurement personnel's awareness of supply chain sustainability, two training sessions took place in 2021. We invited ESG experts to talk about the "sustainable supply chain goals" and share the practical promotion cases, hoping that our procurement personnel could have a full understanding of the future plans and different implementation details so that an accurate development of sustainable supply chain plans could be further ensured.

Date	Course	Instructor	Hours	Participants
2021/10	Brief Introduction to Supply Chain Sustainability Management Services and Cases of Relevant Assistance	ESG consultant	1hr	ESG seed staff
2021/12	General meeting of suppliers - Experience Sharing Regarding ESG Practices	Expert in the industry	3hr	Procurement personnel



5-2 Quality persistence

Through Continual Innovation and Improvement to Provide High Quality Products and Services to Meet Customer Needs.

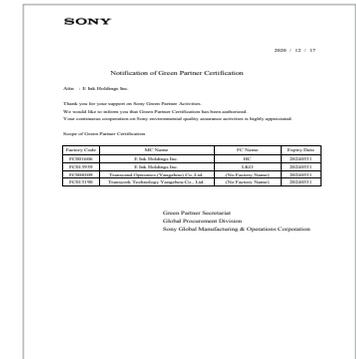
5-2-1 Quality Policy

The Company's Hsinchu Site has been certified by the quality-related system certifications including ISO 9001, SONY GP, and Amazon. The site has also been certified by the customer audits. A quality management system has been set up based on the relevant principles, and with the PDCA cycle of the management system, the customers have visited the production site for onsite process audits to ensure that the product quality and commitment satisfy customer requirements. E Ink has received several customer acknowledgments and recognitions for our product quality. Starting from 2018, our Hsinchu Site, Linkou Site, and Yangzhou Site have all received the Grade-A Supplier distinction from our key customer, SONY Green Partner. Not only that, the Company has passed subsequent quality audits to preserve this distinction in 2021; the certification is valid through 2024.

After establishing quality policies and objectives concerning the framework of these QMSes, we implemented them throughout the organization for all employees to understand and follow the relevant regulations in order to provide customers with quality products and services.



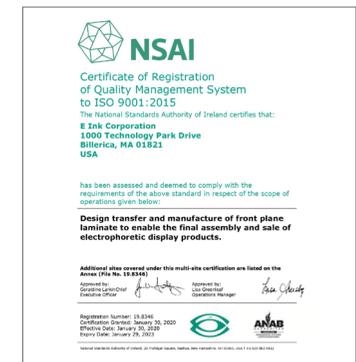
ISO 9001 Certificate from Hsinchu site



SONY GP Certificate



ISO 9001 Certificate from Yangzhou site



ISO 9001 Certificate from the US

5-2-2 Material Management

Management of Restricted Substances

To ensure the parts, raw materials, packing materials, and components we use on products do not contain environment-related substances to be controlled in products; to comply with current laws and codes; to meet customer requirements; to protect Earth and the environment, and to reduce impacts on ecosystems. As such, we ask all suppliers to supply only materials that comply with our environmental and quality policies at the beginning of the development of new parts and components for products while incorporating customers' requirements related to restricted substances into E Ink's Restricted Substances after reviewing them. Meanwhile, specific principles shall be complied with, including EU's RoHS REACH, free from halogen non-use of conflict minerals. We also conform to the specific control standards and supplier management regulations requested by customers, and require our suppliers to submit their lists of restricted substances and an RBA/GeSI Conflict Minerals Report. Currently, our suppliers are required to make a declaration of non-use of conflict minerals, and the response rate from our material and component suppliers is 100%. Should the materials or components from our supplier contain any environmental restricted substances or conflict minerals, the supplier in question shall assume full responsibility for relevant indemnification that may incur. Currently, materials supplied by suppliers conform with the restricted substance requirements. In addition, our products are shipped with packaging materials with the RoHS Label for identification purposes. We had zero cases of product-related nonconformity or violations reported in 2021.

Apart from relevant international standards, after having received the accreditation of Sony Green Product (GP) for several years running, Sony GP has chosen E Ink as an outstanding partner. With this distinction, the Company receives preferential treatment of being eligible for self-audit operation by completing a printed checklist instead of having Sony dispatching a representative to carry out an onsite audit at our premises.

To implement the restricted substance management into the system, we have established the "Environment-Restricted Substances Management Committee". E Ink also bases on The "Environmental Restricted Substances Management Procedure" to control all the parts and components so that they are compliant with pertinent requirements, and have constantly ensured that the management procedure keep pace with the time through meetings and reviews. In the event of any change in customer requirements or amendment in international restricted substances regulations, the Company would conduct an evaluation to adjust relevant standards and SOPs before informing all relevant units regarding the adjustments. For example, the European Chemicals Agency (ECHA) has announced four new additions to the Candidate List as Substances of Very High Concern (SVHC) on June 25, 2021. At present, 209 chemical substances have been identified and placed on the Candidate List. By means of public announcement, E Ink has notified all suppliers and updated existing documentation with the newly added restricted substances. Not only that, E Ink also requires suppliers to conform the E Ink's "Commitment of Restricted Substance Management" to guarantee their compliance with pertinent laws and the rules enforced by E Ink. Further, we also review and update the material reports on a regular basis to make sure that the materials offered by the suppliers comply with E Ink's GP regulations.

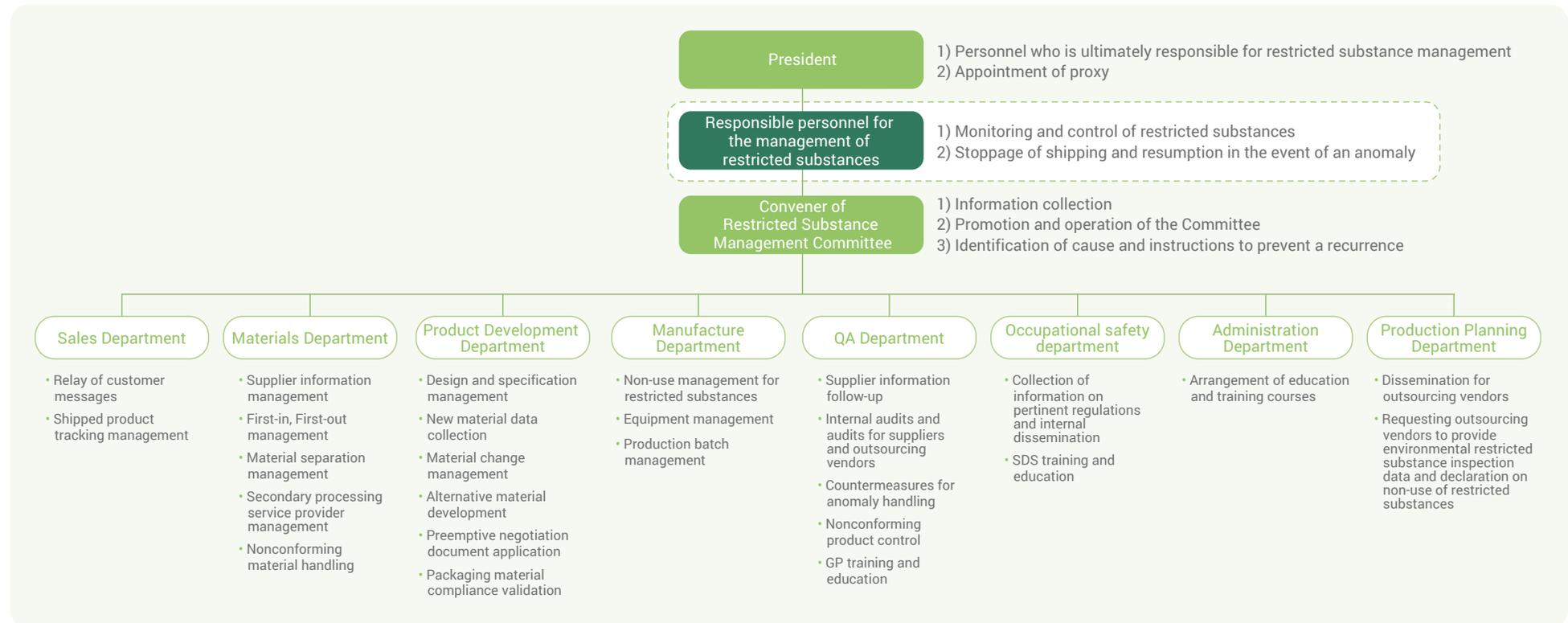


Commitment of Restricted Substance Management

100% compliance with the latest laws and regulations, as well as customers' specifications related to the restricted substance

Planning the chemical substitution in advance, to establish the annual replacement plan.

▼ Duties and responsibilities of each department



As of 2021, there have been 140 restricted substances controlled by E Ink; the controlled restricted substances can meet all the requirements of key customers.

▶ Number of suppliers cooperating in updating the material reports over the past years, and number of material reports



Conflict Minerals Policy and Declaration

Conflict Minerals (CM) refer specifically to tantalum, tungsten, tin and gold (collectively "3TG") that are from the conflict zones controlled by non-governmental military organizations in Democratic Republic of Congo and extracted through a way that violates human rights. The sources of such conflict minerals also include other neighboring areas such as Rwanda, Uganda, Burundi, Tanzania and Kenya.

The relevant metallic minerals have become the main source of income to the non-governmental military organizations of the zones and been used for arms trading and continuation of armed conflicts, which leads to human rights violations and thus gives rise to international disputes. As a contributing global citizen and active proponent of Responsible Business Alliance (RBA) Code of Conduct, E Ink hereby declares and pledges to reject minerals extracted from all existing conflict zones. Not only that, we also ask that all E Ink suppliers must

1. actively fulfill their obligations to the society and environment;
2. ensure that no products contain conflict minerals extracted from the aforementioned conflict zones;
3. trace all sources of tantalum, tungsten, tin and gold that may be present in all E Ink products;
4. confirm and sign the Declaration of Non-use of Conflict Minerals.

Reasonable country of origin inquiry (RCOI)

E Ink performs Reasonable Country of Origin Inquiry (RCOI) to identify and validate the sources of 3TG minerals in the parts, raw materials, packaging and components of our products to determine if they come from conflict zones. The steps of inquiry are as follows:

1. The Company conducts the supplier survey with the Conflict Mineral Reporting Template (CMRT) to identify sources of 3TG mineral smelters/refineries.
2. Our suppliers are required to sign the Representation Letters of compliance with E Ink's Conflict Minerals Policy and to fully reveal the source of the smelters/refineries they sourced from.

Implementation of Conflict Mineral Investigation

With regards to all customers' requests for conflict mineral due diligence, the Company requires relevant suppliers to carry out due diligence on their part and sign respective declarations. As of December 2021, all of our suppliers (100%) have responded to our request for an inquiry. Not only that, we also implemented risk assessment and collected survey forms from suppliers. By double checking against the list of smelters and refiners published by Responsible Minerals Initiative (RMI), we were able to verify the response from our suppliers and determine if they had been working with qualified and approved smelters and refiners.

All of E Ink's suppliers have signed their Declaration of Non-use of Conflict Minerals and the Company has done its due diligence to ensure that all of its products are free of conflict minerals. In addition, to express and adhere to the requirements of conflict mineral management, we have presented our Conflict Minerals Policy and requirements to the suppliers in writing. The suppliers must comply with E Ink's Conflict Minerals Policy, establish their own conflict minerals policy accordingly, and pass the requirements to the next tier of suppliers.

Effectiveness of Conflict Mineral Management in 2021

In 2021, 49 suppliers were investigated and 2,879 materials were validated to ensure that the gold, tantalum, tungsten and tin were not from the conflict zones. The Company further informed the relevant units of the regularly and systematically compiled survey results and the monitoring reports and followed the review process of regular internal meetings, thereby developing improvement measures to make sure the products conform to the laws and regulations.

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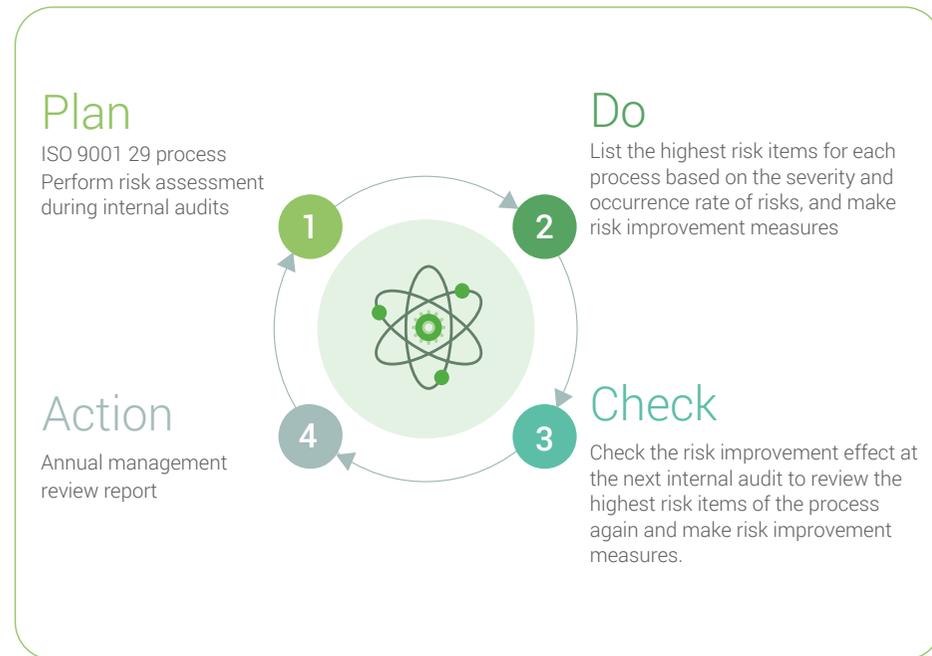
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5-2-3 Quality Risk Management

For the operation process of the quality management system, risk management must be taken into account. Therefore, a specific mechanism process is established and implemented in accordance with the relevant risk assessment and identification process, in the hope to identify high-risk items and discover solutions so as to reduce the impact on business operations.



Continuous Improvement of Production Performance

Apart from making reference to customer feedback and promoting various product quality improvement programs, we discuss quality-related problems at the customer's premises weekly, and hold meetings with key customers biannually to discuss issues relating to business practice, design, and quality in order to maintain a good cooperation relationship with customers through close communication. We also encourage employees to make proposals in order to locate all latent factors affecting production efficiency, product quality, and workforce and resource utilization in routine operations and manufacturing processes, and draw up effective plans to pursue production optimization.

Process Improvement Planning

The Business Process Improvement Division, based on the logic of "One Team One E Ink," aims to integrate global operational ERP (Enterprise Resource Planning) processes and implement smart management to accelerate corporate responsiveness and improve overall operational efficiency.

Effectiveness and Results of Implementation

1. Streamline workflow, reduce unnecessary process links, increase risk control capability, and improve operational quality and efficiency.
2. Smooth the process, simplify and digitalize all visible control operations, and reduce unnecessary operating costs and time costs.
3. Smooth the workflow and information flow with cloud-based operation. Reduce the problems caused by non-transparent information.
4. Strengthen the control of key points of the process and increase predictability and control, which helps achieve the goals more easily.
5. 2021 Team Results:
 - E Ink Goal: The culture of "Objectives and Key Results (OKR)" of E Ink has been established, and a Goal Map has been set up so that the employees can formulate individual or team objectives in accordance with the framework. Meanwhile, the Company has encouraged the employees to set challenging objectives.
 - Performance Management and Development (PMD) 2.0: The innovative "Shining Star" recommendation mechanism has been implemented to stimulate the employees' innovative performance and active participation in interdepartmental projects so that the supervisors can conduct performance evaluation in different aspects.
 - Protection of Critical Production Techniques: The files of ePaper driver Waveforms for ePaper displays are automatically generated, sent, saved in the cloud and automatically encrypted. The setup of such systematic mechanism helps guarantee the Company's R&D niche, prevent the risk of intellectual property loss, and enhance the security and timeliness of data transfer, further allowing the Company to reach the goal of win-win with customers.
 - Production-Sale 2.0: We have achieved the system of one-click generation from sales demand to Master Production Schedule (MPS) and auto transmission link; reports can be generated at the same time as well. This helps us create a transparent and automated offline operation, focus on timely management and abnormality handling, and boost the value of our personnel.
 - List of Key Points in Contracts: The potential risks and conditions in the contracts have been listed through the contract data to provide timely reminders of the risks of violation or wrong behaviors that may occur.
 - Internal Announcement System (External Information Announcement Control): Our system processes the applications and reviews according to the delegation of authority, and controls the permission to view data for different confidentiality levels. This way, we properly control the risks to the Company, improve the external information system, and reinforce the management of pre/post internal control regulations for risk control as well as the external information.

Type	Project	Before improvement	After improvement	Benefit
Innovation	E Ink Goal	<ul style="list-style-type: none"> The objective establishment process was vague, making it hard to set and review objectives. There was no transparent platform to exactly know the goals of the Company/organization/supervisors. 	<ul style="list-style-type: none"> The innovative culture of "objectives and key results (OKR)" of E Ink has been established to provide a clear framework for the employees to formulate individual objectives accordingly. The goal map has been set up to clearly present the common goals of the team. 	The Company can make the team goals particularly visible and encourage the employees to set challenging objectives for themselves.
	PMD 2.0	<ul style="list-style-type: none"> The supervisors had no transparent channels to know the employee's performance in cross-unit collaborations. Only the employee numbers and names were known when it comes to the employee information. 	<ul style="list-style-type: none"> The innovative Shining Star recommendation mechanism has been implemented to support the supervisors to validate the employees' performance in different aspects. We have adopted a brand new operation UI design, with the employee information section magnified and the performance evaluation scores during the past two years, photo and start date of employment added. 	We thereby stimulate our employees' innovative performance and active participation in interdepartmental projects so that the supervisors can conduct performance evaluation in different aspects.
	Protection of Critical Production Techniques	<ul style="list-style-type: none"> The files were manually generated, sent and saved. The encryption was performed manually. <p>Issuance of the encrypted file of ePaper driver waveform (per file) 🕒 5.5 hrs</p>	<ul style="list-style-type: none"> The files are now automatically generated, sent and saved in the cloud. The encryption is performed automatically <p>Issuance of the encrypted file of ePaper driver waveform (per file) 🕒 10 mins</p>	The establishment of systematic mechanism helps guarantee the Company's R&D niche, prevent the risk of intellectual property loss, and enhance the security and timeliness of data transfer, further allowing us to reach the goal of win-win with customers.
Digital Transformation	Production-Sale 2.0	<ul style="list-style-type: none"> One had to look up and check relevant information on different system interfaces manually. The offline EXCEL operation and email transfer were adopted. <p>📅 4 days</p>	<ul style="list-style-type: none"> We have achieved the system of one-click generation of sales demand and MPS and auto transmission link. Reports can be generated automatically and timely. <p>📅 2 days</p>	This helps us create a transparent and automated offline operation, focus on timely management and abnormality handling, and boost the value of our personnel.
	Lists of Key Points in Contracts	<ul style="list-style-type: none"> After a contract took effect, the matters to be noticed were notified orally or by email. The contract couldn't be connected when the customers placed an order. 	<ul style="list-style-type: none"> The system automatically notifies the matters to be noticed and controls the information. The system is automatically connected and reminds the users of predictable risks. 	The potential risks and conditions in the contracts have been listed through the contract data to provide timely reminders of the risks of violation or wrong behaviors that may occur.
	External Announcement System (External Information Announcement Control)	<ul style="list-style-type: none"> The Company printed out, bound, and manually checked the information for review. There were no systematically stored records. The access permission was hard to control with paperwork. 	<ul style="list-style-type: none"> The system processes the applications and submissions for approval according to the delegation of authority. The system manages the relevant records and makes backups for them. The system controls the permission to view data for different confidentiality levels. 	We thus properly control the risks to the Company, improve the external information system, and reinforce the management of pre/post internal control regulations for risk control as well as the external information.

In October 2014, Yangzhou Site implemented the "Continual Improvement Plan (CIP)", which promoted the concept of ARCI (Accountable, Responsible, Consulted, Informed) and encouraged employees to identify problems in the production process and propose possible improvement measures, with a view to fostering the habit of thinking and working style of systematically analyzing and dealing with problems, as well as the corporate culture of actively correcting problems. In 2018, the Yangzhou Site continued to promote the CIP project and also implemented "QCC (Quality Control Circle) Quality for All" on top of the CIP to increase the proportion of field personnel participating in quality improvement projects. Individuals or teams made CIP and QCC proposals, and the main types of projects were quality and yield improvement, efficiency improvement, management mechanism optimization, and cost reduction. The proposals would then be evaluated internally; the outstanding "Accountability Stars" and "Accountability Teams" were praised and rewarded, and the actual promotion plan was plotted. In 2021, the "Team of the Year" and "Accountability Team of the Year" were rewarded and praised.

Exceptional Resilience Engineering by Our Project Team in 2021

Due to the impact of the COVID 19 pandemic, the Yangzhou Site was faced with a shortage of labor, materials, resources, and equipment suppliers, etc. The production team composed of 32 outstanding employees from the Manufacturing Division, Automation Development Division, Administration Division, Production Management/Materials Management Division, and Industrial Engineering Division, was "self-taught" through video conferences and inter-departmental cooperation experiments, and gradually completed the basic data establishment, basic operation training, key technology learning, independent installation and adjustment, and independent operation, successfully solved the difficult problems of no equipment supplier, and eventually met the production capacity and delivery requirements.

In the face of labor shortage, the Yangzhou Site not only continued to implement automation projects to a number of production lines, but also encouraged creativity and adopted ten countermeasures simultaneously with the help of the aforementioned team, so that production requirements could be met even under the pandemic with tight manpower. Moreover, with the team's cooperation in technology transfer, the site not only achieved new product development and mass production in three months, but also steadily improved the product yields and production efficiency.



Manufacturing Process Automation Upgrade

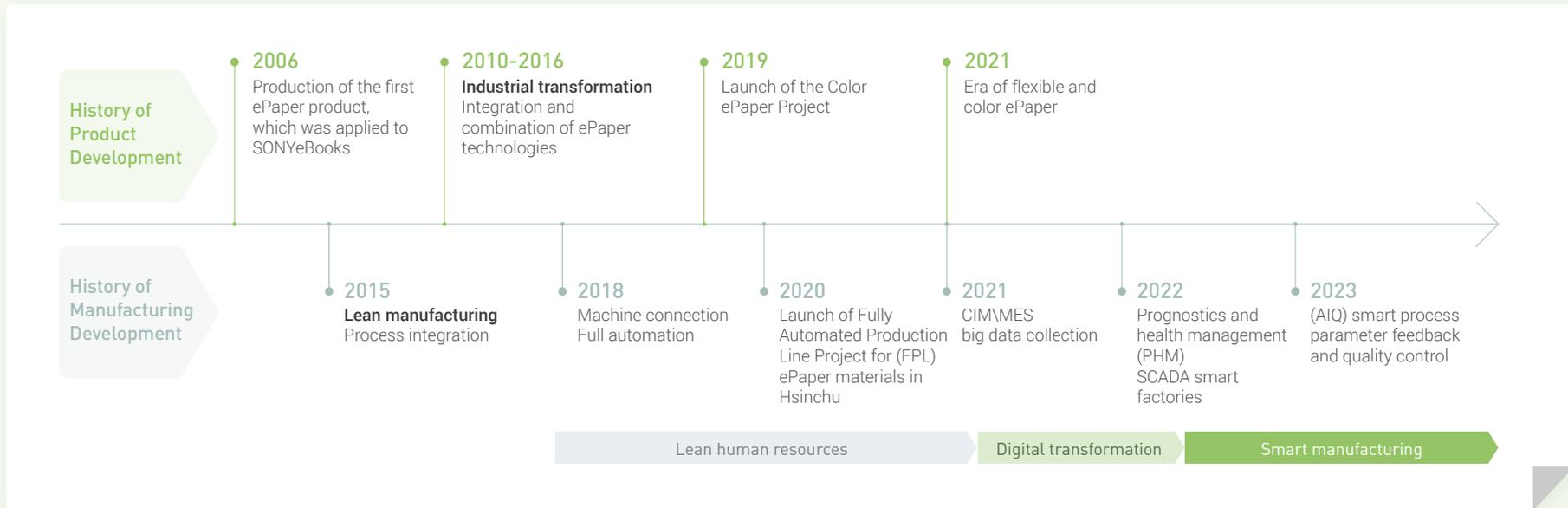
Yangzhou Site has been actively implementing a variety of automation measures in recent years. In 2020, the site invested over RMB 7.5 million in the Neon and Jaeger production line automation project to automate the cleanroom equipment, which will improve production efficiency and accuracy. The Yangzhou Site's automation achievement was recognized by the Jiangsu Provincial Government as a smart model workshop in 2020. In the future, we will continue the intellectualization of process equipment, system and environment.



Operation Process Improvement: Manufacturing Process Automation



Smart Manufacturing - Development with Product Advancement



Key development effectiveness

- Adopting advanced color ink jet technology of high precision, our Yangzhou Site has optimized the color ink jet pattern, expanded the scope of viewing angle, increased the value of gamut, and developed corresponding smart management equipment.
- Our Hsinchu Site has established the first fully-automated line of ePaper materials in the world. Meanwhile, the site has also introduced the smart manufacturing system, and implemented big data, equipment for decision-making, and health management system.

E Ink's smart manufacturing development

- Fulfillment of high automation: Since 2015, lean manufacturing has been promoted to replace old facilities with new ones and create production lines of high automation.
- Adoption of autonomy of key technologies: With the advancement of product development, the color ePaper technology has been developed. Also, we have actively developed R&D personnel, made our own key advanced equipment, and collected the parameters of process big data.
- Planning of the four stages of smart manufacturing development: We have established partnerships in the ecosystem of co-existence and co-prosperity by standardizing the process integration, automating the equipment connection, systemizing the data collection, and promoting the smart precise prediction.

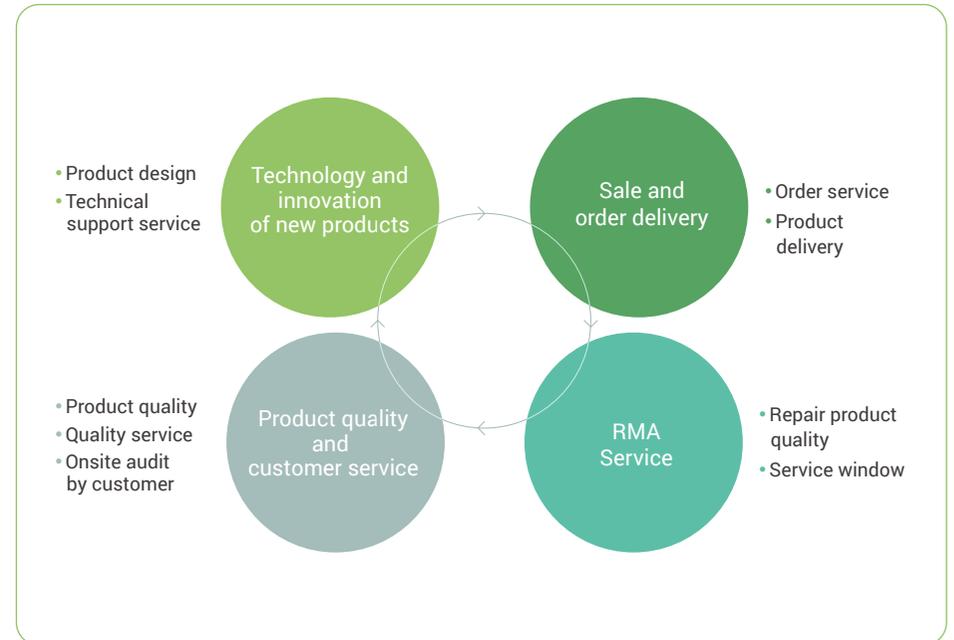
5-3 Customer Relationship Management

5-3-1 Continuous Enhancement of Customer Satisfaction

Here at E Ink, we take the needs of customers very seriously. And as such, customer satisfaction has always been a key indicator of sales and distribution for the Company. By maintaining positive customer service and relationship, our model of working closely with customers enables both E Ink and our customers to achieve a win-win when it comes to product development and distribution. E Ink continues to strive for high product and service quality by constantly pushing for process optimization and quality improvement through various events and activities. As our sites receive relevant certifications, the Company has been routinely reviewing customer satisfaction to ensure that customers are content with E Ink's products and services.

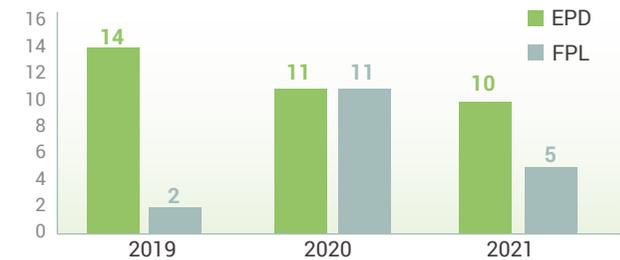
Strengthening the Overall Customer Service Quality

Since 2021, E Ink has divided the customer services into ePaper display (EPD) and Front Plane Laminate (FPL) service based on the categories of the products sold, offering dedicated customer service personnel according to different customer attributes to reinforce the communication and immediate services. As for the customer satisfaction, we have also expanded the scope of customer survey. In addition to the original customers of ePaper Module, the customers of front plane laminate have also been included in the survey. A comprehensive understanding of the customers' needs and expectation in various aspects is thus acquired through the feedback from the customers of different product categories.

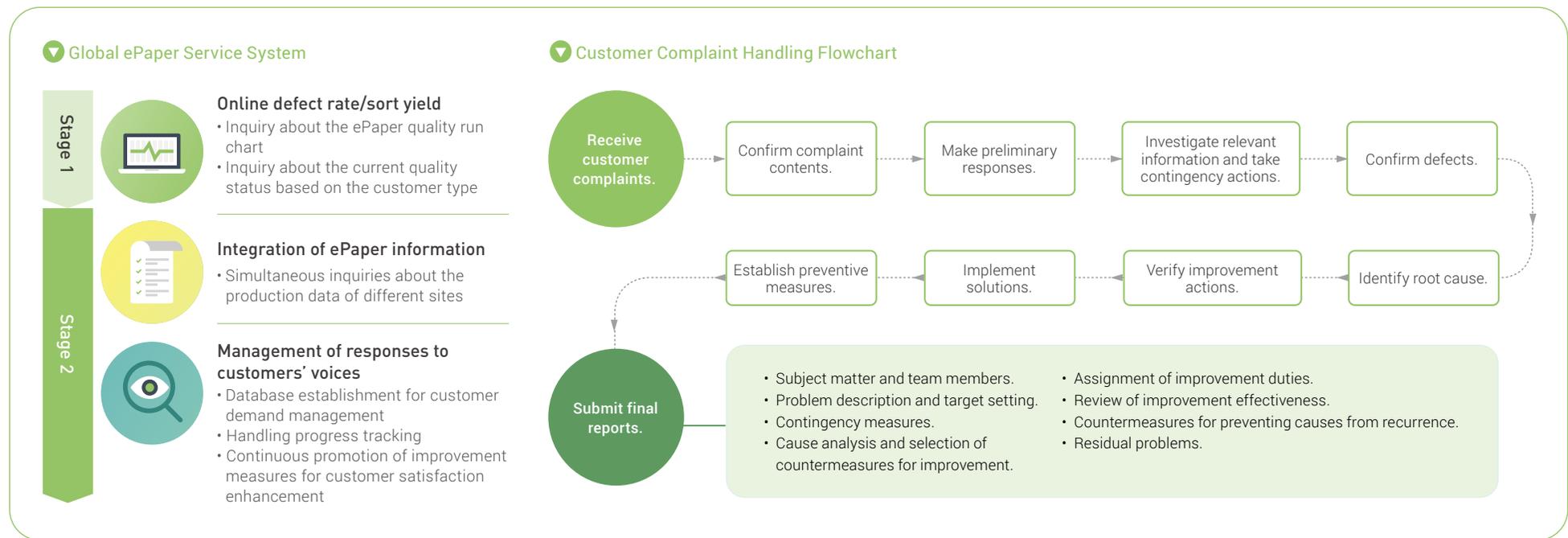


Responding to Customer Complaints in a Timely Manner

Placing great value on customers' feedback, E Ink has introduced the global ePaper service system since 2021. By timely providing product quality status and integrating product data of different sites, we have sped the communication with customers and ensured that immediate responses and improvements can be made for the customer complaints to lower the loss of customers. Moreover, when there is any quality incident, we carry out internal reviews and come up with corresponding improvement strategies and preventive measures to continuously foster the relationship with customers.



▶ Statistics on the customers' complaints for improvement in the three recent years



In 2021, E Ink launched a special yield enhancement project for its Front Plane Laminate (FPL) site. With the potential risks in the process preventively eliminated and the equipment optimized, FPL customers' complaints for improvement have been reduced by 50% compared to 2020.

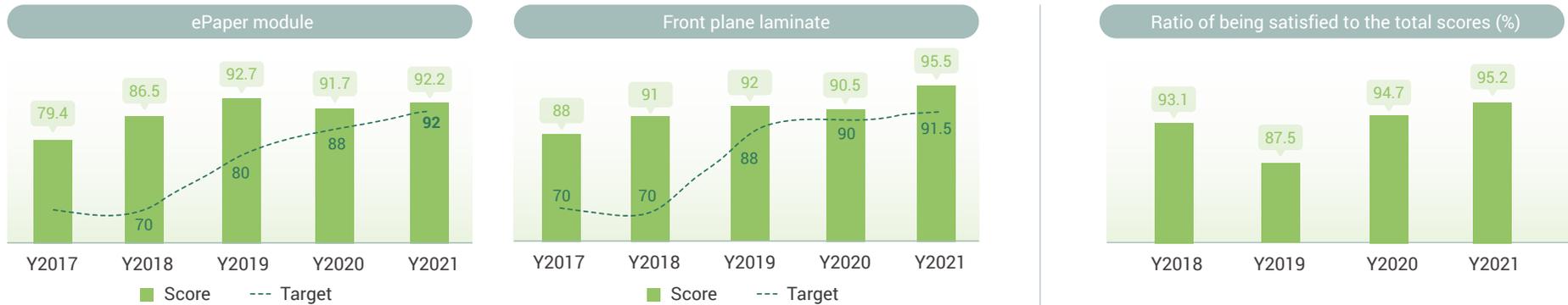
Aside from the implementation of site improvement plans, E Ink held a series of promotion events focusing on quality awareness to raise the operational quality of direct and indirect personnel. These events were attended by a total of more than 522 people in 2021.

- There are quality-related slogans put up in the sites. Also, animated videos about quality costs are produced and placed on public websites to be replayed.
- A quality section where quality-related posters are displayed is set in the Company's home page, and quality-related knowledge competitions are organized.

Distinguished Customer Service

In 2021, E Ink received replies from 80% of the customers in the satisfaction survey, with a satisfaction score in the four major dimensions exceeding 90. The Company has maintained the high level above 80% for three consecutive years, which demonstrates that the Company receives good comments from customers when it comes to the product quality and customer service relationship.

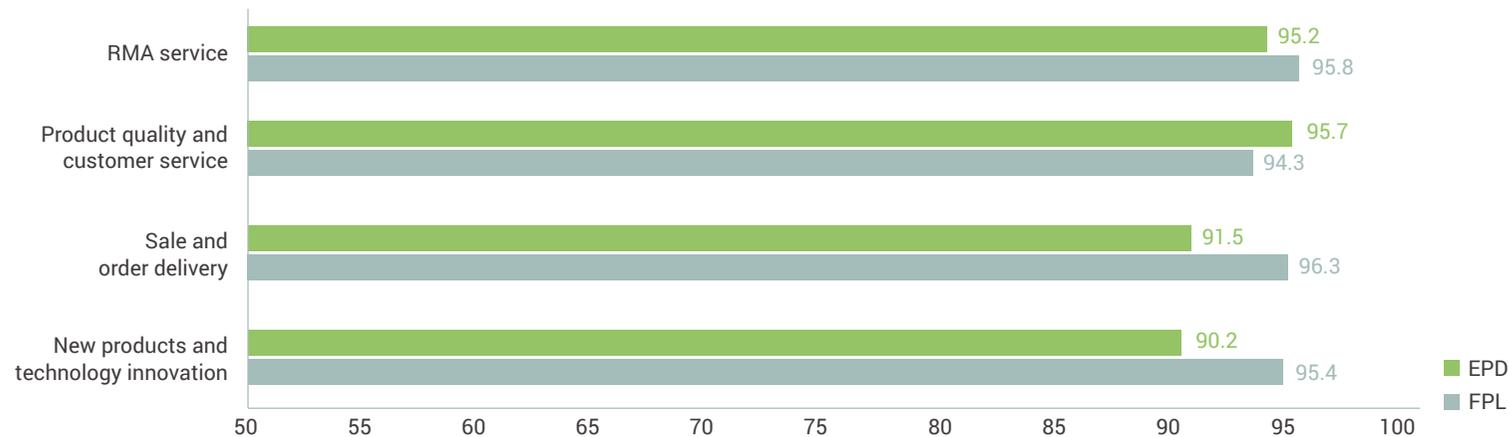
Results of Customer Satisfaction Survey



Note: An overall score of 80 points is considered to be "satisfactory".

Note: the total satisfaction score of 80 means being satisfied.

Four major dimensions of customer satisfaction survey





CHAPTER 06

ENTERPRISE CARE

Healthy and Safe Workplace with Right Persons in the Right Place

6-0 Performance Results

Female employees occupied **37%** globally
with **40%** as the current long-term goal

Employee satisfaction of up to **74%**

A raise in pay for seven consecutive years

Promotion of due diligence on human rights risks

No discrimination, harassment or unethical behavior at E Ink that led to grievance of the employees

Hsinchu Site Joining the “Zero Accident Work-Hours” to demonstrate the determination to reduce accidents, resulting in

2,324,925 accumulative zero accident hours

Enhancement of E Ink University with professional maps for

98 roles

306 corresponding courses

2,658 participants taking the professional competency courses

Maintenance of the “Healthy Workplace Certification Mark for Health Promotion Label” and “AED Secure Place Certification” at Hsinchu Site

Organization of the “Epidemic Prevention & Zero Contact for Your Health!!!” activity that

attracted more than **400** participants

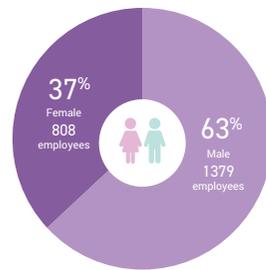
6-1 Overview

6-1-1 2021 Employee Distribution

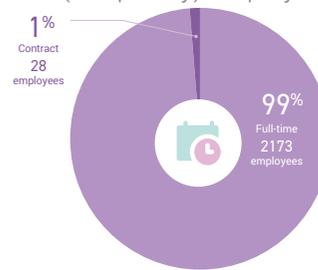
Employees worldwide



Gender



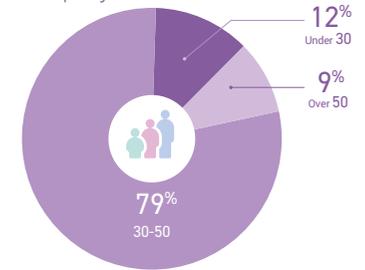
Full-time/contracted (temporary) employees



Job title



Age distribution of employees in Taiwan



Note 1: Executives are managers or officers of higher levels.

Note 2: Yangzhou Site has been actively promoting sector-academia collaboration projects and hires a significant number of interns to provide opportunities for the interns to accumulate hands-on experience at the site while fostering relevant vocational skills through relevant training. Internship programs usually lasted between 3-6 months, and all interns were direct personnel. In 2021, E Ink hired a total of 1,034 interns, 580 were male and 454 were female.

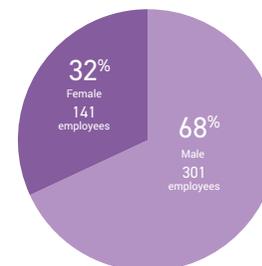
Note 3: All employees at E Ink's Taiwan sites and Yangzhou Site are full-time employees, while our USA sites have full-time and part-time employees.

Note 4: All of the employee statistics presented were calculated based on full-time employees.

Due to the nature of the industry, most of our management personnel and profession engineers are male, while most of the managerial and technical personnel are female. E Ink is dedicated to providing fair opportunities for female employees to demonstrate their best potential. The proportion of female employees will be increased every year as planned with 40% as the long-term goal to promote gender equality in the employment.

As for the turnover rate, E Ink hired 621 new employees (28%) in 2021. The voluntary resignation rate was 18%, and as the separation factor survey shows, 43% of the employees separated for the sake of "work", including the situation in which foreign workers could not come to Taiwan and labor shortage occurred in recent years. As for the retention of talents, E Ink encourages employees to take advantage of our internal rotation system to expand the width of their competency. In 2021, our internal rotation rate came to 25%.

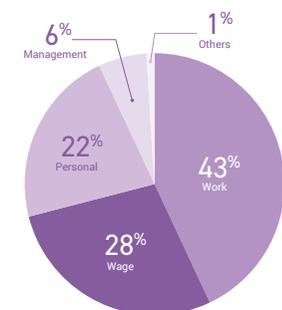
Gender distribution for departed employees



Age distribution for departed employees



Employee separation factors at Taiwan sites



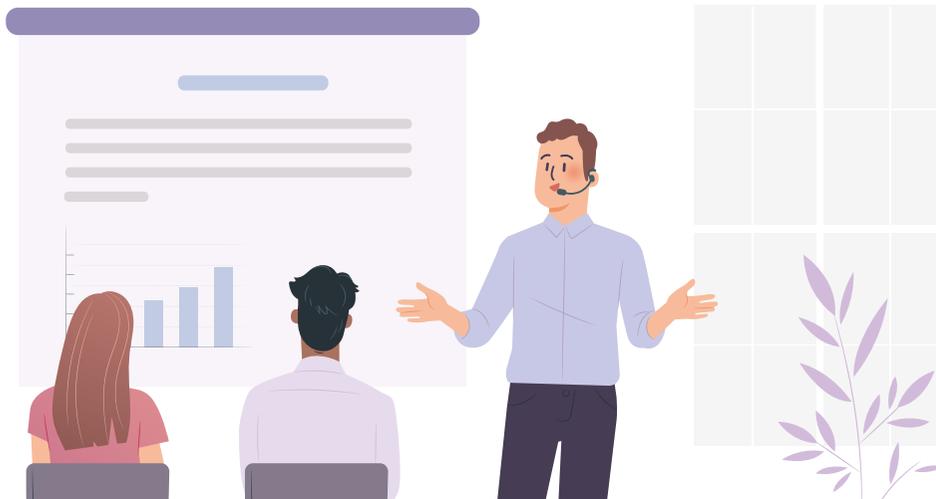
6-1-2 Recruitment of Talent

To achieve the goal of sustainable operations, we establish our talent recruitment guidelines based on our medium-term and long-term management strategies. The forward-looking recruitment plan is formulated to find talents in a fair, open and impartial way. We carry out many projects to internationalize our talent recruitment strategies and implement localization of international talents to help the operation and development of our overseas business.

The demand for manpower in Taiwan grew tremendously in 2021. To attract outstanding talents, we make use of multiple recruitment channels, including on-line job banks, mobile outside posters, social media, industry-academia collaboration.

Campus recruitment

We focus on the schools that can provide more talents for the industries and organize campus recruitment activities. In addition to inviting the experts of E Ink in different fields to give lectures on campus, we provide opportunities for interns and help them learn the latest technology information in the increasingly changing industries. By organizing different competitions events, we share the many features and technologies of ePaper, introduce various application products to end users, attract outstanding young talent, and build our brand image.



2021 campus activity series

To promote our brand and develop talent recruitment channels, E Ink plans and participates in a series of campus recruitment activities to enhance and solidify the industry-academia collaboration.

Get to know E Ink

- We continue enhancing the collaboration with the professors of the Department of Photonics, National Chiao Tung University, by giving courses for nearly two months to help the students to know ePaper, its features and operating principles. Both parties also jointly applied for the 2023 summer vacation program that enables the students of the New York University to come to Taiwan for exchange with the theme of "Advanced Display Equipment and System in the Era of Wearable Electronics" as the core to encourage more discussions and researches on the ePaper technology in the academic circle.
- We provide opportunities for the students to work in E Ink as interns. In addition to providing academic theories and evaluating better practices for the Company's development of color ePaper images, students will also be able to learn relevant software operations, data organization, and other field/job related skills. With the promotion of the internship projects, the students can extend their development to the industries seamlessly, E Ink can recruit new employees, and the schools can benefit from the robust industry-academia collaboration.

Interaction building

- We orchestrate experimental interactive courses with the support of our professional personnel and assistants. They teach students the driving principles of ePaper to help them understand more about ePaper. In addition, we collaborate with schools in many projects, including the arrangement of special industry-academia classes, to realize the idea of attracting global talents without borders. This can help E Ink, which has multiple locations around the world, deploy human resources proactively and make contribution to the world together with other global leading companies.



Recruitment of talents on campus

- We participate in the talent exposition organized in local schools and provide the opportunities for the students to experience our final products personally and get to know more about our/the ePaper applications. We also invite the managers of the relevant departments to talk about the job vacancies and contents, helping students find the jobs most suitable for them. We can also recruit new employees and work with them to work toward the goals of our business operation. For the targeted departments, institutions and colleges, we work with the schools to organize expositions and give a brief introduction to our history, technological features, applications, sustainable operations, job vacancies, compensation and employee welfare, with all in mind to help the students understand the developmental trends of the industry and the prospects of the Company. With reference from the personal experiences of the alumni, students can better understand how the professional knowledge that they have learnt can be put in practices. This is very helpful for establishing an explicit goal and building up more confidence.



National United University
Enterprise Expo



Department and Institute of Electrical
Engineering, Minghsin University of
Science and Technology



Department of Computer Science and
Information Engineering, Minghsin
University of Science and Technology



International and Cross-Strait
Operations Division, Minghsin
University of Science and Technology



College of Computer Science &
Electrical Engineering,
Chung Hua University



Chung Hua University

Video interview launched by epidemic

In light of the COVID-19 pandemic, we changed our in-person interviews to online interviews coupled with our vocational competence evaluation system to emphasize E Ink's core philosophies to job applicants to select suitable candidates based on their overall fitness.

Electronic recruitment and appointment processes

We adopted the eRecruitment system to provide electronic recruitment and appointment processes in 2021. The repetitive processes from application for manpower, arrangement of interview and issue of letter of appointment to report of new employees for duty are integrated into a single system to save the manual operation cost, improve the accuracy rate, and increase the benefit to the department. We will continue institutionalizing the management, documenting the systems, and systematizing the forms.

Enhancement of orientation training

On the foundation that has been established over the past years, we enhance the orientation training to help new employees adapt themselves to our corporate culture and vision. As for the retention of talents, E Ink encourages employees to take advantage of our internal rotation system to expand the width of their competency. We use multiple performance evaluation channels and emphasize two-way communication to ensure that employees can receive feedback about their work, have a sense of accomplishment in their career, and enjoy the opportunity of growth. This way, they accumulate their personal value continuously and E Ink can ensure the stability of the talents.

Employment of people with disabilities

We hire the people with disabilities. A total of 9 employees with disabilities were hired up to the end of December 2021. Three of them, who had serious visual impairment, served as full-time masseuses and three of them, who had mild or moderate disabilities, served for the R&D, production and supporting units of E Ink. The employment ratio exceeded the level required by the applicable law in Taiwan. It was employment above the required quota. As affected by the COVID-19 in 2021, E Ink adopted the remote work and split operation policy. To take care of the employees with serious visual impairment who could not provide massage service, E Ink pay them normally to assure their life. We will continue implementing internal function assessment to provide more employment opportunities for the people with disabilities.

Increase of overall compensation and employment of local talents

As for the Yangzhou Site, since it is a local custom for people to return to their hometown for the Chinese New Year and some of them would find another job after the holidays are over, the turnover rate would naturally be higher during this time of the year. Nevertheless, the "Wage Reform Program" that Yangzhou Site introduced has substantially improved wage levels and benefits for our employees. Consequently, the site's turnover rate for last year has fallen significantly compared to the past and the annual employee satisfaction survey also revealed higher satisfaction compared to the previous year.

In Taiwan, the members of our senior management. Although the Yangzhou Site in China has expatriates from Taiwan take most posts in senior management, we hire as many local managers as possible for middle management positions to ensure effective communication and promote local management.

6-2 Building a Healthy, Positive and Beautiful Workplace

6-2-1 Respect for Human Rights

E Ink human right policy

In addition to observing the laws and regulations applicable in the regions where our global business bases are located, E Ink adheres to the "International Bill of Rights", "International Labour Organization - Declaration on Fundamental Principles and Rights at Work", "United Nations Guiding Principles on Business and Human Rights; UNGPs", "OECD Guidelines for Multinational Enterprises", and "United Nations Global Compact; UNGC", and takes actions that are in line with the Responsible Business Alliance (RBA) to eliminate the acts that infringes and violates human rights. We treat our full-time employees, contracted personnel, temporary workers, and interns respectfully. This policy applies to E Ink and its affiliates.



Implementation guidelines

1. We integrate the respect to the economy, society, culture, citizen, political right, and development in our operations.
2. We provide safe, healthy and harassment-free work environment, prohibit illegal discrimination, and assure equal work opportunities.
3. We prohibit child labor, forced/compulsory labor, and human trafficking or illegal acts in any form.
4. We are committed to responsible procurement of minerals.
5. We shall not discriminate any one due to race, color, nationality, sexual orientation, religion, disability, age, political opinion, pregnancy, marriage or family status, or other similar factors. We shall protect the labor rights of the indigenous peoples, women, foreign workers, contracted employees, people with disabilities, and other disadvantaged or marginalized groups.
6. We comply with all the applicable regulations on the wages and working hours, attach importance to the equal pay for equal work, fair pay, punctual paydays, and disclose the legally required deductions on the pay sheet.
7. We build an environment favorable for communication, develop an open management model, support and help employees maintain their physical and mental health, and ensure the balance of their work and life.
8. We allow the freedom of association subject to relevant regulations and conduct dialogue through different open channels.
9. We provide multiple open dialogue channels including whistleblowing mechanisms to ensure that the suppliers, partners and other stakeholders can give feedback to the Company or report suspected illegal acts.
10. We may review and assess related risks, practices and effects to cope with changing situations and meet the requirement of the stakeholders.

In addition to strictly complying with the Labor Standards Act, E Ink is committed to respecting human rights related policies in the hiring, management and development of employees. All new employees in Taiwan are required to receive education and training on human rights-related policies during their orientations. In 2021, a total of 10 training sessions were conducted, and 277 new employees completed 100% of the training, for a total of 2,493 training hours.

Due diligence on human rights risks

In order to ensure effective implementation of the human rights policy and assess its effectiveness in management, E Ink has promoted human rights risk due diligence by identifying, evaluating, and improving upon specific human rights issues that might arise in our business operations in order to safeguard the workers' human rights. To ensure effective implementation of human rights policy and assess its effectiveness in management, E Ink has promoted human rights risk due diligence by identifying, evaluating, and improving upon specific human rights issues that might arise in our business operations in order to safeguard the workers' human rights. After referring to specific guidelines and standards published by the Responsible Business Alliance (RBA), the UN Global Compact (UNGC), the Global Reporting Initiative (GRI) and relevant sustainability-related evaluations for the material human rights issues, we have regularly conducted a full risk inventory by assessing each risk in accordance to its chance of occurrence and severity of impact to identify the location of human rights risks. We then proposed corresponding mitigation and compensation measures to alleviate the impacts of human rights issues on our operations while creating a happy and joyful workplace.

Human rights issues	Management approaches	Chance of occurrence	Degree of impact	Mitigation measure	Remediation measure	Category of remediation measure	Remediation measure implementation ratio
Workplace safety	<ul style="list-style-type: none"> We passed the ISO 45001 Occupational Safety and Health Management System certification. We established relevant operating procedures and guidelines for due implementation to ensure and maintain employee and workplace safety. 	High	Low	<ul style="list-style-type: none"> We have established corrective & preventive measure handling procedure that enables employee feedback, shortcomings found during routine inspections, corrections by competent authorities and so forth can be handled and dealt with immediately 	<ul style="list-style-type: none"> We have established a specific management solution and planned annual budget that is designated for immediate improvement 	Implementation of internal procedure for the prevention of human rights infringement	100%
Employee health	<ul style="list-style-type: none"> We have established our employee health management procedure as stipulated in the Occupational Safety and Health Act to outline the planning and implementation of affairs such as health checkups, health promotion and so forth 	Low	Low	<ul style="list-style-type: none"> Implement annual employee health checkup with items and frequency superior to the legal requirements Plan and implement health promotional activities and workshops every year 	<ul style="list-style-type: none"> We have established a specific management solution and planned annual budget that is designated for immediate improvement Plan relevant health promotional activities based on the outcomes of annual employee health checkups/ consultations Arrange for practicing physicians to visit the sites to consult with employees individually and arrange for work resumption/transfer depending on the situation 	Non-financial compensation	100%
Child Labor	<ul style="list-style-type: none"> Pursuant to pertinent regulation, E Ink does not hire child labor under the age of 15. For underage workers below the age of 18, relevant administrative actions and measures have been taken. Specific care has been given to review job applicant's personal information and when applicants come on board, they would be verified against their personal information. 	Low	Medium	<ul style="list-style-type: none"> During potential candidate selection, job applicants would be verified for their age and job descriptions When they come on board, responsible personnel shall verify the newcomers against their personal information to ensure compliance with the law 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%
Forced or compulsory labor	<ul style="list-style-type: none"> Employees must be informed in advance prior to performing overtime work and may only engage in overtime work after giving consent The signing of the employment contract shall be carried out under the premise that there will be no violation of the labor-related regulations and that employees are free to sign or not sign the contract Employees have the authority and freedom to terminate their labor contracts and stop offering their service. 	Low	Medium	<ul style="list-style-type: none"> Employees must be informed in advance prior to performing overtime work and may only engage in overtime work after giving consent The signing of the employment contract shall be carried out under the premise that there will be no violation of the labor-related regulations and that employees are free to sign or not sign the contract Employees have the authority and freedom to terminate their labor contracts and stop offering their service. 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%
Work hours	<ul style="list-style-type: none"> Work hours shall be established in the work regulations in accordance with pertinent laws and submitted to the competent authority for approval prior to informing our employees via public announcement We host routine labor-management meetings for communication and negotiations. 	Low	Low	<ul style="list-style-type: none"> We will hire adequate manpower based on production capacity to accommodate actual needs We will periodically review our existing systems and regulations and update them in accordance with the latest regulations to ensure proper control of work hours 	<ul style="list-style-type: none"> We will establish work hour management and follow-up mechanism We will strengthen relevant training and dissemination about work hours 	Implementation of internal procedure for the prevention of human rights infringement	100%
Freedom of association	<ul style="list-style-type: none"> We will establish specific regulations on employee club management while continuing to provide subsidies to maintain and encourage employee club activities in conjunction with the implementation of employee club evaluation and review to attain a healthy balance between work and life for employees We will organize labor-management meetings regularly and retain all meeting records in order to follow up on relevant issues. Thus far, we've maintained a 100% response rate to issues brought up during labor-management meetings and we've made an effort to maintain a harmonious relationship between both parties. 	Low	Low	<ul style="list-style-type: none"> To give employees the freedom to establish, operate and manage their clubs We will hold labor-management meetings on a regular basis 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%

Human rights issues	Management approaches	Chance of occurrence	Degree of Impact	Mitigation measure	Remediation measure	Category of remediation measure	Remediation measure implementation ratio
Gender equality	<ul style="list-style-type: none"> We will exclude gender as a criterion of selection for job openings we offer and employment. Our work regulations contain specific terms to safeguard employees' rights to gender equality All employees shall go over and be mindful of relevant rules on gender equality in our work regulations We have taken steps to safeguard employees' rights to gender equality and eliminate gender discrimination by ensuring that gender does not affect relevant processes such as recruiting, evaluation, remuneration, incentives, and promotion. 	Low	Low	<ul style="list-style-type: none"> We will exclude gender as a criterion of selection for job openings we offer and employment. We will strengthen our dissemination and employee training with regards to gender equality 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%
Maternal protection	<ul style="list-style-type: none"> We have established specific health management procedures for female workers in maternity in accordance with the Occupational Safety and Health Act and planned relevant details such as risk level classification, job fit, and so forth to ensure the physical and mental health of female employees in pregnancy/postpartum/breastfeeding. 	Low	Low	<ul style="list-style-type: none"> E Ink has implemented specific maternal protection measures such as maternity leave, nursing room, no night shift for mothers, lady first, reservation of parking spaces for pregnant employees, and so forth. 	<ul style="list-style-type: none"> Employees needing assistance with work/shift adjustment may inform the infirmary or HR for relevant coordination 	Non-financial compensation	100%
Non-discrimination	<ul style="list-style-type: none"> Our work regulations have a specific article that safeguards our employees from harassment and discrimination of any kind All employees shall go over and be mindful of relevant rules on zero harassment and discrimination in our work regulations. Our work regulations protect our employees from any form of discrimination in relevant processes, including recruiting, training, evaluation, remuneration, incentives, and promotion regardless of their race, skin color, age, gender, sexual orientation, gender identity and expression, ethnicity/nationality, disability, pregnancy, religious belief, political views, organizational background, status as discharged military personnel, confidential genetic data or marital status, be it in their appointment or actual work. 	Low	Low	<ul style="list-style-type: none"> For job openings we offer and personnel employment, we prioritize talent and expertise, with applicants' academic credentials serving as our criteria for assessment We will strengthen our dissemination and employee training to safeguard our employees from harassment or discrimination 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%
Employees with physical/mental disabilities	<ul style="list-style-type: none"> Our work regulations have a specific article that safeguards the rights of employees with physical/mental disabilities to work All employees shall go over and be conscious of relevant rules on the rights of employees with physical/mental disabilities to work regulations. We ensure that employees with physical/mental disabilities work will be protected against discrimination or unfair treatment in terms of workplace accessibility, design of specific duties, participation in company activities, and so forth. In addition, we shall implement relevant risk assessments in accordance with our ESHE management procedures and other documentation while helping with the planning and implementation of workplace improvement measures. 	Low	Low	<ul style="list-style-type: none"> We have been working with relevant responsible units to improve upon relevant facilities and services available in our workplace for employees with physical/mental disabilities in order to safeguard their rights 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%
Foreign workers	<ul style="list-style-type: none"> With regards to foreign workers, we would choose legitimate agents and ask the agents to provide a list of fees they charge when signing contracts to prevent them from charging foreign workers they represent additional fees We forbid agents from seizing foreign workers' passports, bank passbooks or residence permit Foreign workers shall be entitled to receive an equal basic wage, work hours and leaves as domestic workers We will distribute questionnaires regularly for our foreign workers to elicit their opinions and respond to their inquiries 	Low	Low	<ul style="list-style-type: none"> We would choose legitimate agents and ask the agents to provide a list of fees they charge when signing contracts to prevent them from charging foreign workers they represent additional fees We forbid agents from seizing foreign workers' passports, bank passbooks, or residence permit Foreign workers shall be entitled to receive an equal basic wage, work hours and leaves as domestic workers We will distribute questionnaires regularly for our foreign workers to elicit their opinions and respond to their inquiries 	<ul style="list-style-type: none"> To be implemented in accordance to work regulations 	Implementation of internal procedure for the prevention of human rights infringement	100%

Note: The scope of our due diligence on human rights covers our Hsinchu Site and Linkou Site in Taiwan, and the remediation measure implementation ratio has been calculated based on the two sites as the denominator.

6-2-2 Labor-Management Relations and Communication

While talents are one of E Ink's most important corporate assets and pursuing labor-management harmony is the main drive to achieve corporate growth, we build internal consensus through official and unofficial communication channels to realize our corporate culture of "One Team One E Ink". To coordinate labor-management relations and promote labor-management cooperation, we have established diversified mechanisms to meet different communication demands in order to establish sound labor-management interaction and for employees to develop organizational commitment and improve work enthusiasm. A labor union in the Yangzhou Site has already been established, and the participation rate of local employees is at 100%. Since no labor union has been established at E Ink's Taiwan and USA Sites, E Ink's overall employee participation rate in labor union came to 32%.



Labor-Management Meetings/ Employee Welfare Committee Meetings

- We hold labor-management meetings every quarter for employee representatives to make suggestions for and express their opinions about specific topics in order to ensure fluent labor-management communication and reach consensus with the company.



Intranet: MyEink/E Inker

- It is an exchange platform for communicating business philosophy and establishing corporate culture or publishing corporate news or announcements.
- E Inker internal magazines



Employee Seminars

- We organize employee seminars or employee congresses on a quarterly basis for employees to openly and directly communicate with the management.



Employee Suggestion Boxes

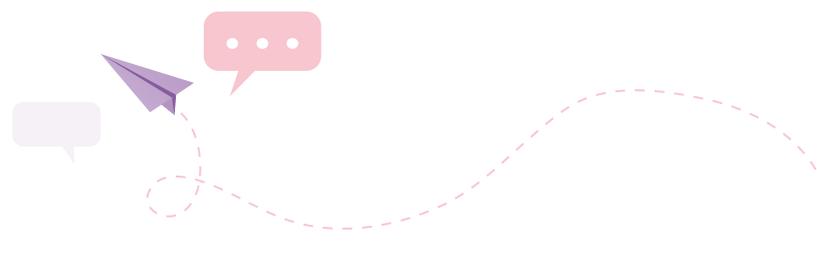
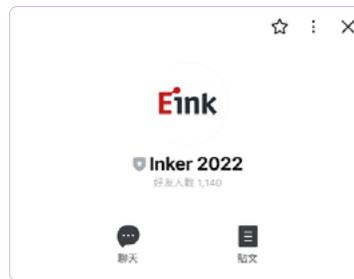
- We set up a life suggestion box for the employees.

Labor Union (Yangzhou Site)

- We have set up a labor union in the Yangzhou Site. Employees can express their opinions regarding workforce management and site operations through labor representatives. The relevant responsible departments will handle and follow up their opinions.

Multiple communication channels

With the increasing Internet population, E Ink has set up a LINE (a messenger application) group, hoping to use social networks or instant messaging softwares to ensure that employees can receive the latest news and pandemic prevention methods instantly.





Yangzhou Site set up a public account on WeChat for communication and exchange among employees and for sharing a wonderful life at E Ink with others!

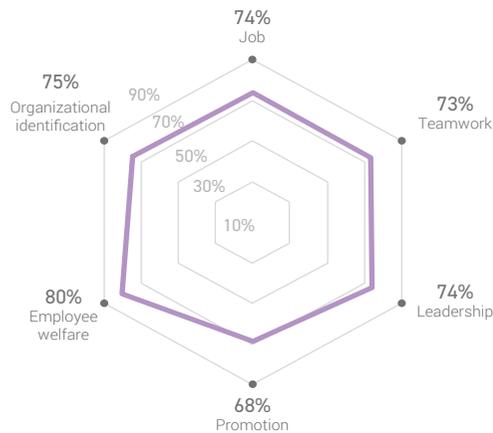


2021 employee satisfaction survey

To build friendly work environment and improve the employee engagement, E Ink organized an employee satisfaction survey in 2021 by making investigation in six facets of job, teamwork, leadership, promotion, wage and welfare, and organizational identification. The analysis result showed a satisfaction level of 74%. 70% of the employees identified themselves as part of the E Ink and up to 80% of them highly recognized the employee welfare policy of E Ink. By understanding what the employee thought, E Ink enhances the measures to the items that are less satisfactory. The result of the survey is used as reference indicators for the organizational management and the enhancement of the employee engagement.

Employee Satisfaction Survey Result

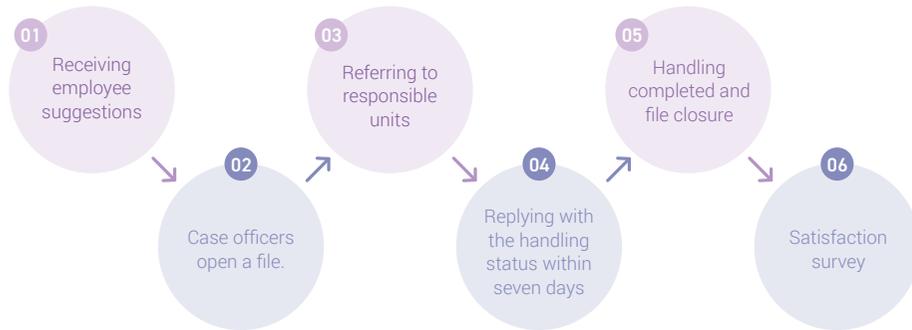
Employee satisfaction of up to 74%



Employ Satisfaction Survey Analysis by Category

Category		Overall satisfaction (%)
Age	30 and under	69
	31-40	71
	41~50	78
	51~60	80
Gender	Female	72
	Male	74
Management	Technician (direct employee)	69
	Administrator	74
	Engineer	71
	Base level officer (manager-associate level)	80

Employee Suggestion Handling Process



2021 Taiwan Sites Employee Communication Meetings

Meeting	Number of Meetings	Number of Proposals	Number of Closed Cases
Labor-Management Meeting	8	20	20
Employee Welfare Committee Meetings	4	11	11
Employee Seminars	2	0	0

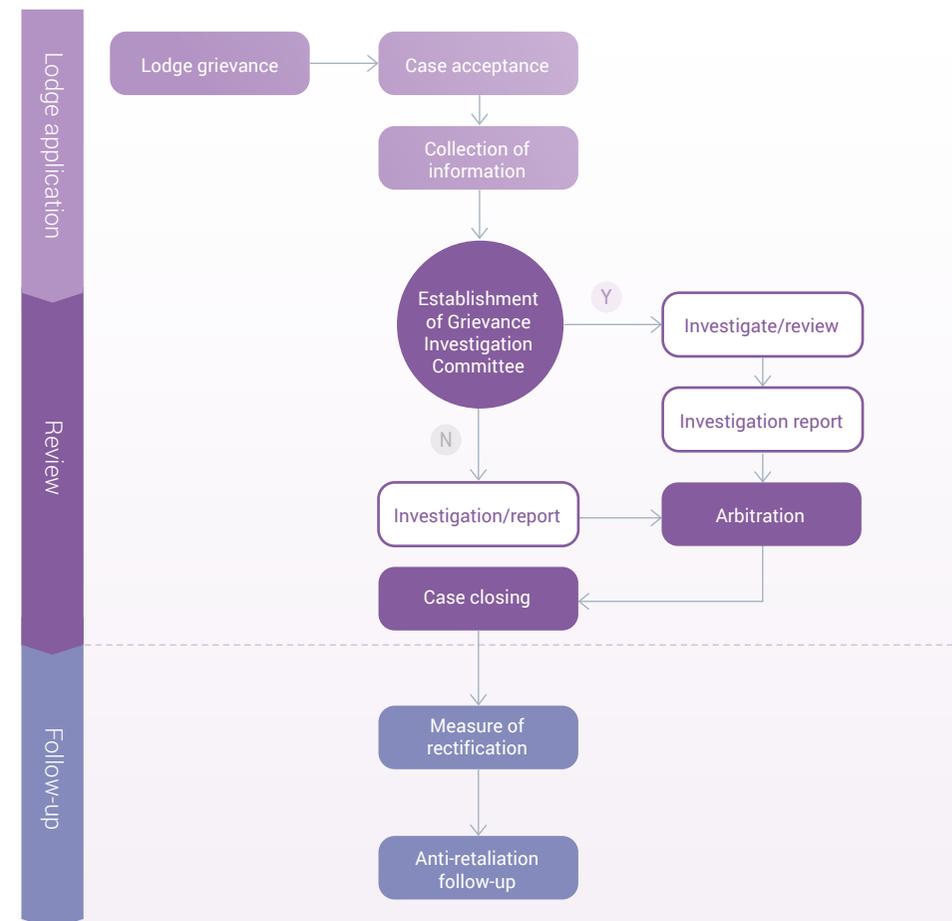
Note: Employee seminars in Q2 and Q3 were canceled due to the epidemic.



e-DM for internal communication

Employee grievance mechanism

In order to protect employees from unhealthy physical/mental unfriendly working environments, poor leadership skills or unethical behaviors that could potentially harm the Company, we have established regulations governing the grievances and relevant measures for the employees, suppliers, contractors, or commercial partners to report issues and solve problems effectively through procedures, investigation process and confirmation of facts. There were no discrimination, harassment or unethical behavior at E Ink that led to grievances of the employees in 2021.



The duties of the Grievance Investigation Committee include:

1. To understand the grievance at hand, contact relevant personnel and follow up on relevant details to prepare the case report.
2. To review the grievance by going over the facts and coming to a decision.
3. To adhere to confidentiality, objectivity and fairness principles when handling grievances relating to sexual harassment, unfriendly workplace environment or poor leadership skills.
4. To investigate the grievance in a confidential manner in order to protect the privacy and legal rights of the individuals involved.
5. To ensure that after the case has been closed, the plaintiff would not be subject to potential acts of retaliation in any form.

Organization of the Grievance Investigation Committee



6-2-3 Wages and Benefits

We emphasize the organizational culture featuring accountability, teamwork, and innovation. We also value the efforts of each employee. At E Ink, we built a friendly workplace with a good wage system, thoughtful benefits, and a quality environment for employees to balance work and everyday life properly. We also attract outstanding talents all over the world by implementing multiple incentive rewarding tools. The wage for new employees is assessed based on the nature of the function, educational background and experience, knowledge and skill, and seniority regardless of the gender, race, religion, disability, political stance, marital status, union membership, etc.

Improvement of the overall wages and benefits

In addition to observing the laws and regulations applicable in the regions where our global business bases are located, E Ink participates in the investigation of the market wage standards on a regular to establish fair and competitive compensation system. For example, the standard

wage for the base-level employees is higher than the minimum wage required by local laws. We review the competitiveness of our wage and benefit measures every year based on the market level of each function and the personal performance. While facing the challenge of the pandemic, we have raised the pay for seven consecutive years. In order to improve the overall welfare of our employees, the Company has made an adjustment and increase fixed salary by one month since 2018. This adjustment enhances the Company's salary competitiveness in the technology industry, offers better recruitment conditions, and serves as an important recognition of our employees' continuous efforts.

E Ink considers employees as the most important asset and expects to provide a good working environment, salary and benefits to every employee worldwide. In addition to the wage for the employees, we offer festival, year-end and annual performance bonuses based on the profit sharing principle and the organizational and personal performance. Corresponding short-term and long-term incentive plans are available with the contribution of the employee as the core. According to the information from the Market Observation Post System (MOPS) of TWSE, the average wage of E Ink was ranked top 1 in the TPEX-listed optoelectronics industry with more than 500 employees in 2021, reaching NT\$1,285,000, higher than the average salary of NT\$818,000 in the same industry and higher than the average salary of NT\$1,084,000 in the TWSE-listed optoelectronics industry.

Comparison between the Standard Salary of Base-Level Employees and Local Minimum Salary

Item	Taiwan Site	Yangzhou Site	USA Sites
Male	1.08	1.11	1.94
Female	1.08	1.11	1.75

Female-to-male salary ratio

Item	Taiwan Site		Yangzhou Site		USA Sites	
	Female	Male	Female	Male	Female	Male
Non-unit heads	1	1.14	1	1.17	1	1.19
Unit heads	1	1.46	1	1.29	1	0.99
Workers	1	0.74	1	0.98	1	1.24

Note: As most upper executives are male, the salary ratio in the unit head category is diverse.

▼ Number of full-time employees not with supervisory duties, average salary and difference from the previous year in Taiwan

	2020	2021	Difference
Number of full-time employees not with supervisory duties (person)	829	891	↑ 62
Total salary of full-time employees not with supervisory duties (NT\$1,000)	971,975	1,145,288	↑ 173,312
"Average salary" of full-time employees not with supervisory duties (NT\$1,000)	1,172	1,285	↑ 113
"Median salary" of full-time employees not with supervisory duties (NT\$1,000)	1,014	1,100	↑ 86

Note: The average and median salaries for 2021 and the median salaries for 2020 were audited by CPAs.

▼ Wage and bonus differences between male and female employees expressed in percentage



In addition to offering employees a comfortable, safe and humanized work environment, we care about employee health. Therefore, we organize regular health examinations for employees and organize various cultural and intellectual talks, employee travel, family day, and comprehensive clubs for employees to enjoy quality life after work.

▼ List of Employee Benefits of E Ink Taiwan

Wage and Bonus System <ul style="list-style-type: none"> Reasonable salary structure Employee bonus and employee stock option plan 	<ul style="list-style-type: none"> Annual performance bonus Patent bonus
Medical Insurance and Healthcare <ul style="list-style-type: none"> Employee group insurance Employee health checkup Travel insurance 	<ul style="list-style-type: none"> Occupational accident insurance Labor insurance and national health insurance Paid vaccination leave
Thoughtful Benefit System <ul style="list-style-type: none"> Discount for E Ink products Subsidies for childbirth, injury and sickness, hospitalization, emergencies, wedding and funeral expenses Gift certificates/gifts for birthdays, folk festivals 	<ul style="list-style-type: none"> Annual travel subsidies Stress relief massage room Diversified employee dining options and meal subsidies Advance leave and special leave system

Note: Employee bonus and stock options, annual performance bonus, and patent bonus are limited to regular employees.

▼ E Ink Employee Welfare Committee



Activities of Taiwan Sites and Yangzhou Site

Taiwan Site

2021 Epidemic Prevention Activity **No Epidemic with the Pack**

The one-day trip in 2021 was canceled to support the epidemic prevention measures of the government and replaced with the innovative "E Ink Epidemic Prevention Pack". Four totally different premium epidemic prevention packs were offered for selection. This activity was highly praised by our employees.

<p>A Useful Epidemic Prevention Pack</p>	<p>masks + department store gift coupons</p>		<p>+</p> 																																
<p>B Good Looking Epidemic Prevention Pack</p>	<p>exchange codes of a video/audit platform + department store gift coupons</p>		<p>+</p> 																																
<p>C Good Eating Epidemic Prevention Pack</p>	<p>organic fresh food + department store gift coupons</p>	<table border="1"> <thead> <tr> <th>品名</th> <th>單位</th> <th>價格</th> <th>數量</th> </tr> </thead> <tbody> <tr> <td>生鮮蔬菜</td> <td>每斤</td> <td>2.50</td> <td>1</td> </tr> <tr> <td>生鮮肉類</td> <td>每斤</td> <td>3.50</td> <td>1</td> </tr> <tr> <td>生鮮海鮮</td> <td>每斤</td> <td>2.50</td> <td>1</td> </tr> <tr> <td>生鮮蛋類</td> <td>每斤</td> <td>4.50</td> <td>1</td> </tr> <tr> <td>生鮮水果</td> <td>每斤</td> <td>5.50</td> <td>1</td> </tr> <tr> <td>生鮮雜貨</td> <td>每斤</td> <td>3.50</td> <td>1</td> </tr> <tr> <td>生鮮其他</td> <td>每斤</td> <td>3.50</td> <td>1</td> </tr> </tbody> </table> 	品名	單位	價格	數量	生鮮蔬菜	每斤	2.50	1	生鮮肉類	每斤	3.50	1	生鮮海鮮	每斤	2.50	1	生鮮蛋類	每斤	4.50	1	生鮮水果	每斤	5.50	1	生鮮雜貨	每斤	3.50	1	生鮮其他	每斤	3.50	1	<p>+</p> 
品名	單位	價格	數量																																
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生鮮其他	每斤	3.50	1																																
<p>D Delicious Epidemic Prevention Pack</p>	<p>meal coupons + department store gift coupons</p>		<p>+</p> 																																

2021 New Year Gift **Your Own Mug**

We prepared "Your Own Mug" for each employee on the first workday during the Chinese New Year in 2021, in the hope that your mug will accompany you every day and every moment.



2022 New Year Gift **GREEN & SAVE New Year Dish Box**

In consideration that employees were busy and worried about their new year dishes, E Ink prepared the "GREEN & SAVE" New Year Dish Box with selected seasonal fresh food containing balanced nutrition. By doing so, we showed our appreciation to the family members of the employees for their support and hoped that this small gift could send warmth to the employees and their family members.



2021 Family Day **The Lightening Christmas Eve**

E Ink invites employees and their family to the carnival-like Family Day for the families of employees to understand more and better about E Ink's work environment and to develop a higher sense of involvement and enhance employees' organizational cohesion and loyalty in order to retain employees. This event was held in December 2021. A Christmas tree of 2.4 meters high was lightened for the opening of the event. The brilliant and colorful light manifested the atmosphere of Christmas. Food stands were set up for the celebration with games from Switch and Just Dance as the core form of entertainment for our employees. It was an unforgettable event for many.



2022 Annual Party Live Stream - Together We are the Future

The 2022 Annual Party was held in conjunction with the 30th anniversary as the core. The sustainable green energy was the keynote of the theme: "Together We are the Future"! In addition to the information on the lot drawing, the election of the host for the party was one of the highlights of this event. Taking pictures with the I Love E Ink AR picture frame was another engaging activity of the Annual Party. Due to the COVID-19 pandemic prevention measures, the Annual Party was broadcast live online instead, with more than 800 users watching. Although there were no get togethers in person, the idea of a live broadcast was more innovative and unique, displaying the rapidly increasing technological advancements since the start of the pandemic. The arranged activities were the Praise of Poets, the 2021 Senior Employee Recognition, the 2021 H2 Outstanding Employee Recognition, the 2021 Excellent Team Recognition, the E Ink Heritage Award Presentation, and the Annual Party luck draw, all of which were wonderful.



Yangzhou Site



Cake and Zongzi Box presented at Dragon Boat Festival for the employees whose children participated in college entrance examination



Christmas event



International Women's Day gifts



Moon Festival gifts



Gifts for the retired in 2021

2021 Team Excellence

To promote the teamwork culture of E Ink and praise the teams for their result and performance, employees must report their performance as a unit in September of every year. Results of the current years are assessed for selection. The selection criteria is based on five core competencies of the key behaviors of "promoting team success" which includes: common goals, execution, division of work, information sharing, and leading by example, in the hope of stimulating teamwork and shaping corporate culture. The award is given to the annual excellent teams, with each team receiving a maximum of NT\$200,000. The selected teams will be recognized at the annual party.



The epidemic changes the world and facilitates the ESL



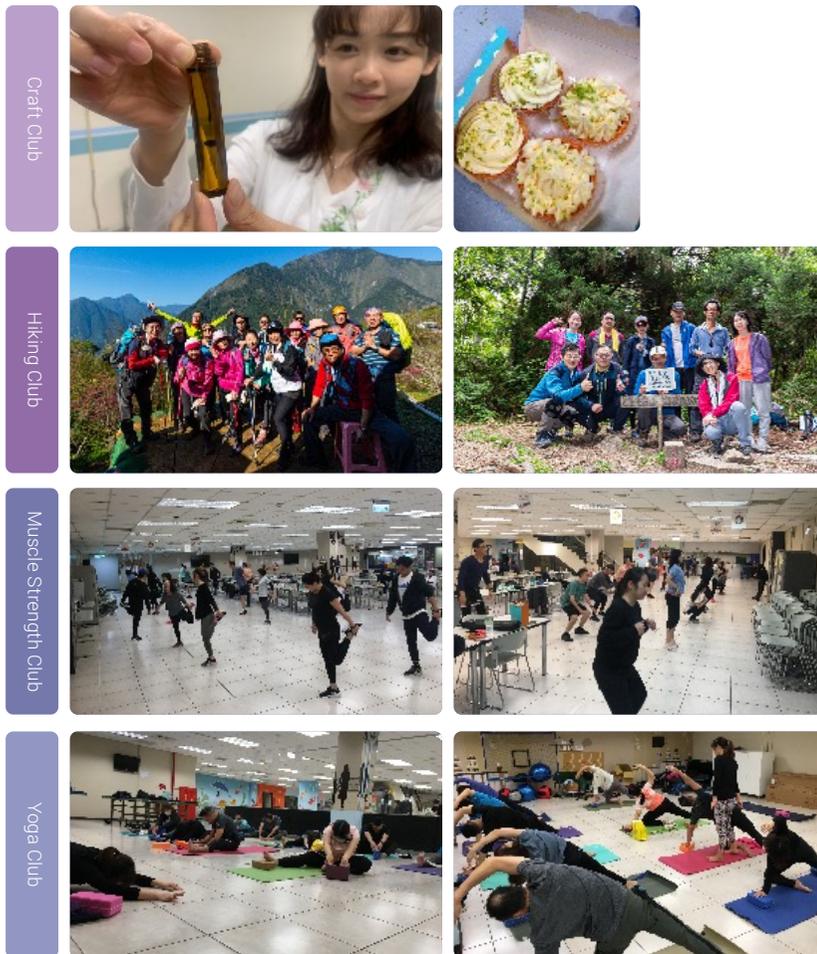
The Fastest Ram Up FPL Team



eNote soars up

Employee Clubs in Taiwan

- Academic: Photography Club, Handicraft Club, Movie Club
- Athletic: Muscle Strength Club, Yoga Club, Badminton Club, Hiking Club, Basketball Club
- Leisure: Movie Club, Video Game Club NEW



Statistics on Parental Leave of Absence

Item	Taiwan Site			Yangzhou Site			USA Sites		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
A: Total applicants of parental leave of absence in 2020	6	2	8	0	0	0	1	3	4
B: Number of employees applying for reinstatement in 2020	9	1	10	0	0	0	1	3	4
C: Actual number of employees reinstating in 2020	6	1	7	0	0	0	0	3	3
D: Number of employees who should reinstate in 2020 applying for leave extension	2	0	2	0	0	0	0	0	0
E: Number of employees reinstating after parental LOA in 2019 continuing service for one year	3	1	4	0	0	0	3	5	8
F: Number of employees reinstating after parental LOA in 2019	4	2	6	0	0	0	3	5	8
Reinstatement rate (%) = C/ (B-D)	86%	100%	88%	-	-	-	0%	100%	75%
Retention rate (%) = E/ F	75%	50%	67%	-	-	-	100%	100%	100%

Note 1: All official employees in Taiwan Sites fulfilling the requirements for parental leave of absence can apply for the leave.
 Note 2: Yangzhou site employees who have been employed for at least two years and have children under the age of one are eligible to apply for unpaid parental leave, which is better than local regulations.

Retirement benefits

Every month we contribute the employee retirement reserve and the labor pension fund with regard to the Labor Standards Act and the Labor Pension Act to ensure employees will not need to worry about their retirement life after devoting their efforts to E Ink.

The Labor Standards Law

requires the Company to contribute 4% of salary every month to the Labor Pension Reserve Fund, which is supervised by the Labor Pension Supervisory Committee, with a balance of NT\$69.81 million in the pension reserve account up the end of December, 2021.

The Labor Pension Act

requires the Company to afford the monthly contribution rate of 6% for the Labor Pension Fund, and the contributions are made to the employees' personal pension accounts set up at the Bureau of Labor Insurance, Ministry of Labor, according to the monthly salary scale approved by the Executive Yuan.

► For further details, please refer to our financial statements.

In addition to offering labor and national health insurance by the law, we arrange group insurance for employees who can also include their family at their own expense in order to extend coverage to their family.

6-3

Diversified Development and Growth of Employees

E Ink expects all employees to possess the DNA spirit of "accountability, teamwork, and innovation" so that employees' capabilities can align with their job descriptions and the six core competencies can be developed in-depth through the E Ink DNA, organizational vision, values, and management philosophy to help build up the capabilities needed to realize the core values and further connect with the Company's management philosophy, goals, and strategies.

Initiating action

The ability to automatically and spontaneously take action to achieve a goal/task or go beyond the requirements. Have a positive work attitude and do not rely on instructions before acting.

1. Quick response
2. Independent action
3. Beyond the requirements

Work standards

Set high performance standards for others and oneself, have a strong sense of mission to complete tasks successfully, and demand oneself to pursue high standards, not because of being asked by others.

1. Set high standards
2. Think thoroughly
3. Assume responsibility
4. Encourage others to take responsibility

Contributing to team success

Actively participate in the team's tasks and contribute to the achievement of the team's goals.

1. Common goals
2. Execution
3. Collaboration
4. Information sharing
5. Leading by example

Adaptability

Maintain high performance when jobs and environments change, adjusting effectively to new work structures, processes, demands and cultures.

1. Try to understand the change
2. Positive attitude towards change
3. Adjust behavior to accommodate change

Continuous learning

Proactively seek out learning opportunities and actively participate in them while applying the new knowledge and skills gained in the workplace.

1. Work-related
2. Appropriate way
3. Expand the effect
4. Apply what has been learned
5. Challenges the unfamiliar

Innovation

Develop innovative and feasible solutions to work situations and try different approaches to work problems or opportunities.

1. Challenge the established patterns
2. Utilize multiple resources
3. Expand the scope of thinking
4. Evaluate different programs
5. Beneficial to work

The cultivation and development of employees is a talent strategy that E Ink attaches great importance to. Through continuous learning and self-growth, we shape the learning culture of the organization. The Company works with its employees to create a positive work atmosphere and environment and to integrate a responsible attitude into the organizational culture, emphasizing the "One More Ounce" spirit. We recognize the value and efforts of each employee, and the fruitful operation results are driven by the efforts of each unit. We also believe that the infusion of new employees will bring us new ideas, and more innovative products to make our organization more dynamic.

E Ink University

In terms of employee training, the Company focuses on global talent cultivation and training with systematic planning of core competencies. We founded E Ink University in 2020 to provide training and learning resources to all E Inkers with diverse, basic and common training courses. We invited internal instructors to build professional maps for different roles and help new employees understand the core of their jobs as soon as possible and more effectively by learning the experiences of the existing employees and creating an organizational language.

2021 Execution Performance in Taiwan Sites



Total training sessions
Over **424** sessions



A total of **14,701**
participants in internal training



A total of **14,584**
training hours



Average satisfaction with the courses
Online **91.6%** Offline **93.8%**

The experience of an employee in the US site



"E Ink University was an important part of my onboarding in 2020 and 2021. E Ink's technology is fascinating, but when I joined it was completely new to me! The E Ink U courses provided a solid foundation for me to jump right in with both feet and having the materials available afterward for review was very useful in quite a few meetings. Some of the courses that I found particularly interesting and helpful were the Moisture 101/201 series, Active Matrix Training, and the TFT Backplane course led by EIH. I have also participated in the Project Management and JMP Knowledge Communities sponsored by E Ink U which provide a forum for sharing of best practices and have given me an understanding of how we get work done along with a better sense of the community and culture at E Ink."

— CaSaundra Gallagher, Snr. Engineer I, Product Design and Integration, Billerica, MA

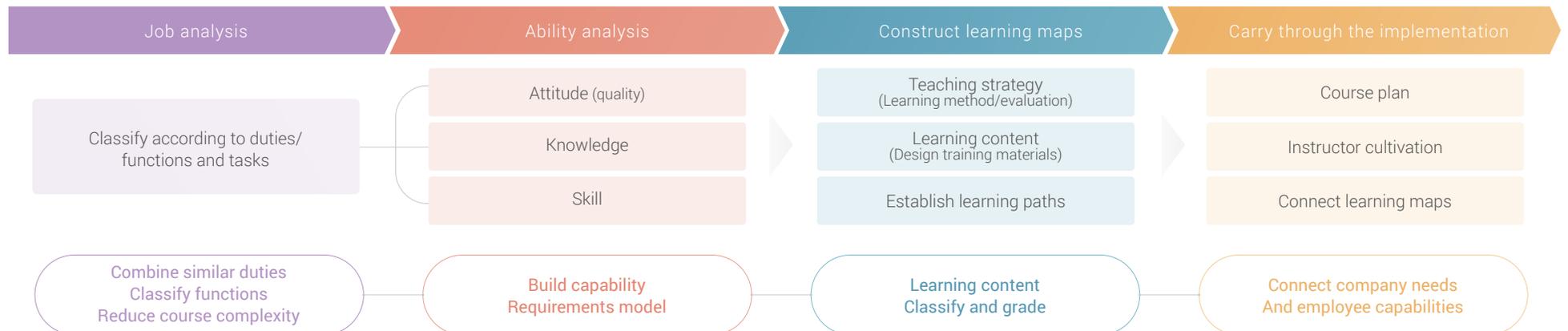


"I believe continuous learning is something I am passionate about and what played a major role in me accepting my offer to join E Ink in 2021. Since joining I've had the opportunity to participate in short courses provide by Society for Information Displays (SID) and internal E Ink U courses to advance my understanding of information displays metrology as well as sustainable development/manufacturing practices. By gaining exposure to information outside of my technical expertise, I have been able to grow as a scientist and better support technical and business ventures at E Ink."

— Marcus Cole, Scientist III, Synthetic Polymer Scientist, Fremont, CA

Training Courses

To systematically improve employee quality and enhance organizational competitiveness, we specifically planned the E Ink Training Road Map to establish a complete training framework and convert strategic maps into ability maps, and then convert ability maps into learning maps, hoping to stimulate organizational creativity and thereby enhance overall competitiveness with comprehensive and abundant learning resources.



Training courses planned by ranks

Based on the organizational culture and competencies, we define the capability bases for all general employee levels, manager-associate level, and division level. We then design training courses and conduct function-based training based on the framework of core competencies, management competencies, and professional competencies to improve employee performance.



Complete training development framework



New employees training

For the educational training for new employees, in order to enable new employees to quickly integrate into the corporate culture and shorten the time for orientation, new employee education and training focus primarily on transmitting the Company's overall culture and organizational structure, enhancing the newcomers' understanding and recognition of the Company, communicating the Company's values, philosophies and resources right away.

Required training courses for new employees

Completion of the required courses is one of the prerequisites for successful probation.

Physical Training

- First Class for New Employees
- General Hazard Education Training
- Safety and Health Education Training for New Employees

01

Online Training(IDL)

- Company Profile and Product Application
- E Ink Guide
- Introduction to Training, Development and Competency
- Introduction to Employee Relations
- Introduction to Performance Management
- Management of Green Products and Restricted Substances
- Corporate Image and Demo Room Use Regulations
- Quality Awareness
- Introduction to Attendance Evaluation and Wage System
- Protection of Trade Secrets and Dissemination of Legal Concepts for New Employees
- E Ink Technology and Work Regulations
- E Ink Business Integrity Code of Conduct
- Introduction to E Ink University Users
- Introduction to the Portal and System of E Ink
- Introduction to the Information System
- Introduction to the Document Control System
- Introduction to the KM System
- Creation and Dissemination of the Intellectual Property Rights Awareness
- How to Hold a WebEx Online Meeting
- VPN Remote Connection and Work from Home Demo
- How to Use Proofpoint Email Protection System
- Introduction to the Electronic Signature System (required for managerial officers)



02

Effectiveness in 2021

Site	Session	Number of Trainee (person)
Taiwan	27	315
Yangzhou	121	310
USA	25	55

New employee mentoring program

After employees enter the Company, the senior employees of the respective departments will be their mentors to help them know their new working environment, corporate culture, professional knowledge, and adapting to their roles more rapidly via on-the-job training, as well as having the ability to handle their work independently. Meanwhile, we have devised a senior mentor guidance plan, ensuring that the new executives of division level and above can fully understand the Company's strategy, organizational teamwork and integrated resources through the guidance of the mentors who are executives of a higher level. This has become our distinctive feature for higher-level executive development.

Profession training maps

In order to systematically improve the quality of our employees and the competitiveness of the organization, we have tailored our training according to the job duty of our employees and planned the initial professional courses and the advanced professional courses in order to develop the training blueprint for each job duty, so as to cultivate the professional ability of each employee. Through professional and rich learning resources, we can stimulate strong creativity and enhance the overall technical competitiveness of E Ink. In 2021, professional maps for 98 roles and 306 corresponding courses were established.



Diverse courses of E Ink University

E Ink University

In 2020, we established E Ink University and a committee composed of representatives from each plan to provide training and learning resources to all E Inkers with diverse, basic and common training courses. Many of the training materials are prepared through the collaboration of instructors from different sites. Currently, we have developed and released courses such as "Introduction to Electronic Thin Film Technology", "Introduction to Python", "Introduction to E Ink" and "Introduction to Electron Optics", and introduced the GlobeSmart cross-cultural communication learning platform. In the future, we will continue to develop more technical and non-technical training and learning resources. These learning activities will help achieve E Ink's goal of creating a shared "collaboration, continuous learning and innovation" culture.

e-Learning Platform

Knowledge management has become a vital issue for enterprise competition and operational management in the 21st century. E Ink perceives organizational knowledge and experience as our critical assets and apart from improving our corporate competitiveness by building upon our core competencies and creating values, we have also introduced our e-Learning Platform - E Ink University in 2019 to provide employees with a platform for knowledge and experience sharing to achieve ubiquitous dissemination of knowledge and make learning on-demand with e-learning. Meanwhile, regarding the learning through the courses, the participants can finish the practices of assignments through E Ink University courses and further receive feedback from the internal professional instructors to deepen the understanding of the learning contents. Through the efforts of our internal instructors, we have not only developed courses on our own but also actively sought and integrated external learning resources to give diversified learning opportunities to our employees. In 2021, we persistently developed 324 internal online courses.



Course introduction screen

Course learning screen

Illustration that department heads can effectively stay on top of the learning status of their employees

Performance system integrated with training records

E Ink spares no effort in promoting the employee education and training. With a view to emphasizing how much we value the core competency culture of "continuous learning," we have connected performance evaluation system with the training records on E Ink University system in 2021, allowing the supervisors and employees to directly review the training records of the year and the preceding years. In addition to including the completion status of courses, the completion status of professional maps for the role, and the number of obtained certifications as a part of the references for performance evaluation was also included. The records also assist supervisors in identifying the learning and training needs of the employees and provide further necessary resources or assistance.

AOE certification training by the General Administration of Customs (China)

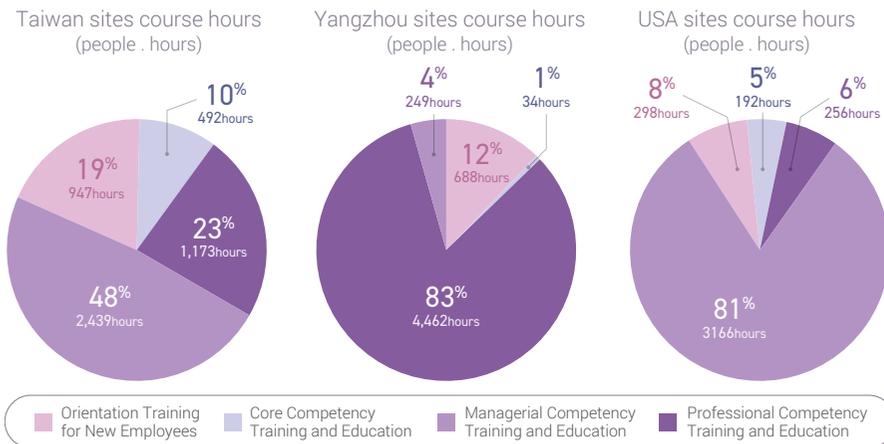
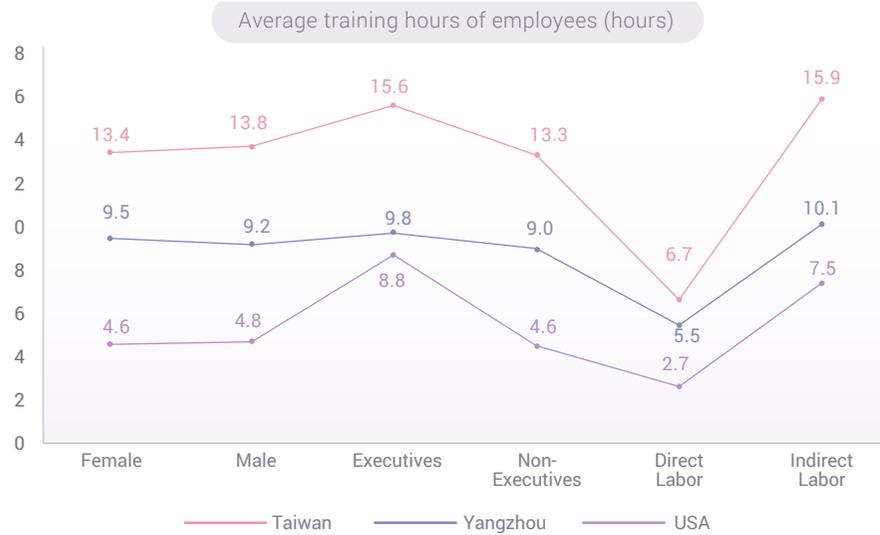
In 2020, the Yangzhou Site submitted its application to the General Administration of Customs for advanced certification qualification as an "Authorized Economic Operator (AEO)" by launching a series of professional training courses required for AEO certification. The training topics include "Training on Customs Laws", "Trade Safety", "Information Security", "Supply Chain Security", "Crisis Management" and so forth, and they were intended to strengthen relevant personnel's understanding and awareness of pertinent customs laws. A total of 1,905 employees took part in the training.

By receiving the advanced certification qualification as an AEO from the General Administration of Customs, E Ink will be able to benefit from various competitive edges, including:

1. Boost Yangzhou site's (Transcend Optronics) reputation and credibility.
2. Eligibility to benefit from various stimulus measures provided by different Chinese ministries.
3. Enhanced versatility in the management of site operation.
4. Reduction of relevant expenses and expedited customs clearance.
5. Improvement of relevant management capabilities to ensure Yangzhou Site's operational compliance.



▼ Achievements of Training and Education in 2021



In 2021, the average training cost per employee at Taiwan sites came to NT\$ 1,257. In the near future, our USA sites will be accounted for in relevant statistics. Not only that, we will continue to plan and expand upon existing employee training according to E Ink's objectives, employees' learning blueprint, international trends, and product development status.

6-4 Maintaining a Safe and Healthy Work Environment

6-4-1 Occupational Safety and Health Management

While employee safety and health are exceptionally important to us, we strive to build a healthy, safe, and comfortable work environment, while continuously improve it along the way, and minimize the opportunity of incidence of occupational diseases. In addition, enterprises must put the environment, safety, and health (ESH) (of the environment) first in order to pursue sustainable operations. With appropriate assessment tools, we propose management plans and implement them in everyday work to uphold the balance between ESH and corporate development in order to achieve sustainable operations. For the relevant occupational safety and health policy, please refer to Chapter 4-2 "ESHE Policy."

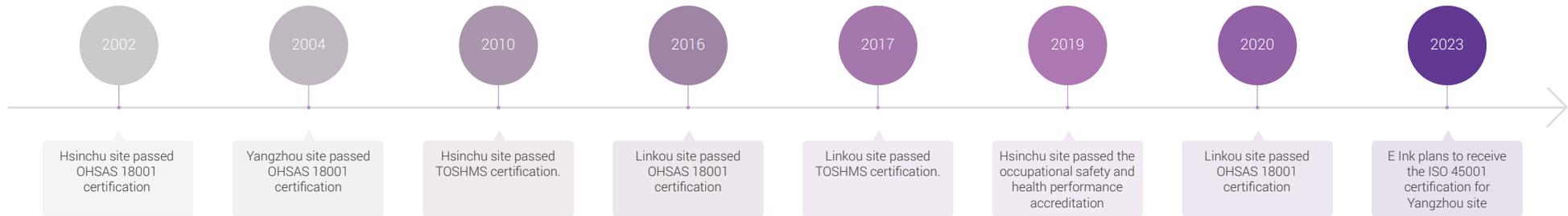
Receiving Occupational Safety and Health Management System Certifications

Starting from 2002, we have passed the OHSAS 18001 occupational health and safety management system certification, TOSHMS (Taiwan Occupational Safety and Health Management System) certification, etc. In 2020, we have also passed the ISO 45001 Occupational Health and Safety Management System Certification version update. By receiving these certifications, we have further guaranteed the occupational safety of employees and contractors. We plan to receive the ISO 45001 certification for our Yangzhou Site in 2023.



◀ (Left)
E Ink ISO 45001 Certificate

▶ (Right)
E Ink CNS 45001 Certificate

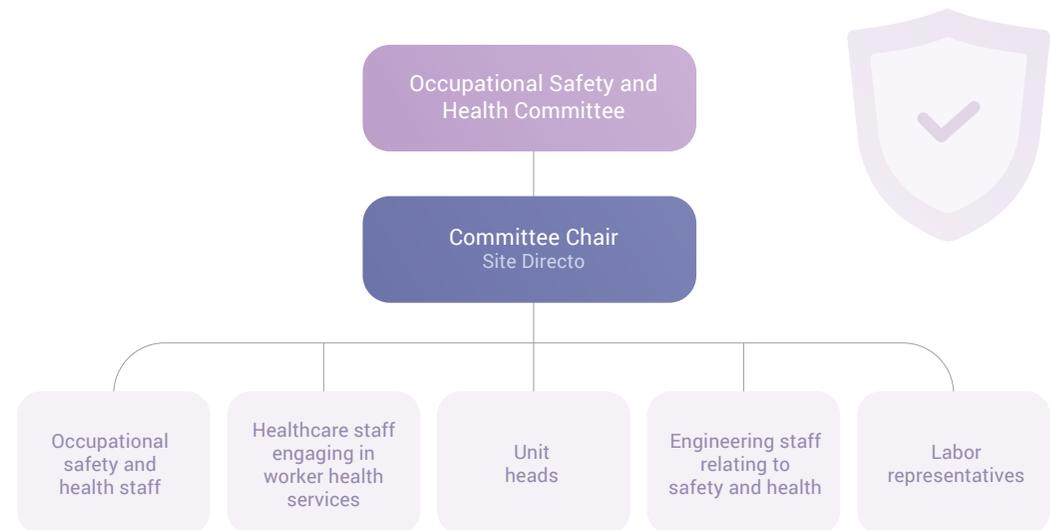


▼ The programs and expenses invested in promoting the environmental safety and health management system from 2018 to 2021

Item		2018	2019	2020	2021
Completed management programs at Taiwan sites	Number of Complaints	9	8	8	4
	Total expenses (NT \$10,000)	230.5	160.5	303.3	68.4
Completed management programs at Yangzhou site	Number of Complaints	31	34	48	55
	Total expenses (RMB 10,000)	32.8	41.5	52.0	57.2

Establishment of the Occupational Safety and Health Committee for protection of good work environment

We have established an occupational safety and health committee by law in each site, and the committee holds a meeting every quarter. The Occupational Safety and Health Committee meeting is chaired by the site manager. Attendees include occupational safety and health staff, department heads, engineering staff relating to occupational safety and health, healthcare staff engaging in worker health services, and labor representatives. At the meeting, affairs relating to occupational safety and health, including education and training programs, plans for improving the work environment, safety and health management performance, contractor management, and health promotion are discussed. After the meeting, a report will be sent to the most senior executive of the site, responsible units, and labor representatives. In 2021, there were 16 labor representatives from the Hsinchu site, accounting for 67% of the number of committee members who should attend the meeting, and 16 labor representatives from the Linkou site, accounting for 50% of the committee members who should attend the meeting. Through the quarterly committee meeting, we review the site's management approach, compliance, and effectiveness, aiming to build a good working environment for employees away from worries.



Statistical analysis of employees' occupational injuries and disabling injuries

We conducted calculations according to the definition of occupational accidents as specified in the Occupational Safety and Health Act and the important statistical indicators for disabling injuries issued by the Global Reporting Initiative (GRI) and analyzed the calculated Lost-Time Injury Frequency Rate, disabling injury frequency rate (FR) and disabling injury severity rate (SR) to formulate improvement measures for ensuring the safety of employees at work. Hsinchu and Linkou sites joined the "Zero Accident Work-Hours" campaign to express their determination to eliminate occupational injuries.

Statistics on Industrial Safety Incidents

Accumulated incident-free work hours at Hsinchu Site

2,324,925 hours
2019/12-2021/12

Accumulated incident-free work hours at Linkou Site

943,812 hours
2020/07-2021/12

Analysis of causes of employees' occupational injuries and disabling injuries

In 2021, there were no occupational injuries resulting in over 1 lost day or major accidents as defined by the Ministry of Labor at our Hsinchu site. For the 17 on-site and 10 off-site occupational injuries that occurred at our Taiwan, Yangzhou, and USA sites, we have implemented improvement measures for major occupational injuries in the hope of preventing such accidents. Other workers (e.g. contractors, interns, etc) did not suffer from occupational injuries in the same year.

	Major occupational injuries	Improvement
 <p>In-house</p> <p>Clamping injuries, injuries due to operational mistakes or falling objects, falls, glass cuts, bee bites, etc.</p>	<ul style="list-style-type: none"> For clamping accidents, steps have been taken to improve the risky area near the equipment in question by installing a safety sensor and putting a protective cover at the risky spot for the operation to prevent operators' hands or heads from getting caught accidentally. We will continuously improve the safety of equipment, strengthen protective measures, increase the awareness of safe operation, and reinforce on-site personnel management to reduce the possibility of occurrence of accidents and lower accident severity rate. 	
 <p>Off-site</p> <p>Traffic accidents during commutes</p>	<ul style="list-style-type: none"> Relevant courses have been organized to convey traffic safety concepts in order to raise the awareness of driving and road safety and thereby stem traffic accidents 	

Occupational Injuries Over the Years

Unit: Incident

Region	Type	2017	2018	2019	2020	2021
Taiwan Site	In-house	1	5	3	1	3
	Outside of site (traffic accidents)	17	7	6	6	8
	Subtotal	18	12	9	7	11
Yangzhou Site	In-house	7	4	6	8	7
	Outside of site (traffic accidents)	7	2	2	4	2
	Subtotal	14	6	8	12	9
USA Sites	In-house	4	1	2	2	7
	Outside of site (traffic accidents)	-	-	-	-	-
	Subtotal	4	1	2	2	7

*As only in-house incidents were accounted for in the USA Sites, no data on traffic accidents outside of the site were recorded.

Statistics on the Lost-Time Injury Frequency Rate (LTIFR) in 2021 - Full-Time Employees

		Work-related injuries		Total hours worked in accounting period	Number of occupational injuries	LTIFR ^{Note 1}
		Number of lost-time injuries	Number of fatalities			
Taiwan Site	Female	1	0	592,455	4	1.69
	Male	2	0	1,263,071	7	1.58
	Subtotal	3	0	1,855,526	11	1.62
Yangzhou Site	Female	1	0	1,666,441	2	0.60
	Male	6	0	1,632,900	7	3.67
	Subtotal	7	0	3,299,341	9	2.12
USA Sites	Female	1	0	184,982	1	5.41
	Male	6	0	452,936	6	13.25
	Subtotal	7	0	637,918	7	10.97
Note	Taiwan's sites: Of the 11 occupational injuries, 3 occurred in the sites and the others were due to traffic accidents. Yangzhou Site: Of the 9 occupational injuries, 7 occurred in the sites and the others were due to traffic accidents. USA Sites: Of the 7 occupational injuries that occurred in the site, 6 involved allergic reactions resulting from the bites of bees.					

Note 1: LTIFR = (Number of lost-time injuries / Total hours worked in accounting period) x 1,000,000 Hours

▼ Statistics on the Lost-Time Injury Frequency Rate (LTIFR) in 2021 - Other Workers (e.g. Contractors, etc.)

		Work-related injuries		Total hours worked in accounting period	Number of occupational injuries	LTIFR
		Number of lost-time injuries	Number of fatalities			
Taiwan Site	Female	0	0	489,492	0	0
	Male	0	0	955,353	0	0
	Subtotal	0	0	1,444,845	0	0
Yangzhou Site	Female	0	0	707,623	0	0
	Male	0	0	1,225,993	0	0
	Subtotal	0	0	1,933,615	0	0
USA Sites	Female	0	0	7,558	0	0
	Male	0	0	13,565	0	0
	Subtotal	0	0	21,123	0	0

Note 1: The interns of Yangzhou Site are not full-time employees and thus counted as a part of the other workers.

▼ Statistics on Disabling Injuries Over the Years

-Both the FR and SR in Taiwan sites and the Yangzhou site were 0.



Strengthen the contractor's construction work management

The Yangzhou site focuses on contractors' construction safety management and pandemic prevention. Thus, in addition to offering training, the site requests contractors to present their "health codes, travel records, vaccination records and RT-PCR test reports" when entering the site. In 2021, the site also provided further training for monitoring personnel to improve their awareness of safety while adopting a higher standard in terms of supervision of contractors' operations to ensure full compliance with safety requirements. A total of 71 pre-construction safety training sessions were conducted for 19 contractors in 2021, with a 100% training rate. There was no entry of contractors tested positive for COVID-19 into the site in 2021.



Contractor training



Site construction monitoring personnel training

6-4-2 Risk Management in the Workplace

Identification of hazards in sites and Internal Inspection

The "Procedure Governing Hazard Identification, Risk Evaluation and Environmental Considerations" established with reference to the ISO 45001 occupational health and safety system is used along with the Hazard for the identification of potential risks and hazards for each manufacturing process. The evaluation result would classify risks as "acceptable high risks" and "unacceptable risks" and serve as the basis to determine the priorities of items/aspects for improvement. The control measures for the identified risks would either be added to the list of improvement measures or be used as checklist items for daily management. In 2021, 1,575 hazard identification and risk assessments were carried out in the Hsinchu site. There was a total of 452 items with high risks and unacceptable risks. The main risks included injuries due to getting caught in or drawn into machines or those because of falling objects, inhalation of odors, chemical exposures, and contact with high- or low-temperature objects. Three of the listed incidents above were included in a management program for improvement and the remaining ones have been controlled through documentation and daily management. In 2021, E Ink performed the internal inspection of Environment, Safety, Health, and Energy (ESHE) policy, and a total of 6 suggestions have been pointed out; the subsequent improvement percentage has reached 100% in 2021.

▼ Hazard identification and risk assessment result

Site	Hazard and risk assessments	Items with high risks and unacceptable risks	Improvements for management programs
Hsinchu Site	1,153	199	1
Linkou Site	422	253	2
Total	1,575	452	3

▼ Improvements for risk management programs

The implementation rate of improvement plans for three management programs in 2021 reached 100%.

Management programs	Goals for 2021
Installation of guardrails and reinforcement of fall protection nets for CUB	Completion of the reinforcement of the fall protection nets
Renewal of fire doors in the gasification area	Reinforcement of fire doors for fire compartments
Installation of guardrails on the roof of the chemical warehouse	Completion of installation of the guardrails on the roof

Improvement of employees' health and awareness of personal protection

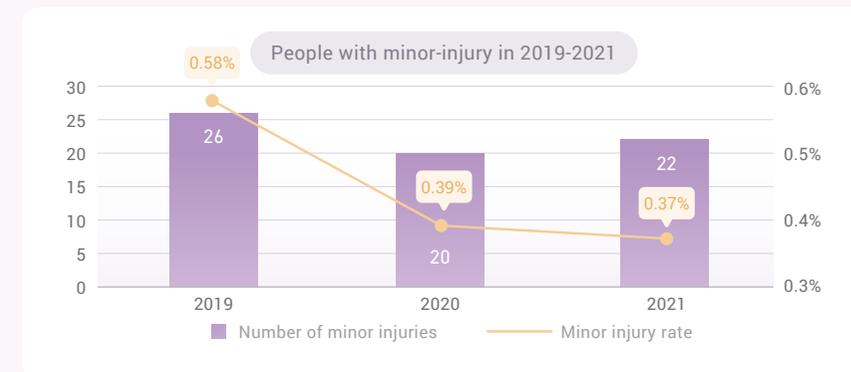
In work environment management, we periodically detect toxic substances in the environment by the law and provide workers with appropriate personal protective equipment (PPE) to ensure employees work in a comfortable and healthy environment.

In addition, we arrange special physical examinations for employees responsible for tasks with special health hazards in Taiwan sites, as specified in the "Rules for Worker Safety Protection". Such tasks with special hazards are those involving n-hexane, lead and nickel. Different levels of health management for special tasks are ensured for the employees according to the Company's employee health management procedure. An occupational disease doctor is on-site providing services in order to understand the hazards of the work and give improvement suggestions. Instead of neglecting the prevention and promotion of hazards from special tasks in the fight against the pandemic, we organize online courses to encourage health maintenance against the hazards of special tasks. In the fight against the pandemic, we organize online courses to encourage health maintenance against the hazards of special tasks. Employees responsible for such tasks may make attend the courses at any time and are able to know how to prevent and avoid occupational hazards through the doctor's easy-to-understand explanation.

Reinforce personnel minor-injury management and prevent allergy incidents

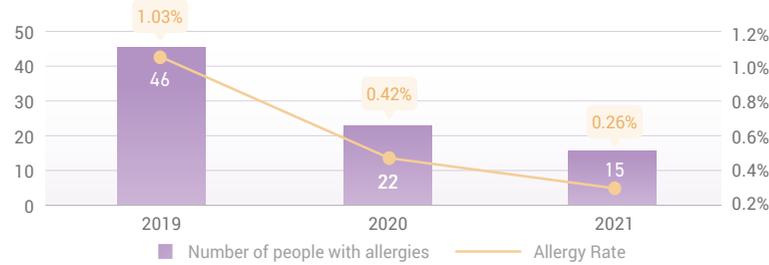
In order to curb the occurrence of major incidents, the Yangzhou site continues to prevent minor injuries in the site, and important measures include:

1. Consider the source of risk identification and engineering protection, and adopt control programs.
2. Standardize personnel fetching/wiping glass practices.
3. Adopt a daily inspection system (strict inspection of personnel gloves wearing, and fetching, wiping glass practices).
4. Reduce personnel contact with glass, the use of suction balls to fetch glass.
5. Continue to pursue 100% employee on-the-job training and qualification for assessment.
6. Continue the data collection and analysis of minor injury events to make timely improvements.
7. Equip all personnel in the face of occupational hazards with protective equipment and audit regularly the use of the protective equipment.



Employees responsible for such tasks may make attend the courses at any time The Yangzhou site surveyed the allergy symptoms of employees having contact with chemical substances related to work with questionnaires. In 2021, there were 15 allergy incidents, with an allergy rate of 0.26%, achieving the annual KPI of ≤2%, and no serious allergy cases occurred. When analyzing the causes of the allergy incidents in 2021, all incidents were concentrated in new employees who had been employed for less than three months and needed a certain period of adaptation to the work environment. Some of them showed allergic reactions. There was no incident involving allergies that spread widely in 2021. The main body parts suffering from allergy symptoms were the backs and fingers. The causes of the allergy symptoms were mostly having contact with alcoholic substances and wearing impermeable gloves. To prevent personnel allergy incidents, more preventive measures are implemented, such as further training personnel how to wear protective gloves the right way and teaching them how to adapt to the environment. We also keep track of the condition of people suffering from allergies to provide them with timely assistance.

People with allergies in 2019-2021



Use of personal protective equipment corresponding to the types of risks from manufacturing processes in Taiwan sites

Through the hazard identification evaluation pursuant to ISO45001, hazardous risks in the sites have been identified. The Linkou site's material process areas are at high risk of health hazards. There are tasks including the weighing and feeding of powdered materials, the packaging, feeding and rinsing tasks for organic solvents, and the operation of centrifuges and ultrasonic cleaners, which are associated with health hazards caused by dust, organic solvents and noise, respectively.

Risk control measures against health hazards include not only improvement construction works and administrative management, but also the use of personal protective equipment, which is the ultimate line of defense for workers. To achieve the best protective effect, personal protective equipment shall be chosen based on the characteristics of on-site tasks, such as the dust particle size, the type and nature of chemical substances, and the decibels of noise. Protective equipment with appropriate specifications shall be used to make sure that they can protect on-site employees from being exposed to hazardous risks in such tasks, for example, gas masks equipped with cotton filters that are able to filter a certain size of particles and have suitable filtration efficiency, appropriate canister filters, safety glasses and gloves with chemical resistance, and hearing protectors that reduce the noise exposure level. The different natures of manufacturing processes lead to different types of hazards. Therefore, requirements for wearing protective equipment shall be adapted to the processes. The Industrial Safety Section and production units have defined the requirements for wearing protective equipment in process areas. First of all, for on-site tasks, lab coats, safety glasses, gloves, masks, and safety shoes are required. Secondly, appropriate protective equipment shall be used based on the types of risks from manufacturing processes. For example, personnel performing tasks involving organic solvents and dust shall wear gas masks (with cotton filters) and those who work in areas with noise shall put in earplugs or put on earmuffs.

In addition to the correct choice and use of protective equipment, its management is the key. If the protective equipment fails, the user will be directly exposed to dangers. Therefore, all protective equipment must be cleaned regularly and the canister filter of gas masks shall be replaced on a regular basis. A visual inspection shall also be conducted monthly for replacement of any damaged or degraded equipment to ensure that the personal protective equipment is functional.

Area	Tasks	Personnel	Lab coat	Mask	Safety glasses	Earplugs	Safety shoes	Gas mask	Anti-static wristband	Note:
	Non-operating	all	/	V	/	/	/	/	/	
	Handling reactions	Pigment personnel	V	O	V	/	V	O	V	
	Centrifugation/ rinsing/caking	Pigment personnel	V	O	V	V	V	O	V	
	Weighing powdered materials	Pigment personnel	V	/	V	/	V	V	/	
	Weighing solvents	all	V	/	V	/	V	O	V	
	Ultrasound room	IP personnel	V	/	V	V	V	O	V	
	Rising IP vessels	IP personnel	V	/	V	/	V	V	V	
	IP compounding	IP personnel	V	O	V	/	V	O	V	
	Analysis room	Analysts	V	O	V	/	V	O	/	
Whole area	Constructions works	Contractors	/	●	/	/	/	/	/	Material department personnel shall be present



Optional
 V Required
 O Alternative
 ● The contractor is required to prepare its own PPE; if it does not have one, the material department will provide it with PPE



Area: [Red] [Yellow] [Blue] [Green] [Purple] [Orange] [Dark Blue] [Light Blue] Analysis room
 task: [Red] [Yellow] [Blue] [Green] [Purple] [Orange] [Dark Blue] [Light Blue] Analysis room
 task: Weighing solvents Weighing powdered materials

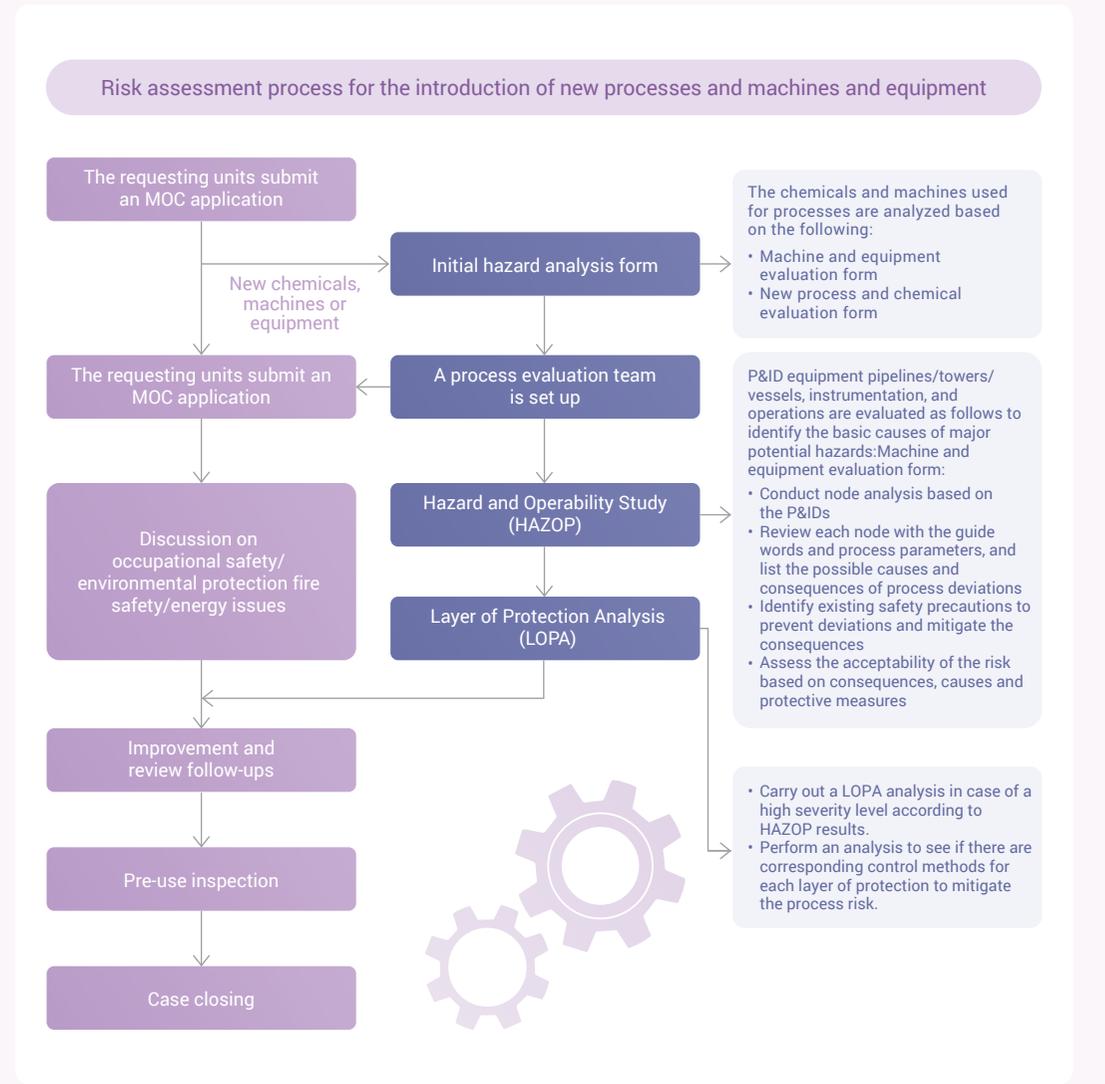
Enhance mechanical safety in sites

Risk assessment process for the introduction of new processes and machines and equipment

In response to the future demand for Front Plane Laminate (FPL) production capacity, we will expand the FPL line at our Hsinchu site and introduce the FPL process at the Linkou site, from material production, FPL coating, lamination to cutting and packaging. The establishment of the new FPL line, from space planning, the purchase of new machines and equipment for each process, trial production, to the start of mass production and waste generation, is a significant change to the Hsinchu site, and is different from the original processes and machine types. In accordance with the occupational safety and health regulations and ISO 45001 requirements, we perform environmental safety and health change management and verify compliance with regulations. Risk assessment is also used to confirm regulatory compliance, machine equipment and process safety levels to enhance the intrinsic safety of machines and equipment and reduce process operation risks.

With the establishment of the new FPL line at Hsinchu Site, a new assessment method has been introduced into the risk assessment of environmental safety and health change management, which is also more stringent than before. For newly purchased machines and equipment, we hope to apply the concept of source management to improve the intrinsic safety of machines and equipment. From the design and manufacturing stages of the machine and equipment, we implement measures such as hazard identification, risk assessment and risk reduction safety design. For the new chemical process, we apply the methods from the Process Safety Assessment and Counseling conducted by the consultant of the Safety and Health Technology Center in 2019: Hazard and Operability Study (HAZOP) and Layer of Protection Analysis (LOPA) evaluations are introduced into the change management of the new FPL line at Hsinchu site. Through the analysis process, the frequency of deviation events is taken into consideration and presented in a qualitative or semi-quantitative manner. Eventually, the risk matrix, the risk level of the process is known, and the risk of fire and explosion caused by out-of-control process reaction is reduced.

Since 2021, Hsinchu and Linkou sites have implemented 29 projects with respect to environmental safety and health change management, 14 of which are related to the establishment of the new FPL line at the Hsinchu site and are ongoing. As a result of the risk assessment of environmental safety and health change management, a total of 235 items have been listed for follow-up and improvement, of which 120 items have been completed and the remaining items are under continuous implementation.



Safety and protective measures at Hsinchu Site

1. Explosion prevention areas for production lines are arranged with explosion-proof technology. Electrical facilities are installed to reduce the risk of fire hazards.
2. The nitrogen purging process is incorporated into processes, and the air-tightness between equipment is ensured to lower the content of oxygen in organic environments (below 5 vol.%) and thereby reduce the risk of explosion.
3. All equipment and transmission pipelines are grounded or protected from static electricity to avoid sparks.
4. The PLC's AI control interface is used to control process parameters effectively and for immediate prioritized tripping and warning.
5. The tank positioning mechanism and drip pan design can help reduce the risk of the leakage of organic substances.



To reduce the escape risk, raw materials are in the liquid state and solvents are transferred through pipelines



Anti-static and grounded devices



The nitrogen system keeps the oxygen content < 5 vol%



PLC control enables automatic exhaust when the pressure is too high and prevents the vacuum valve and exhaust valve from opening at the same time.



PLC's HMI system features timing and temperature control functions and enables immediate tripping and warning.



The tank positioning mechanism prevents equipment from starting to stir when it is not closed and not in the right position to reduce the risk of organic substances splashing/leaking and of objects drawn into or caught in the equipment

Case study - Reduction of the pressure supplied to TM2 Sealing Tank

In the TM2 Sealing Tank incident that occurred on November 22, 2020, an occupational accident occurred on site due to the inconsistency between the Sealing Tank's design strength, operating pressure, and the long-time use of the Sealing Tank which caused its screws to break. In addition to investigating the accident, the legal compliance and the operation of the Sealing Tank involvement in unacceptable risks consists of improvements and follow-ups which are included in the management program and prioritized in 2021.

The management program aimed at reducing the pressure supplied to the TM2 Sealing Tank to 0.5kg/cm². Therefore, the following engineering control and administrative management measures were implemented:

1. A lower pressure to 3kg was set for the site affairs unit's secondary pressure regulating valve.
2. The operating parameter control of the process was adopted.
 - The diameter of the pipe from tank to gear pump was increased from 3/8" to 1".
 - The operating pressure of the process was lowered from 7kg/cm² to 0.5kg/cm².
3. The full bore safety valve was set up, with a blow-off pressure of 1 kg/cm².

The gas pressure control from the source, namely the site affairs unit, can significantly reduce the risks resulting from abnormal pressure. The operating parameter control of the process can improve the pressure reduction while maintaining the glue supply equipment operation of the original process. Moreover, the newly added full bore safety valve can be a second safety protection mechanism to protect the operators against risks.



Lower pressure setting of the secondary pressure regulating valve



Newly added full bore safety valve

Emergency Response Process and Exercises

We have established an emergency response process and organized all kinds of exercises every year according to the law for all employees to get familiar with the emergency report, emergency response, and emergency evacuation processes in order to reduce the significance of impacts when an accident breaks out. In 2021, a total of 28 exercises were arranged in Taiwan sites and Yangzhou Site.

	Taiwan Site	Yangzhou Site
Personnel evacuation drill	2	9
Exercise for fire emergency response and fire equipment use	3	9
Emergency response exercise for leakage of toxic gases/chemicals/gas	2	3

2021 emergency response training at Hsinchu Site

In April 2021, the Industrial Safety Section found that the extension cord used by the lab had old and worn sheathing and thus posed a risk of fire. To enhance the employees' awareness of such hazards, an emergency response exercise for "fire caused by extension cords" was specially formulated to increase the employees' familiarity with the response process for fires and reduce the injury rate of personnel. There were 11 employees participating in this exercise.

Before the emergency response exercise

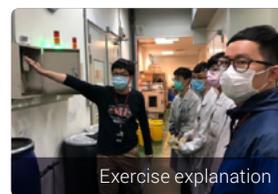
-Work arrangement of personnel

- We discussed with the participating personnel about the manpower deployment to make reasonable arrangement of commanding, reporting, firefighting, safety protection and the work of Evacuation Guidance Squad, adopting a simulation model close to the real situation to simulate the actual conditions of the accident.
- The attending production engineer was in command, the workers took on the role of the Firefighting Squad, while engineers of neighboring operating areas were responsible for turning off the power and guiding evacuation as the Safety Protection Squad. We also simulated the transfer of command authority to the executive arriving at the location subsequent to all that was described above. Authority of investigation and handling after the accident were handed over.

Emergency Response Exercise Result

-Personnel understanding of the accident response process

- The production engineer understood the exercise process well. Instead of repeating the script, he had his own ways of commanding and gave clear instructions.
- The on-site workers were aware of the fire extinguishers locations. They were also familiar with the fire extinguisher mnemonic. Were nimble and cooperative. Engineers of neighboring areas showed responsibility by turning of the power as well as by guiding evacuation exercise.



Exercise explanation



Accident reporting



Fire extinguishing



Turning off power



Evacuation

Review after Exercise

-Enhancement of the employees' awareness of work environment safety

- After the exercise, a review meeting was held to promote related points for the defect found in this audit. For instance, an extension cord shall be checked and confirmed as qualified before use, and shall be replaced immediately when its sheathing has been worn or deteriorated.



Review meeting

6-4-3 Healthy and Happy Workplace

Building up a Safe Workplace

Since 1998, we have been committed to providing a safe and secure work environment. In 2017, we participated in the "Healthy Workplace Certification" organized by the Health Promotion Administration for the first time and obtained the "Healthy Workplace Certification Mark for Health Promotion Label" in 2019. With the goal of creating a healthy workplace and providing employees with a secure work environment, we are striving to build a smoke-free workplace, obtain workplace security certification, and stress the importance of healthy eating and exercise to enhance employees' self-care and health knowledge and reduce the risk factors of unhealthiness and stress.



Healthy workplace certification

Promoting Workplace Maternal Health Care for Women

To take care of the maternal health for women in the workplace, the Company provides the following benefits and care measures:

- Prohibiting pregnant or breastfeeding female workers from performing dangerous and harmful tasks.
- Sending congratulation cards by e-mail and "Happy Pregnancy" kits to pregnant employees on sites.
- Establishing a separate milk collecting room, sterilizing cleaning tools and providing parking spaces for breastfeeding and pregnant women.

Offering First-aid Training Courses and Installing AED on Sites

In recent years, sudden heart attacks have become an important global public health issue of the 21st century. In an effort to create a truly safe and secure work environment for all employees, we have placed an automated external defibrillator (AED) unit each at both Hsinchu and Linkou Sites in 2016. The AED and cardiopulmonary resuscitation training is provided in the monthly occupational safety and health education for new employees, and professional instructors are invited every 3 years to conduct relevant training for all employees to actually try out the practices. So far, we have provided a total of 13 sessions, with 97% of employees achieving training completion. In addition, our sites in Taiwan have successfully received the "AED Secure Place Certification," further enhancing the environment safety.



AED Secure Place Certification - Taiwan Sites

Continuously Establishing a Healthy Workplace during the Pandemic

In 2021, the affects of the COVID-19 pandemic persisted as it continues to impact all of our daily lives. The question of how to strike a balance between the current conditions caused by the pandemic and the healthy life has been a recent consideration for E Ink when it comes to the issue of health promotion. Meanwhile, our pandemic prevention policy and diverse information dissemination regarding the pandemic prevention have been unceasingly implemented!

- Promoting personal hygiene through ePaper bulletin board in public spaces.
- Providing masks and implementing the policy of wearing a mask during working time.
- Requiring the employees to get rapid COVID-19 testing after a long weekend to avoid cross-infection among employees.
- Making use of the social network so that the employees can know our latest pandemic prevention policy first-hand.
- Establishing a health care notification mechanism to care for the employees who returned to Taiwan from abroad, made close contact with confirmed cases, or are generally not feeling well, with self-health management links and performing health management tracking sent by the company infirmary.
- Using contractor visit QR codes and visitor ePaper health reports to enhance the health reporting and control over the number of people while reducing unnecessary waste due to physical paper reports.





Temperature scanner and alcohol dispenser



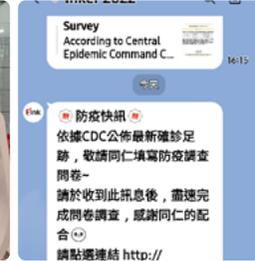
Checkerboard seating and dividers in dining areas



Splitting shifts and off-site working



Pandemic prevention promotion



Inker 2022 social network



Visitor and contractor health report completed through the form of eBooks and QR Code

Holding Health Promotion Activities

Organizing the "Epidemic Prevention & Zero Contact for Your Health!!!" program

The new life campaign for COVID-19 prevention has been going around the world. To avoid gatherings and contacts with others, the Company has held small activities such as weight management competition, 10,000 steps for health, iSport jumpers, health-related courses, and eTasks based on the concept that "solo exercising can also be enjoyable." Through the health promotion activities, our employees could stay happy and relaxed during this stressful pandemic period. Over 400 people attended this program.

Activity	Rule	Effectiveness
Task 1: Weight management competition	There were 3 kinds of awards. Winners are limited to one win only. 1. Top 3 participants who lost the most weight. 2. Top 3 participants with the best body weight percentage. 3. Top 3 participants for the weight maintenance award. The 3 winners were those who lost the most weight, with the final weight in the last competition in 2020 as a starting point.	Attended by 92 participants; a total weight loss of 166.8kg achieved.
Task 2: 10,000 steps for health	The participants recorded their daily steps via step counting tools like step tracker bracelet, cell phone or pedometer, and submitted the photos of data every 2 weeks for total step calculation. Those exceeding 450,000 steps in total could take part in the lucky draw.	Attended by 125 participants; a total of 38,723,468 steps achieved (equivalent to traveling around Taiwan for 38 times).
Task 3: iSport jumpers	The infirmary provided a jump rope pedometer. 4 weeks later, those with a record of at least 10 times of jumping rope (100 steps or above for each time) could get such a jump rope pedometer.	Attended by 51 participants; a total of 63,240 steps achieved.
Task 4: Online health-related courses	Professional dietitians and exercise specialists were invited to make videos about how people can maintain a healthy eating lifestyle during the pandemic and avoid sports injuries during home exercise.	Attended by 141 participants.
eTasks	Those who finished three of the above tasks could take part in the lucky draw.	

Improving Work Environment

E Ink has been improving the public facilities, environment and services in the sites to further improve the performance of employees.

Office product placement

In order to promote the application of E Ink's products in the administration building, the general affairs department has come up with an idea and used the production line experimental materials to conduct relevant applications and practical tests. The placement and application of ePaper can be seen everywhere in E Ink, so that guests and visitors are greeted with surprises wherever they go. At the same time, the field test results will be fed back to the R&D and product development personnel, so that the product can be perfected in the future design.



Moveable
ePaper signage



Visitor
identification badge



ePaper car badge



Passenger elevator
pandemic prevention
promotion

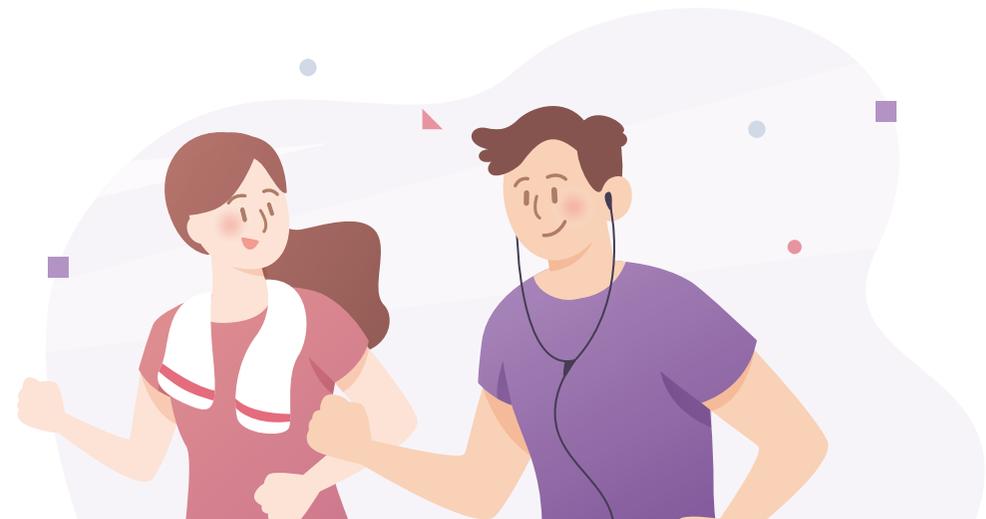
Environmental cleanliness enhancement and hardware upgrade

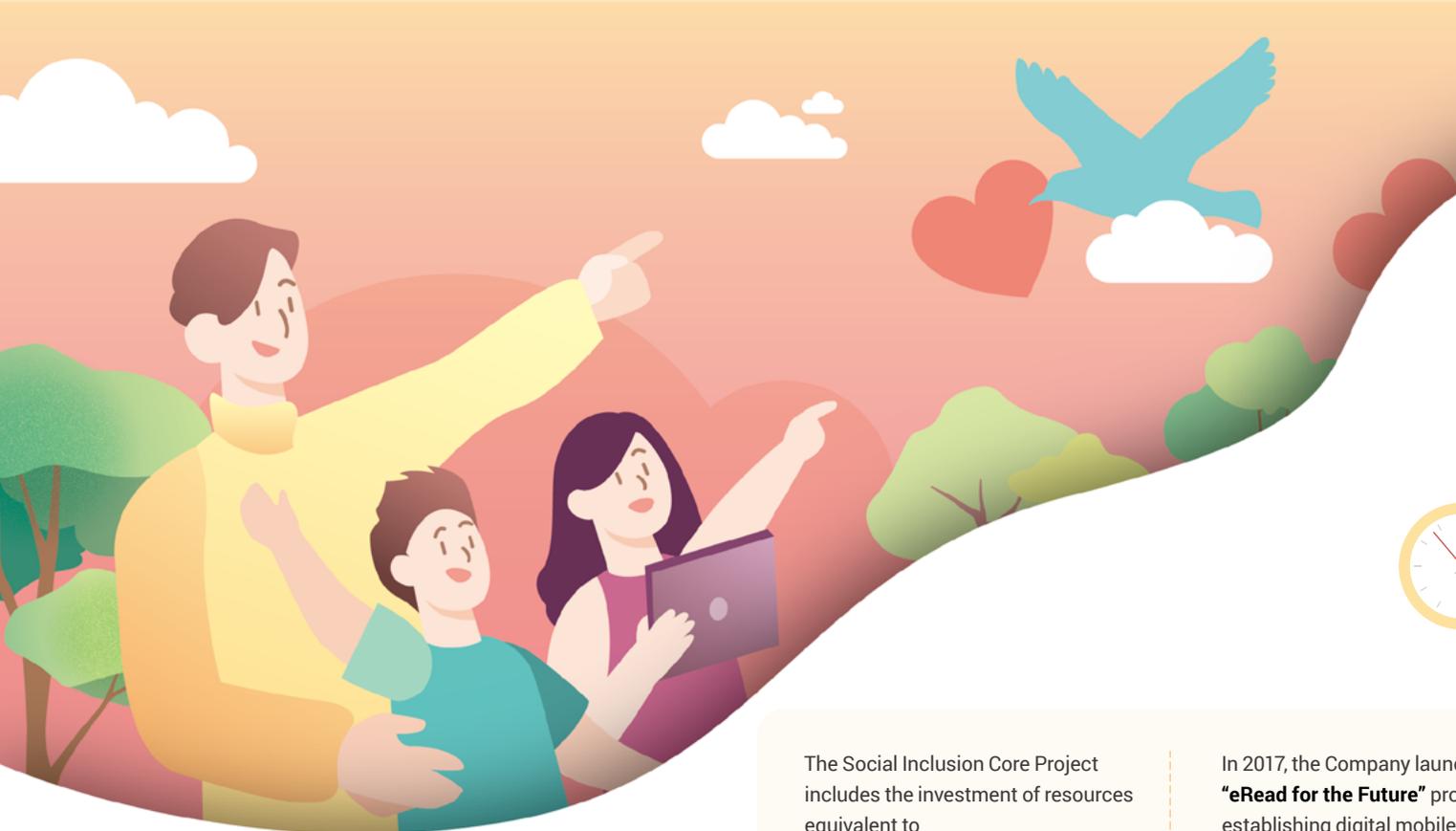
Two new resting areas have been added to our sites and facilities, with new furniture and appliances such as: tables, chairs, refrigerator, microwave oven, and water fountain. These are so that our employees can experience complete relaxation while still be in close proximity to their working area. The electronic devices and the interior space of the sites have been upgraded and kept clean, which helps boost the overall for employees.



Diversified options for meals

Aside from providing the employees with buffet, bento or convenience store meals, the Company also regularly launches the "1-Day Delicacies" activity to give the employees more options for meals. In addition, the replenishment speed of food vending machine in Linkou Site has been increased, and hot food options are available to meet employee needs.





CHAPTER 07

SOCIAL INCLUSION

Local care leveraging with the core business

7-0 Performance Results

The Social Inclusion Core Project includes the investment of resources equivalent to

NT\$ 8.679 million for charitable donations, community investments, and business initiatives.

USA Sites have taken part in the BIG1 public welfare organization to promote UN SDGs. Through BIG1, E Ink contributed more than

100K impacts worldwide with our charitable donations

In 2017, the Company launched the “eRead for the Future” project, establishing digital mobile libraries for students.

In 2021, together with **7 partners** in the ePaper ecosystem, we donated

370
eReaders

30,340
ebooks

with a total value of

NT\$ 37.74 million

To date, we have supported **103 primary and junior high schools, 19 libraries and more than 36,000 students**, making contributions worth

NT\$ 193 million.

Yangzhou Site has participated in the Maitian Project for ten consecutive years to assist schools in rural regions by providing relevant resources. The accumulated amount of donation has exceeded

RMB 869 thousand

with **12 schools** in rural regions supported.

The Company donated four COVID-19 testing huts to contribute to local care.

7-1 Social Inclusion

7-1-1 Social Inclusion

With the sustainable visions in mind, E Ink carries out the mission of "relational inclusiveness and mutual benefit." Setting the policy of "local care in combination with the core business" as the main focus, the Company also connects the corporate business strategy to the core business, namely the technology and application of ePaper display, and incorporates relevant Sustainable Development Goals (SDGs) for the promotion of social inclusion. By promoting digital reading, E Ink closes the gap of educational resources, cares for the disadvantaged, and gives back to the community. In addition, we formulate and run social inclusion projects at our various sites in Taiwan, China, USA, and Korea according to local demands in order to fulfill our corporate social responsibilities and work towards a brighter future.

Driving force for social inclusion	<ul style="list-style-type: none"> • Link to SDGs • Connection to company resources • Needs of society
Objective for social inclusion	<ul style="list-style-type: none"> • Promotion of digital reading to close the gap of educational resource discrepancy • Caring for the disadvantaged • Giving back to the communities
Anchor for social inclusion	<ul style="list-style-type: none"> • E Ink Can Help!: Actions having been taken since 2020 for pandemic preventive in response to COVID-19. • eRead for the Future: to promote digital reading and eliminate the gap in educational resource • Local care: to pool corporate resources and involve employees to take part in charity and give back to society.

E Ink's Social Inclusiveness Core Project for 2021



SDG 3 Good Health and Well-being

Charitable donation
COVID-19 donations



SDG 4 Quality Education

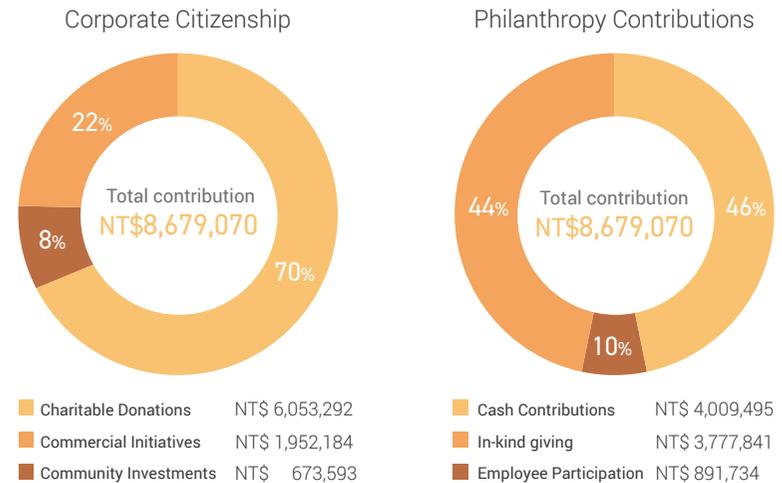
Business initiatives
eRead for the Future



SDG 10 Reduced Inequalities

Community investment
Maitian Project

E Ink Corporate Citizenship & Philanthropy Contributions in 2021



Note: The funding sources for commitment towards social inclusion promotion include monetary donation, donations in kind and participation time of employees. The participation time of employees is calculated based on the number of work hours contributed, multiplied by the average hourly employee wage for 2021 to derive the estimate of monetary equivalent. °

Paid Volunteering Leave

With a view to encouraging our employees to join the volunteer services, the Company has provided 8 hours of paid volunteering leave per year for every employee since 2017. In 2021, 9 people applied for the leave, and the total applied time was 72 hours. The volunteering leave applicants mainly participated in the project of "eRead for the Future." It is our hope that in addition to working, our employees can make use of the volunteering leave to make contributions in charitable events and provide more diversified social services.

7-2 Actions to Care the Community



7-2-1 eRead for the Future

Model of Implementation for eRead for the Future

The "eRead for the Future" is a philanthropic project initiated by E Ink. Through it, we aim to provide students with a comfortable and vision-friendly digital reading experience with our core ePaper technology in collaboration with our ePaper ecosystem partners by involving their expertise, products, and technical advantages.

Based on the location of the Company and sites, we invest our resources in collaboration with local ecosystem partners to bring eReader mobile libraries to schools and help students develop reading literacy, acquire more knowledge, broaden their vision and further find inspiration with the digital reading resources available through our "eRead for the Future" project.

Origins

Reading is the source of nutrient of knowledge; the technology development makes digital reading an inevitable trend.

- Through reading, people can acquire knowledge of different fields and develop soft power related to the cognition, language, understanding and logical reasoning.
- As digital technology is integrated with education, digital reading will become an inevitable trend.

Despite its robust development, digital technology has negative impacts on children during their learning process.

- With devices such as desktops, tablets, and smartphones with internet connectivity becoming an inseparable part of our daily lives, students have a hard time resisting the temptation of internet videos, games, and real-time dynamic information.
- According to the data from the Ministry of Health and Welfare (MOHW) the blue light emitted from TFT-LCDs (Thin Film Transistor Liquid Crystal Display) will stimulate human eyes to produce free radicals through the extended use of electronic products at a short distance, thus causing harm to retinal cells.

Aim

We utilize the characteristics and strengths of ePaper to create an ideal digital reading device - the eReader, thereby providing children with a focused and comfortable reading experience.



SDG 3 Good Health and Well-being



SDG 4 Quality Education

In conjunction with our management strategy of generating greater value for ePaper for our partners in the ecosphere and collaborating with our supply chain partners, we wish to give back to society as outlined in our core values to promote positive development in our society.



SDG 17 Partnerships for the Goals

▼ Project Goals and Evaluations



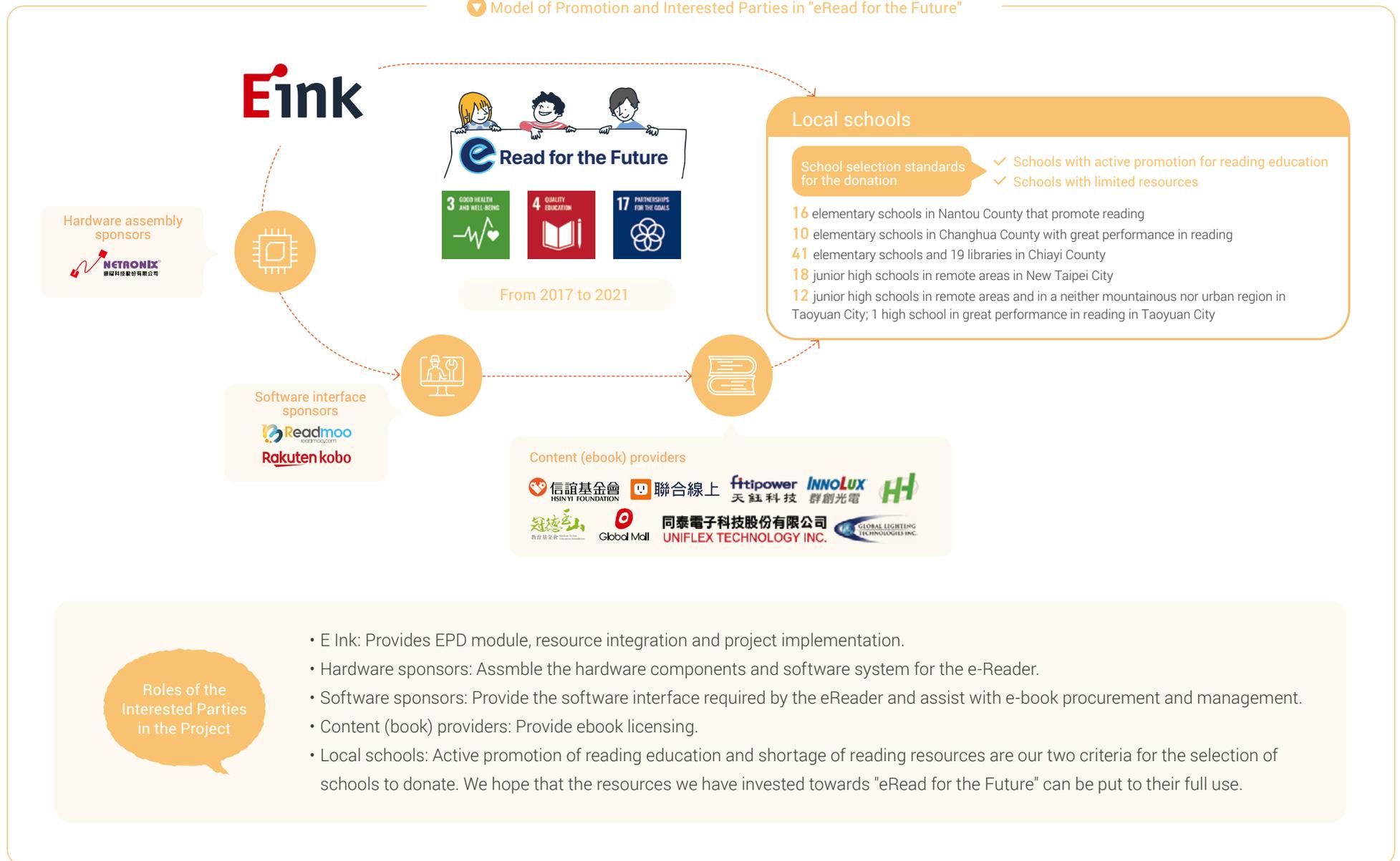
Performance Evaluations

- Enhance the ecosystem partners' participation in and contribution to the project, and pool resources to increase the influence on social welfare.
- Evaluation indicator: Constant increase in the total sponsorship amount for ebook procurement every year.

*eReader is a digital reading carrier while ebooks are doors that lead children to knowledge. To increase the number of ebooks sponsored by the project, E Ink invited the partners in the ePaper supply chain to join the eBook procurement for the sponsorship in 2021.

Year	2021	2022	2023	2024	2025
Target (NTD)	600,000	800,000	1 million	1.2 million	1.4 million
Actual amount (NTD)	600,000	-	-		
Achievement rate	100%	-	-		

Model of Promotion and Interested Parties in "eRead for the Future"



History of development



2017

Initiation of eRead for the Future project

Taiwan

- Donated a total of 350 eReaders to 16 elementary schools in Nantou County along with 35,000 volumes of ebooks.
- The total donation amounted to approximately NTD 23 million.
- Participating partners: Netronix, Readmoo

Yangzhou, China

- Donated a total of 100 eReaders to two elementary schools in Hunan Province. Each eReader is preloaded with about 500 children's books at a total value of approximately NTD 200,000.

2018

Taiwan

• **Establishment of the eReader Library**

Donated a total of 310 eReaders and 31,000 ebooks to 10 elementary schools in Changhua County. The total donation amounted to approximately NTD 32 million. Participating partners: Netronix, Readmoo.

• **Ingraining e-Reading**

Collaborated with the Nantou County Education Bureau based on three focuses: "reading, digitization, and teaching. Organized teaching training and reading contests at the 16 elementary schools that received our donations to promote e-reading.

South Korea

- Donated 515 eReaders and 221,000 ebooks to 1,209 students from 53 schools in South Korea.

2019

Taiwan

- Donated a total of 450 eReaders and 45,000 ebooks to Chiayi County.
- It was our first attempt to bring eReaders to Chiayi Municipal Library along with 18 township libraries within the municipality, for a total of 19 libraries. Not only that, we also donated relevant resources to 41 elementary schools in the county.
- The total donation amounted to approximately NTD 51 million.
- Participating partners: Hsin-Yi Foundation, Netronix, Readmoo

USA

- Donated ebooks to local libraries, youth groups, regional elementary schools and so forth; the total invested amount has exceeded NTD 2.5 million (roughly equivalent to USD 84,000).

2021

Taiwan

- Donated a total of 370 eReaders and 30,000 ebooks to Taoyuan City.
- The Company extended the project to include junior high schools. A total of 13 junior high schools were identified, including those in Taoyuan with outstanding performance in reading, and those not situated in mountainous or urban regions but relatively remote areas, with limited educational resources and significant student populations yet not prioritized for government subsidies.
- The total value of commitment came to approximately NT\$ 37.74 million.
- Participating partners: ePaper ecosystem partners including Netronix Inc., Rakuten Kobo Inc., Fitipower Integrated Technology Inc., Uniflex Technology Inc., Global Lighting Technologies Inc., Henghao Technology Co., Ltd. and Innolux Corporation.

USA

- Donated 24 eNotes to Buys & Girls Clubs of Silicon Valley.

Yangzhou, China

- Donated 110 eReaders along with 57,000 ebooks to two elementary schools located in Changshun County of Qiannan Buyei and Miao Autonomous Prefecture in Guizhou Province.

2020

Taiwan

- Donated a total of 506 eReaders and 28,000 ebooks to New Taipei City.
- It was the first time for the Company to extend the project to include junior high schools. We identified 18 junior high schools in relatively remote areas with limited educational resources and significant student populations for the donation. These schools are not situated in mountainous or urban regions and are not prioritized for government subsidies.
- The total value of commitment came to approximately NT\$ 29.6 million.
- Participating partners: Netronix, Rakuten Kobo, UDN Vision Project, Cite Publishing Ltd., China Times Publishing Co., Ltd., Yuan-Liou Publishing Company, Business Weekly, Global Mall and Kindom Yu San Education Foundation.

USA

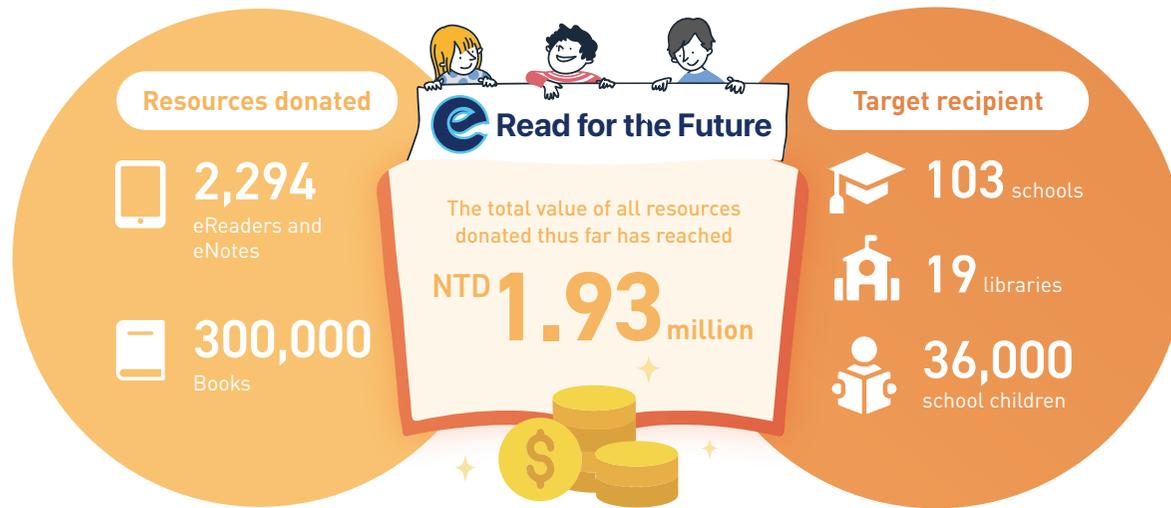
- Donated 19 eNotes and US\$ 30,000 to two schools in Billerica to assist the schools in the promotion of digital education.

Yangzhou, China

- Donated 49 eReaders along with 20,000 ebooks to two elementary schools located in Danzhai County of Qiandongnan Miao and Dong Autonomous Prefecture in Guizhou Province.



▼ Cumulative Benefits of eRead for the Future



▼ Establishment of eReader Mobile Library Map



2021 eRead for the Future

The "eRead for the Future" project has come to its fifth year of implementation in 2021. With "digitization, reading, and knowledge" as the core of the project, the Company has finished establishing eReader mobile libraries for 16 elementary schools in Nantou County, 10 elementary schools in Changhua County, 41 elementary schools and 19 township libraries in Chiayi County, and 18 junior high schools in remote areas in New Taipei City, promoting digital reading with plenty of ebooks.

Establishment of eReader mobile libraries for 13 junior high schools in Taoyuan City

With the long-term operation of projects, the positive feedbacks from the public segment and education field have been received continuously. The Secretariat of Taoyuan City Government initiated the contact with E Ink eco-system partner Rakuten Kobo for cooperation when planning the 2021 projects. However, looking back on the motivation of the project, we hoped that the digital reading resources could be provided for the interested parties with real needs. Therefore, the areas having better resources, such as the six special municipalities, had been excluded from our consideration. The project team assessed that the 2021 donation resources would be identical to 2020, and thus follow the collaborative pattern with the Education Department of New Taipei City Government, with the continuous discussion with the Department of Education, Taoyuan, seeking to bring the digital reading resources, without deviation to the original intention of projects, to the junior high school students in "the rural villages that are difficult to obtain teaching resources, and the schools that are not located in mountain nor downtown, but with many students and not the preferential targets of subsidies."

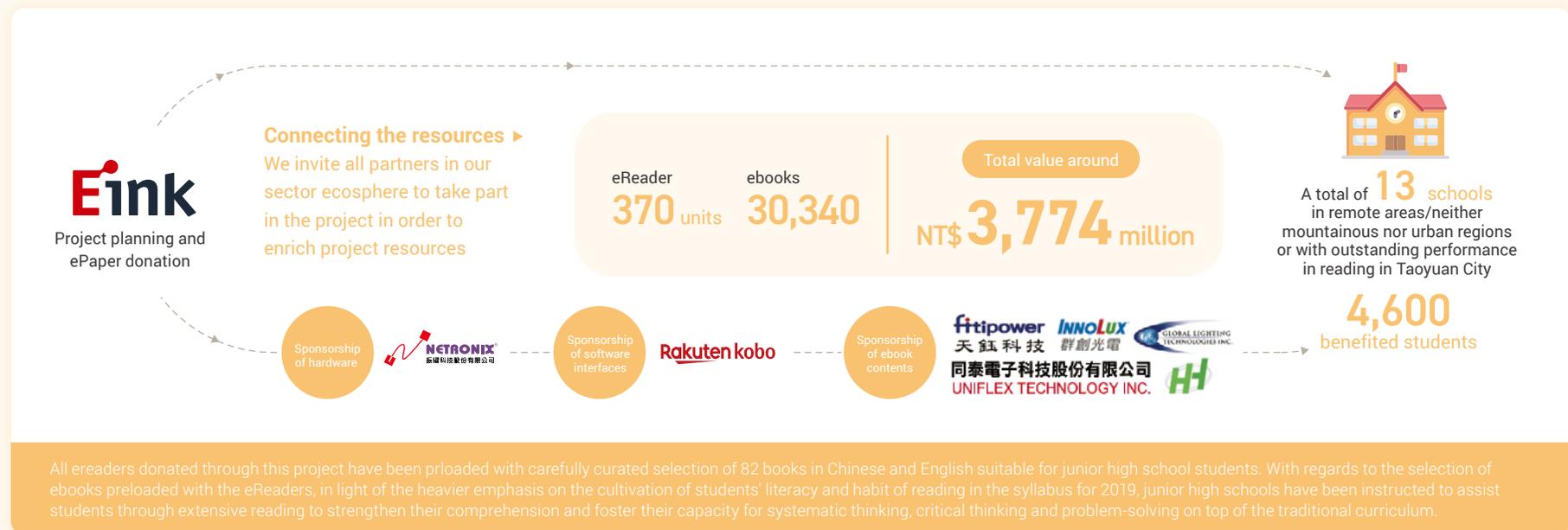
Other than assessing the active discussion with Taoyuan City Government, from E Ink's view, the Company has the geographical relationship with Taoyuan area, because one of the production bases is in Guishan, Taoyuan; meanwhile, the eco-system partners engaged in 2021, such as Rakuten Group to which Rakuten Kobo belongs, Global Lighting Technologies and Uniflex Technology also

have presences in Taoyuan area. Therefore, the 2021 projects reflected the two pillars of E Ink ESG - social inclusion: "Read for the Future: to promote digital reading and eliminate the gap in educational resource" and "Local Care: Integration of corporate resources and joint engagement of employees for public welfare events as the feedback to the local communities." At the end, the project selected five junior high schools in rural villages, and seven junior high schools that are neither in mountains nor urban region, while cutting in from the diversity of project stakeholders, one outperformer of reading among the junior high schools in the Taoyuan urban area was selected, too. It is sought to have a beneficial exchange, not only the sponsorship of hardware equipment, software and digital contents, but also from the view of cultivating reading education in school, to enhance teachers' willingness of promoting digital reading, for activating the project resources.

▼ Establishment of eReader Mobile Library Map

Type	In a remote area					In a neither mountainous nor urban region							Winner of Best Reader Award
School	Fu Gung Junior High School	Rei Yuan Junior High School	Yung-An Junior High School	Yung-An Junior High School	Yung-An Junior High School	Ling Yun Junior High School	Shimen Junior High School	Wu Han Junior High School	Da Gang Junior High School	Chuwei Junior High School	Guanyin Junior High School	Caota Junior High School	Guang Ming Junior High School

In accordance with the model of promotion of the "eRead for the Future" project, we gathered more ecosystem partners to join us and made our influence on social welfare extend in 2021.



eReaders making their way officially at 13 junior high schools in Taoyuan City

The "eRead for the Future" Project Donation Ceremony was held on November 18, 2021 at Guang Ming Junior High School in Taoyuan City. The eReaders have been delivered to each of the 13 junior high schools by the end of November 2021.



In an effort to ensure that the recipient schools make effective use of the eReaders, the Company also held "eReader Tutorial Training" on December 28, 2021. The training involved volunteers from Rakuten Kobo Inc. to present the hardware and software interface of the readers for teachers from the 13 junior high schools in Taoyuan City responsible for reading promotion. Volunteers from E Ink familiar with eReader operation also took part in the training to resolve any operation-related difficulties that the participants had. Selected "reading seed" teachers from the 13 recipient schools took part in the "eReader Tutorial Training". Upon completion of their training, they would be able to give demonstrations on how to operate the eReaders to the other teachers and students at their schools.



Please scan the QR Code below for the activity video of 2021 "eRead for the Future" in Taoyuan.

Feedback from the interested parties



Wen-Tsan Cheng, Mayor of Taoyuan City

Through digital reading, we can not only expand the scope of exploration, learning and reading, but also develop another form of reading by combining the traditional education with the education using modern technologies. As a result, the promotion of eReaders is well worth it.



Ming-Yu Lin, Director of the Department of Education, Taoyuan

We are grateful to E Ink and the relevant enterprises for giving so many educational resources to our children in remote areas. It is our hope that through this kind of donation, children can have more reading opportunities.



7-2-2 Local Care

E Ink pools corporate resources and involves employees to take part in charity in the hope of building relationships with and taking care of local communities. In 2021, we promoted the "Anti-epidemic", "Maitian Project - Unceasing Contributions to Charity" and "Caring for the Disadvantaged" projects to fulfill our corporate social responsibility.

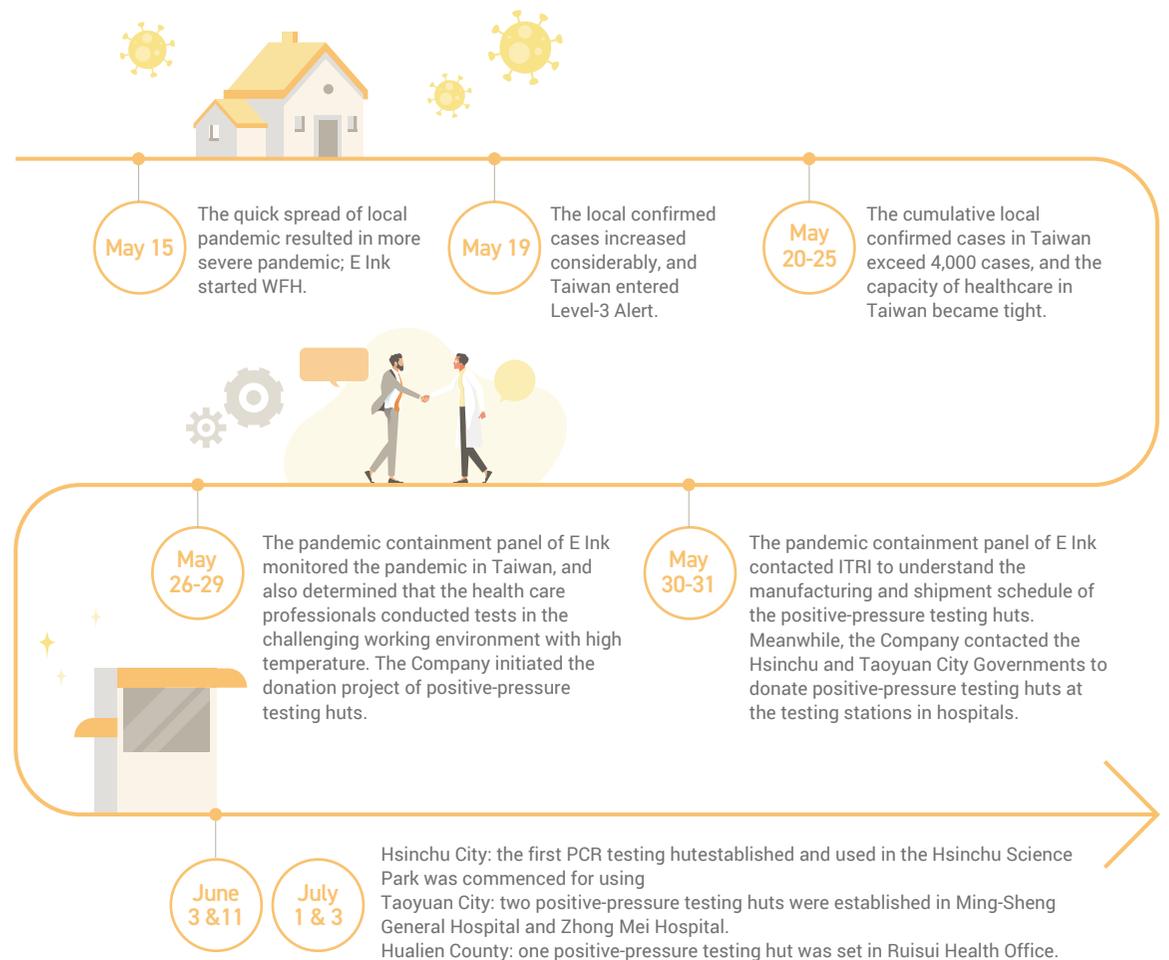
Anti-epidemic - Donation of positive pressure testing huts to support medical personnel on the front-line of pandemic prevention

In response to the new development of preventive measures against the COVID-19 pandemic in 2021, the Company's global pandemic prevention team continuously paid attention to the development of the pandemic worldwide and had relevant supplies in reserve for future needs. In April 2021, there were several local positive cases popping up in Taiwan, and then the pandemic spread widely around Taiwan due to the positive cases originating from a gathering in May.

After the government issued a Level 3 alert for the severe pandemic in Taiwan, E Ink's pandemic prevention team monitored the development of the pandemic on a daily basis. Once Taipei City, New Taipei City, Taoyuan City and Hsinchu City initiated their community PCR testings, the team stayed highly sensitive and immediately noticed that, in addition to heavy workloads and a higher risk of infection, front-line medical personnel would struggle with an increasingly rising temperature in outdoor tents when wearing less breathable and water-proof protective clothing to reduce the risk of being exposed to the virus, in which case, such a harsh work environment could cause physical burdens to the personnel when they perform sample collection tasks.

To enable the medical personnel to focus on the COVID-19 virus screening tasks, we donated positive pressure testing huts developed by the Industrial Technology Research Institute. Such testing huts feature a positive pressure design that only delivers air from the inside towards the outside with clean room-level cleanliness to minimize the risk of virus exposure. Also, air conditioning equipment were installed in the positive pressure screening huts to maintain a constant temperature and humidity environment and allow the medical personnel to perform virus sample collection tasks in a clean and comfortable environment.

To increase the COVID-19 screening capacity for communities, after looking into the design and production/shipment schedule of positive pressure testing



Anti-epidemic

huts, the pandemic prevention team immediately contacted the governments of Taoyuan City and Hsinchu City where our sites are located to launch a testing hut donation project. The first PCR testing hut in the Hsinchu Science Park was donated by E Ink. We also donated another testing hut that was set in Minsheng Hospital upon the assessment of the Taoyuan City Government.

As the pandemic was getting severe, the need for COVID-19 testing become greater throughout Taiwan. We provided continuous support for medical screening capacity and donated a positive pressure screening hut to Taoyuan Zhongmei Hospital and Hualien County Ruisui Township Health Center, respectively, to improve the comfort of medical personnel's work environments, reduce the risk of infection and thereby allow them to stay focused on screening tasks.

As a member of society, we uphold the spirit: Contributing what is taken from society to society and continuously investing labor and funds to contribute to the construction of a quality society and the natural environment. Here at E Ink, we believe that apart from monetary donations, philanthropy also involves promoting social welfare and helping those in need of help in society through the teamwork of our employees, charities, the government, and our partners and their voluntary participation in ESG.



Maitian Project - Unceasing Contributions to "Charity"

It has been 10 years since the participation of the Yangzhou Site in the Maitian Project in 2012. Through the donation of supplies and volunteer services, resources have been provided to remote schools, and the cumulative donations have exceeded RMB 869 thousand. In 2021, with the "Rainbow Spring" water purification project, ebook library project, free courses, and drawing/essay contests, the students of 2 schools in Changshun County of Qiannan Buyei and Miao Autonomous Prefecture in Guizhou Province were provided with access to safe and healthy drinking water and rich reading resources. The donations to the schools in 2021 exceeded RMB 166 thousand.

"Rainbow Spring" water purification project

In order to ensure clean drinking water for children in remote townships, we donated 2 units of water purification equipment along with 550 thermos flasks to the townships. Not only that, we also conveyed the importance of staying hydrated to the children so that they will be able to "read great books and drink clean water". The donations totaled RMB 95 thousand.



Free courses and drawing/essay contests

Reading courses were offered to teach students how to gain more resources and knowledge through ebooks in order for them keep up with the trend of digitalization. In addition, essay and drawing contests were organized at the schools to raise the students' awareness of the importance of "reading great books and drinking clean water".



Library of ebooks

A total of 110 eReaders were donated to a local elementary school in Guizhou Province. Our eReaders were pre-bundled with a variety of books and contents to help local students to read more extensively. The eReaders serve as an effective source of educational resources for the students by expanding their vision and boosting their knowledge. The donated eReaders were worth RMB 64 thousand.



Caring for the Disadvantaged Minorities

Taiwan sites' "Town Hall Meetings- Cheering Employees With Charitable Work"

In an effort to facilitate cohesion within the company and increase the internal communications, E Ink has organized quarterly Town Hall meetings for indirect employees. At the meeting, cake and/or desserts are served by the Welfare committee to cheer employees. The desserts are hand-made by the disadvantaged minorities or social charity organizations. Through the massive purchase of desserts, E Ink not only shows its support to the disadvantaged minority group, but also presents its to care employees.



USA sites's "donations to the disadvantaged"

A new philanthropy program was started in Jan. 2021 that provided \$100 to each employee to match their personal donation to a charity of their choice or receive \$100 in an account for their use supporting the B1G1 organization, a global philanthropic organization that supports the UN and the SDGs. As a result of the B1G1 program, E Ink contributed more than 100K impacts worldwide with our charitable donations.

USA sites's "donations to the Rosie's Place

In 2021, The Women's Network collected, assembled, and delivered over 50 care packages and other supplies to Rosie's Place in Boston, MA. Rosie's Place is a community center that provides shelter, meals, food pantry services, English language classes, legal assistance, wellness care, and more to women in need in the Boston area.



Appendix

Comparison Table of the GRI Standards Sustainability Reporting Standards Disclosure Items

	Generic Disclosures	Report Chapters (with omitted descriptions)	Page
Organizational Profile (2016)			
102-1	Name of the organization	1-2 Global Locations	14
102-2	Activities, brands, products, and services	1-2 Global Locations	14
102-3	Location of headquarters	1-2 Global Locations	14
102-4	Location of operations	1-2 Global Locations	14-15
102-5	Ownership and legal form	1-2 Global Locations	14
102-6	Markets served	1-2 Global Locations	14
102-7	Scale of the organization	1-2 Global Locations 1-3 Business Strategy and Development	13-16 16-21
102-8	Information on employees and other workers	6-1 Overview	135
102-9	Supply Chain	5-1 Supply Chain Management	111-121
102-10	Significant changes to the organization and its supply chain	There are no material changes in the organization or supply chain in the scope of this year's report	-
102-11	Precautionary Principle or approach	1-3 Business Strategy and Development 2-1 Material Issue Analysis and Stakeholders Communications 2-3 Risk Management 4-3 Climate Change	16-20 31-38 48-53 92-95

	Generic Disclosures	Report Chapters (with omitted descriptions)	Page
102-12	External initiatives	1-5 Honor and Glory 4-3 Climate Change	26-29 87-88
102-13	Membership of associations	1-3 Business Strategy and Development	28
Strategy (2016)			
102-14	Statement from senior decision-maker	CEO Messages	4-5
102-15	Key impacts, risks, and opportunities	1-3 Business Strategy and Development 2-3 Risk Management 4-3 Climate Change	16-21 48-53 92-95
Ethics and Integrity (2016)			
102-16	Values, principles, standards, and norms of behavior	1-4 Framework for Sustainability 2-2 Ethical Management and Sustainable Governance	21-25 45-47
Governance (2016)			
102-18	Governance structure	1-4 Framework for Sustainability 2-2 Ethical Management and Sustainable Governance	21-25 39-43
Stakeholder Communication (2016)			
102-40	List of stakeholder groups	2-1 Material Issue Analysis and Stakeholders Communications	31
102-41	Collective bargaining agreements	6-2 Building a Healthy, Positive and Beautiful Workplace	141
102-42	Identifying and selecting stakeholders	2-1 Material Issue Analysis and Stakeholders Communications	31
102-43	Approach to stakeholder engagement	2-1 Material Issue Analysis and Stakeholders Communications	36-38
102-44	Key topics and concerns raised	2-1 Material Issue Analysis and Stakeholders Communications	31-38

Generic Disclosures		Report Chapters (with omitted descriptions)	Page
Reporting Practices (2016)			
102-45	Entities included in the consolidated financial statements	About this report	1
102-46	Defining report content and topic Boundaries	About this report 2-1 Material Issue Analysis and Stakeholders Communications	1 34-35
102-47	List of material topics	2-1 Material Issue Analysis and Stakeholders Communications	33-35
102-48	Restatements of information	There was no such thing this year	-
102-49	Changes in reporting	There was no such thing this year	-
102-50	Reporting period	About this report	1
102-51	Date of most recent report	About this report	1
102-52	Reporting cycle	About this report	1
102-53	Contact point for questions regarding the report	About this report	1
102-54	Claims of reporting in accordance with the GRI Standards	About this report	1
102-55	GRI content index	Appendix: Comparison Table of the GRI Standards Sustainability Reporting Standards Disclosure Items	178-181
102-56	External assurance	About this report Appendix: Independent Limited Assurance Report	1 188
Management Approach (2016)		Report Chapters (with omitted descriptions)	Page
103-1	Explanation of the material topic and its Boundary	2-1 Material Issue Analysis and Stakeholders Communications	34-35
103-2	The management approach and its components	1-4 Framework for Sustainability 2-1 Material Issue Analysis and Stakeholders Communications	24-25 38
103-3	Evaluation of the management approach	2-1 Material Issue Analysis and Stakeholders Communications	38

Economic		Report Chapters (with omitted descriptions)	Page
GRI 201: Economic Performance (2016)			
201-1	Direct economic value generated and distributed	1-3 Business Strategy and Development	19
201-3	Direct economic value generated and distributed	6-2 Building a Healthy, Positive and Beautiful Workplace For details, please refer to the Company's financial statements	144-148
201-4	Financial assistance received from government	1-3 Business Strategy and Development The government's shareholdings in the Company are described in 4.1.2 Shareholder Structure of the 2021 Annual Report	20
GRI 202: Market Presence (2016)			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	6-2 Building a Healthy, Positive and Beautiful Workplace	144
202-2	Proportion of senior management hired from the local community	6-1 Overview	137
GRI 203: Indirect Economic Impact (2016)			
203-2	Significant indirect economic impacts	7-2 Actions to Care the Community	166-177
GRI 204: Procurement Practice (2016)			
204-1	Proportion of spending on local suppliers	5-1 Supply Chain Management	118
GRI 205: Anti-corruption (2016)			
205-3	Confirmed incidents of corruption and actions taken	There was no such thing this year	-
GRI 206: Anti-competitive Behavior (2016)			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	There was no such thing this year	-

Environmental		Report Chapters (with omitted descriptions)	Page
GRI 302: Energy (2016)			
302-1	Energy consumption within the organization	4-4 Energy Consumption and Management Appendix: Environmental Information	96-97 183
302-3	Energy intensity	4-4 Energy Consumption and Management	96
302-4	Reduction of energy consumption	4-4 Energy Consumption and Management	96-97 99-102
GRI 302: Energy (2016)			
303-3	Water withdrawal	4-5-2 Water Resources Management Appendix: Environmental Information	103-106 184
GRI 305: Emissions (2016)			
305-1	Direct (Scope 1) GHG emissions	4-4 Energy Consumption and Management Appendix: Environmental Information	98 184
305-2	Energy indirect (Scope 2) GHG emissions	4-4 Energy Consumption and Management Appendix: Environmental Information	98 184
305-3	Other indirect (Scope 3) GHG emissions	4-4 Energy Consumption and Management Appendix: Environmental Information	99 184
305-4	GHG emissions intensity	4-4 Energy Consumption and Management	98
305-7	Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and other significant air emissions	4-5-3 Air Pollution Management	106-107
GRI 306: Waste (2020)			
306-1	Waste generation and significant waste-related impacts	4-5-4 Waste Management Appendix: Environmental Information	107-109 184
306-5	Waste directed to disposal	4-5-4 Waste Management	107-108

Environmental		Report Chapters (with omitted descriptions)	Page
GRI 307: Legal Compliance with Environmental Protection (2016)			
307-1	Non-compliance with environmental laws and regulations	2-2 Ethical Management and Sustainable Governance	184
GRI 308: Supplier Environment (2016)			
308-1	New suppliers that were screened using environmental criteria	5-1 Supply Chain Management	111-115
Social aspect		Report Chapters (with omitted descriptions)	Page
GRI 401: Labor Relations (2016)			
401-1	New employee hires and employee turnover	6-1 Overview Appendix: Social Information	135 186
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6-2 Building a Healthy, Positive and Beautiful Workplace	145
401-3	Parental leave	6-2 Building a Healthy, Positive and Beautiful Workplace	148
GRI 403: Occupational Safety and Health (2018)			
403-1	Occupational health and safety management system	6-4 Maintaining a Safe and Healthy Work Environment	154-155
403-2	Hazard identification, risk assessment, and incident investigation	6-4 Maintaining a Safe and Healthy Work Environment	156-159
403-3	Occupational health services	6-4 Maintaining a Safe and Healthy Work Environment	163-165
403-4	Worker participation, consultation, and communication on occupational health and safety	6-4 Maintaining a Safe and Healthy Work Environment	155
403-5	Worker training on occupational health and safety	6-4 Maintaining a Safe and Healthy Work Environment	163
403-6	Promotion of worker health	6-4 Maintaining a Safe and Healthy Work Environment	164

	Social aspect	Report Chapters (with omitted descriptions)	Page
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	6-4 Maintaining a Safe and Healthy Work Environment	158-165
403-9	Work-related injuries	6-4 Maintaining a Safe and Healthy Work Environment	156-157
GRI 404: Training and Education (2016)			
404-1	Average hours of training per year per employee	6-3 Diversified Development and Growth of Employees	154
404-3	Percentage of employees receiving regular performance and career development reviews	All employees have undergone performance evaluation	-
GRI 405: Employee Diversity and Equal Opportunity (2016)			
405-2	Ratio of basic salary and remuneration of women to men	6-2 Building a Healthy, Positive and Beautiful Workplace E Ink does not pay employees differently based on gender	144
GRI 406: Non-discrimination (2016)			
406-1	Incidents of discrimination and corrective actions taken	There was no such thing this year	-
GRI 407: Freedom of Association and Collective Bargaining (2016)			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	There was no such thing this year	-
GRI 408: Child Labor (2016)			
408-1	Operations and suppliers at significant risk for incidents of child labor	There was no such thing this year	-
GRI 409: Forced or Compulsory Labor (2016)			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	There was no such thing this year	-

	Social aspect	Report Chapters (with omitted descriptions)	Page
GRI 411: Rights of Indigenous Peoples (2016)			
411-1	Incidents of violations involving rights of indigenous peoples	There was no such thing this year	-
GRI 412: Human Rights Assessment (2016)			
412-2	Employee training on human rights policies or procedures	6-2 Building a Healthy, Positive and Beautiful Workplace	138-140
GRI 414: Provider Social Assessment (2016)			
414-1	New suppliers that were screened using social criteria	5-1 Supply Chain Management	113-114
GRI 415: Public Policy (2016)			
415-1	Political contributions	There was no such thing this year Appendix: Social Information	- 187
GRI 416: Customer Health and Safety (2016)			
416-2	Incidents of non-compliance concerning product and service information and labeling	There was no such thing this year	-
GRI 417: Marketing and Labeling (2016)			
417-2	Incidents of non-compliance concerning product and service information and labeling	There was no such thing this year	-
417-3	Incidents of non-compliance concerning marketing communications	There was no such thing this year	-
GRI 418: Customer Privacy (2016)			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	There was no such thing this year	-
GRI 419: Compliance with the Social and Economic Laws and Regulations (2016)			
419-1	Non-compliance with laws and regulations in the social and economic area	2-2 Ethical Management and Sustainable Governance There were no material violations against the social and economic laws and regulations during the year	47

Sustainability Accounting Standards Board (SASB) Indicator Comparison Table

Topic	Indicator code	Property	Disclosure item	Report Chapters (Including description)	Page
Data Security	TC-HW-230a.1	Qualification	Description of approach to identifying and addressing data security risks in products	2-3 Risk Management	65
Employee Engagement, Diversity & Inclusion	TC-HW-330a.1	Quantification	Percentage of gender and racial/ ethnic group representation for (1) management, (2) technical staff, and (3) all other employees	Appendix: Social Information	185-186
Materials Sourcing & Efficiency	TC-HW-440a.1.	Qualification	Description of the management of risks associated with the use of critical materials	5-1 Supply Chain Management	116-117
Activity indicator	TC-HW-000.A	Quantification	Production quantity by product category	The number of displays produced in 2021 was 25,640 thousand.	-
	TC-HW-000.B	Quantification	Total area of production locations (square feet)	Taiwan: 556,761.6 Yangzhou: 5,457,627.64 USA: 250,000	-
	TC-HW-000.C	Quantification	Percentage of self-made products	E Ink products are 100% self-made	-

Comparison Table of the Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Reports by TPEX- Listed Companies

Rule requirements	Report Chapters	Page
The number of full-time employees not in supervisory positions, the average and median salaries of full-time employees not in supervisory positions and the differences from the previous year for the three items	6-2 Building a Healthy, Positive and Beautiful Workplace	145
Corporate governance of climate-related risks and opportunities, actual and potential climate-related impacts, how to identify, evaluate and manage climate-related risks, and the indicators and goals for evaluating and managing climate-related issues	4-3 Climate Change	92-95

Appendix Environmental Information

E Ink Energy Usage Statistics (Original Unit)

Energy Type	Region	Original Unit				
		2017	2018	2019	2020	2021
Self-generated renewable electricity (GWh)	Yangzhou Site 	2.1	2.0	0.1	0.1	0.1
	Subtotal	2.1	2.0	0.1	0.1	0.1
Purchased renewable electricity (GWh)	Taiwan Sites 	-	-	-	-	0.05
	Subtotal	-	-	-	-	0.05
Purchased electricity for production(GWh)	Taiwan Sites 	41.6	40.3	37.9	36.8	34.2
	USA Sites	11.3	12.3	11.7	11.4	12.7
	Yangzhou Site 	17.5	20.3	17.4	20.2	23.8
	Subtotal	70.3	72.9	67.1	68.4	70.7
Purchased electricity (dormitories)(GWh)	Taiwan Sites	-	-	-	-	-
	Subtotal	2.7	2.6	1.6	1.7	1.5
Purchased steam(ton)	Yangzhou Site 	4,977.0	6,403.6	3,429.9	3,145.3	3,321.0
	Subtotal	4,977.0	6,403.6	3,429.9	3,145.3	3,321.0
Natural gas(m ³)	Taiwan Sites	-	-	-	-	-
	USA Sites	1,331,074.6	1,351,723.1	1,436,746.4	1,404,988.2	1,590,338.4
	Yangzhou Site 	44,194.0	41,369.0	60,983.0	64,308.0	75,574.0
	Subtotal	1,375,268.6	1,393,092.1	1,497,729.4	1,468,296.2	1,665,912.4
Diesel(L)	Taiwan Sites 	2,403.5	5,444.7	4,683.2	5,001.2	1,718.2
	USA Sites	2,157.7	1,506.6	1,900.3	2,745.2	2,347.3
	Yangzhou Site 	18,571.7	9,736.9	595.6	1,390.2	10,612.6
	Subtotal	23,132.9	16,688.2	7,179.0	9,136.6	14,678.1
Gasoline(L)	Taiwan Sites 	8,861.5	5,632.0	5,496.7	6,686.1	5,911.4
	Yangzhou Site 	19,442.6	14,917.9	12,689.6	4,531.7	6,799.0
	Subtotal	28,304.1	20,549.9	18,186.3	11,217.8	12,710.4

Note 1: Statistics on electricity consumption are based on the electricity bills. Other forms of energy are calculated according to actual consumption.

Note 2: The symbol  means that the outcomes have been verified or assured by a third party.

E Ink Energy Usage Statistics (Converted to GJ)

Energy Type	Region	Converted to GJ				
		2017	2018	2019	2020	2021
Self-generated renewable energy electricity	Yangzhou Site	7,700.23	7,016.57	431.79	395.81	429.01
	Subtotal	7700.23	7016.57	431.79	395.81	429.01
Purchased renewable energy electricity	Taiwan Sites	-	-	-	-	171.91
	Subtotal	-	-	-	-	171.91
Purchased electricity for production	Taiwan Sites	149,655.26	145,117.02	136,450.55	132,552.90	123,086.22
	USA Sites	40,556.96	44,284.87	42,251.53	40,956.89	45,542.20
	Yangzhou Site	62,840.46	73,008.29	62,570.78	72,540.52	85,627.31
	Subtotal	253,052.69	262,410.18	241,272.86	246,050.32	254,255.73
Purchased electricity (dormitories)	Taiwan Sites	-	-	-	-	-
	Subtotal	9,679.27	9,391.41	5,845.61	6,009.06	5,249.20
Purchased steam	Yangzhou Site	13,959.44	17,960.81	9,620.26	8,821.91	9,314.71
	Subtotal	13,959.44	17,960.81	9,620.26	8,821.91	9,314.71
Natural gas	USA Sites	44,553.73	45,244.87	48,090.78	47,027.77	53,231.81
	Yangzhou Site	1,479.26	1,384.70	2,041.22	2,152.52	2,529.61
	Subtotal	46,032.99	46,629.58	50,132.00	49,180.28	55,761.42
Diesel	Taiwan Sites	84.47	191.36	164.59	175.77	60.39
	USA Sites	75.83	52.95	66.79	96.48	82.50
	Yangzhou Site	652.71	342.21	20.93	48.86	372.98
	Subtotal	813.02	586.52	252.31	321.11	515.87
Gasoline	Taiwan Sites	289.20	183.80	179.39	218.20	192.92
	Yangzhou Site	634.51	486.85	414.13	147.89	221.89
	Subtotal	923.71	670.65	593.51	366.09	414.81
Total		332,161.35	344,665.72	308,148.35	311,144.58	326,112.66

Note 1: The conversion coefficient is calculated based on the local government's announcement of the energy calorific value coefficient.

E Ink greenhouse gas emission statistics

Unit: tCO_{2e}

Region	Scope	2017	2018	2019	2020	2021
Taiwan Sites	Scope 1	88.00	66.06	65.45	128.29	207.62
	Scope 2	22,003.92	22,331.34	20,213.79	18,750.67	17,172.08
	Emissions subtotal	22,091.92	22,397.40	20,279.24	18,878.97	17,379.70
USA Sites	Scope 1	2,451.76	2,546.36	2,707.30	2,649.78	2,997.36
	Scope 2	2,886.23	3,151.52	3,006.82	2,914.69	3,241.00
	Emissions subtotal	5,337.99	5,697.88	5,714.12	5,564.47	6,238.36
Yangzhou Site	Scope 1	296.42	219.97	182.30	164.63	254.45
	Scope 2	18,072.15	21,065.55	17,049.56	18,928.09	22,123.35
	Emissions subtotal	18,368.56	21,285.52	17,231.86	19,092.72	22,377.80

Note 1. The outcomes of GHG inventory in Taiwan Sites are the combined volume of the Hsinchu Site, Linkou Site and YHMI. All the outcomes have passed the third-party verification.

Note 2. The GHG inventory outcomes of the USA Site are estimated based on energy consumption.

Note 3. The GHG inventory outcomes of the Yangzhou Site have passed third-party verification.

Note 4. We adopt IPCC-AR4 data for GHG emission potential.

Note 5. Greenhouse gas emissions are aggregated using the operational control rights method.

Note 6. The types of greenhouse gases included in the calculation include these 7 types: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆, NF₃.

Note 7. The Scope 2 emissions are calculated on a site-based approach.

Note 8. The symbol means that the outcomes have been verified or assured by a third party.

Substantial fines and penalties

	2018	2019	2020	2021
Number of non-compliance with legal obligations/regulations	0	0	0	0
Amount of fines/penalties due to the said non-compliance	0	0	0	0
Environmental debt to be calculated at the end of the year	0	0	0	0

Note 1. The symbol means that the outcomes have been verified or assured by a third party.

E Ink water resource statistics

Region	(million liters)	2017	2018	2019	2020	2021
Taiwan Sites	Volume of water withdrawn	256.38	240.10	201.73	237.06	167.82
	Recycled water volume	184.94	171.19	188.48	192.69	115.14
	Proportion of recycle	72%	71%	93%	81%	68.6%
	Effluent volume	193.97	176.57	155.90	175.62	119.1
USA Sites	Volume of water withdrawn	20.90	22.28	18.90	18.29	25.2
	Recycled water volume	-	-	-	-	-
	Effluent volume	6.46	7.47	7.03	6.86	10.36
Yangzhou Site	Withdrawn process water volume	140.83	153.63	139.78	130.65	175.63
	Withdrawn domestic water volume	104.39	82.76	73.98	82.02	106.05
	Purchased hot water	22.82	22.40	27.38	27.67	28.48
	Recycled water volume	4.98	7.80	14.73	41.95	31.78
	Effluent volume	No process effluent (all regarded as domestic sewage)				
	Proportion of recycle	1.9%	3.0%	6.1%	17.5%	10.2

Note 1. All the water used is tap water (third-party water) and the statistics are based on water bills.

Note 2. Taiwan Sites: The wastewater from the Hsinchu Site is confirmed to meet the controlled water quality standard and is processed by the Hsinchu Science Park Wastewater Treatment Site, and the wastewater discharge is recorded by a flow meter. No process wastewater is generated from the Linkou Site.

Note 3. The Yangzhou Environmental Protection Bureau approved the Yangzhou Site in January 2011 to stop operating the wastewater treatment facilities for direct discharge. The wastewater discharge was calculated by multiplying the withdrawn water by 80% (wastewater discharge coefficient).

Note 4. USA: The wastewater is discharged into the industrial wastewater discharge system after treatment and the flow records are calculated for statistics.

Note 5. The symbol means that the outcomes have been verified or assured by a third party.

Appendix Social Information

Employee Composition Overview

	Taiwan Sites			Yangzhou Site			USA Sites		
Employment Type	Male	Female	Subtotal	Male	Female	Subtotal	Male	Female	Subtotal
Official Employees	735	329	1064	367	358	725	273	111	384
Contract Employees	3	2	5	0	5	5	13	5	18
Total	738	331	1069	367	363	730	286	116	402
Employment Type	Male	Female	Subtotal	Male	Female	Subtotal	Male	Female	Subtotal
Supervisors	128	26	154	19	3	22	109	43	152
Non-Supervisors	610	305	915	348	360	708	165	71	236
Total Official Employees	738	331	1069	367	363	730	274	114	388

Employee gender and job category statistics

Job category		Female		Male		N/A or undisclosed		Total
		Number of employees	%	Number of employees	%	Number of employees	%	
Taiwan Sites	Management position	26	16.9%	128	83.1%	0	0%	154
	Technical personnel	78	30.1%	181	69.9%	0	0%	259
	All other employees	227	34.6%	429	65.4%	0	0%	656
Yangzhou Site	Management position	3	13.6%	19	86.4%	0	0%	22
	Technical personnel	61	27.5%	161	72.5%	0	0%	222
	All other employees	299	61.5%	187	38.5%	0	0%	486
USA Sites	Management position	43	28.3%	109	71.7%	0	0%	152
	Technical personnel	61	27.4%	162	72.6%	0	0%	223
	All other employees	10	76.9%	3	23.1%	0	0%	13

Employees statistics by race/ethnicity

Race/ethnicity	Asian		Black and African-American		Spanish or Latino		Caucasian		Others		N/A or undisclosed		Total		
	Number of employees	Ratio	Number of employees	Ratio	Number of employees	Ratio	Number of employees	Ratio	Number of employees	Ratio	Number of employees	Ratio	Number of employees	Ratio	
Taiwan Sites	Management	153	99.4%	0	0%	0	0%	1	0.6%	0	0%	0	0%	154	100%
	Technical employee	259	100%	0	0%	0	0%	0	0.0%	0	0%	0	0%	259	100%
	Other employees	655	99.8%	0	0%	0	0%	1	0.2%	0	0%	0	0%	656	100%
	Subtotal	1,067	99.8%	0	0%	0	0%	2	0.2%	0	0%	0	0%	1,069	100%
Yangzhou Site	Management	22	100%	0	0%	0	0%	0	0%	0	0%	0	0%	22	100%
	Technical employee	222	100%	0	0%	0	0%	0	0%	0	0%	0	0%	222	100%
	Other employees	486	100%	0	0%	0	0%	0	0%	0	0%	0	0%	486	100%
	Subtotal	730	100%	0	0%	0	0%	0	0%	0	0%	0	0%	730	100%
USA Sites	Management	49	32.9%	0	0%	4	2.7%	89	59.7%	0	0%	7	4.7%	149	100%
	Technical employee	45	20.5%	8	3.6%	17	7.7%	116	52.7%	6	2.7%	28	12.7%	220	100%
	Other employees	2	10.5%	3	15.8%	0	0%	12	63.2%	1	5.3%	1	5.3%	19	100%
	Subtotal	96	24.7%	11	2.8%	21	5.4%	217	55.9%	7	1.8%	36	9.3%	388	100%
Total	Management	224	68.9%	0	0%	4	1.2%	90	27.7%	0	0%	7	2.2%	325	100%
	Technical employee	526	75.0%	8	1.1%	17	2.4%	116	16.5%	6	0.9%	28	4.0%	701	100%
	Other employees	1,143	98.4%	3	0.3%	0	0%	13	1.1%	1	0.1%	1	0.1%	1,161	100%
	Total	1,893	86.6%	11	0.5%	21	1.0%	219	10.0%	7	0.3%	36	1.6%	2,187	100%

Note: "Other" includes native Americans, Alaska Natives, Native Hawaiians or Pacific Islanders or those of two or more ethnicities.

Number of New Official Employees

Region	Gender		Age				Total	%
	Male	Female	30 years old and below	31-40 years old	41-50 years old	51 years old and above		
Taiwan Sites	266	102	93	189	84	2	368	59.3%
Yangzhou Site	113	59	111	42	16	3	172	27.7%
USA Sites	65	16	28	16	17	20	81	13.0%
Total	444	177	232	247	117	25	621	100.0%
%	71.5%	28.5%	37.4%	39.8%	18.8%	4.0%		

Total employee turnover rate

Region	Gender		Age				Total	Turnover rate(%)
	Male	Female	30 years old and below	31-40 years old	41-50 years old	51 years old and above		
Taiwan Sites	114	47	37	83	36	5	161	15.1%
Yangzhou Site	138	70	111	71	20	6	208	18.8%
USA Sites	49	24	10	23	18	22	73	28.5%
Total	301	141	158	177	74	33	442	20.2%
%	68.10%	31.90%	35.75%	40.05%	16.74%	7.47%		

Proportion of female employees

Item	Proportion
Share of women in total workforce	36.82%
Share of women in all management positions	20.59%
Share of women in junior management positions	30.37%
Share of women in top management positions	25.37%
Share of women in management positions in revenue-generating functions	28.57%
Share of women in STEM-related positions	35.53%

Amount of donation attributed to politics/policies

Unit: in NT\$

Contributions and Expenses	2018	2019	2020	2021
Lobbyists and lobbying organizations, for-profit organizations	0	0	0	0
Political parties, election candidates	0	0	0	0
Trade association/think tanks that may influence the outcome of election or legislation	0	0	0	0
Others, e.g. related expenses for election propositions/referendums	0	0	0	0
Total	0	0	0	0
Scope of coverage	100%	100%	100%	100%

Achievements of Training and Education

Average Education/ Training Time	Course Type (hours)	Taiwan Sites						Yangzhou Site						USA Sites					
		Male	Female	Direct personnel	Indirect personnel	Supervisors	Non-Supervisors	Male	Female	Direct personnel	Indirect personnel	Supervisors	Non-Supervisors	Male	Female	Direct personnel	Indirect personnel	Supervisors	Non-Supervisors
	Physical Training Courses	3,028	1,299	1,432	2,896	578	3,749	1,201	1,152	1,146	1,207	106	2,247	749	243	148	844	249	743
	e-Learning course	5,779	2,782	240	8,320	1,071	7,489	525	503	-	1,028	78	950	1,525	668	192	2,001	1,064	1,129
	External Training Courses	1,340	358	60	1,638	758	940	21	26	-	47	9	38	255	175	53	378	171	259
	Average Length (hours)	13.8	13.4	6.7	15.9	15.6	13.3	4.8	4.6	2.7	7.5	8.8	4.6	9.2	9.5	5.5	10.2	9.8	9.0

Type of Education and Training Courses

Course Type	Taiwan Sites			Yangzhou Site			USA Sites		
	Employees trained	Course frequency	Course hours (people . hours)	Employees trained	Employees trained	Course hours (people . hours)	Employees trained	Course frequency	Course hours (people . hours)
Orientation Training for New Employees	2,888	27	947.28	172	99	688.00	83	59	298.00
Core Competency Training and Education	737	2	492.11	34	2	34.00	294	4	192.00
Managerial Competency Training and Education	1,467	33	1,173.09	3,056	19	4,662.46	175	11	256.50
Professional Competency Training and Education	2,658	231	2,439.04	119	10	249.00	2,623	152	3,165.75

Appendix

Independent Limited Assurance Report



INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT

The Board of Directors and Stockholders
E Ink Holdings, Inc.

We have performed a limited assurance engagement on the selected subject matter information (see Appendix) in the Sustainability Report ("the Report") of E Ink Holdings, Inc. ("the Company") for the year ended December 31, 2021.

Responsibilities of Management for the Report

Management is responsible for the preparation of the Report in accordance with Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Reports by TPEX Listed Companies and GRI Standards and Sector Guidance published by the Global Reporting Initiatives (GRI) and other applicable rules according to its sector features, and for such internal control as management determines is necessary to enable the preparation of the Report that are free from material misstatement.

Auditors' Responsibilities for the Limited Assurance Engagement Performed on the Report

We conducted our work on the selected subject matter information (see Appendix) in the Report in accordance with the Statements of Assurance Engagements Standards No. 1 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" issued by the Accounting Research and Development Foundation of the Republic of China to issue a limited assurance report on the preparation, in all material respects, of the Report. The nature, timing and extent of procedures performed in a limited assurance engagement are different from and more limited than a reasonable assurance engagement and, therefore, a lower assurance level is obtained than a reasonable assurance.

We applied professional judgment in the planning and conduct of our work to obtain evidence supporting the limited assurance. Because of the inherent limitations of any internal control, there is an unavoidable risk that even some material misstatements may remain undetected. The procedures we performed include, but not limited to:

- Obtaining and reading the Report.
- Inquiring management and personnel involved in the preparation of the Report to understand the policies and procedures for the preparation of the Report.
- Inquiring the personnel responsible for the preparation of the Report to understand the process, controls, and information systems in the preparation of the selected subject matter information.
- Analyzing and examining, on a test basis, the documents and records supporting the selected subject matter information.

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Inherent Limitations

The subject information included non-financial information, which was under more inherent limitations than financial information. The information may involve significant judgment, assumptions and interpretations by the management, and the different stakeholders may have different interpretations of such information.

Independence and Quality Controls

We have complied with the independence and other ethical requirements of the Norm of Professional Ethics for Certified Public Accountant in the Republic of China, which contains integrity, objectivity, professional competence and due care, confidentiality and professional behavior as the fundamental principles. In addition, the firm applies Statement of Auditing Standard No. 46 "Quality Control for Public Accounting Firms" issued by the Accounting Research and Development Foundation of the Republic of China and, accordingly, maintains a comprehensive system of quality controls, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the selected subject matter information in the Report are, in all material respects, not prepared in accordance with the above mentioned reporting criteria.

Other Matters

We shall not be responsible for conducting any further assurance work for any change of the subject matter information or the criteria applied after the issuance date of this report.

The engagement partner on the limited assurance report is Han-Ni Fang.

Deloitte & Touche
Taipei, Taiwan
Republic of China

June 24, 2022

Notice to Readers

For the convenience of readers, the independent auditors' limited assurance report and the accompanying summary of selected subject matter information have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' limited assurance report and summary of selected subject matter information shall prevail.

APPENDIX

SUMMARY OF SELECTED SUBJECT MATTER INFORMATION

#	Assurance Subject Matter (GRI Standards/ Designated indicator)	Descriptions of Indicators	Corresponding Section	Applicable Criteria
1.	GRI 302-1: 2016	Energy consumption within the organization	4-4 Energy Consumption and Management Appendix: Environmental Information	Amount of energy consumed from self-generated renewable energy (solar power), purchased electricity, purchased steam, natural gas, diesel, and gasoline in Yangzhou plant.
2.	GRI 303-3: 2018	Water withdrawal	4-5-2 Water Resources Management Appendix: Environmental Information	Total volume of water (tap water) withdrawn with a breakdown by the sources and in areas with water stress in Yangzhou plant.
3.	GRI 306-5: 2020	Waste directed to disposal	4-5-4 Waste Management	Total weight of waste breakdown by category and disposal methods in Taiwan.
4.	GRI 403-9: 2018	Work-related injuries	6-4 Maintaining a Safe and Healthy Work Environment	The number and rate of fatalities as a result of work-related injury, the number and rate of high-consequence work-related injuries and recordable work-related injuries, the main types of work-related injury and the number of hours worked, for employees and other workers (contractors) in Taiwan.
5.	GRI 405-2: 2016	Ratio of basic salary and remuneration of women to men	6-2 Building a Healthy, Positive and Beautiful Workplace	The ratio of basic salary and remuneration of women to men in Taiwan.
6.	Designated indicator 1	Code of conduct management process (Confirmed follow-up matters and incidents involving breach of code of conduct, the number of employees that have received training on code of conduct)	2-2 Ethical Management and Sustainable Governance	The total number of confirmed follow-up matters and incidents involving breach of code of conduct, the number of employees that have received training on code of conduct in Taiwan.
7.	Designated indicator 2	VOC's emissions	4-5 Resource Recycling	The total emissions of volatile organic compounds in Taiwan.

The logo for 'Eink' features the letter 'E' in red with a small red dot above it, followed by 'ink' in a dark blue, sans-serif font.

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