ASMPT
enabling the digital world

Environmental, Social and Governance Report

ASMPT LIMITED
(Incorporated in the Cayman Islands with limited liability)

(Stock Code: 0522)

2023

1 About this Report

This Environmental, Social and Governance Report ("ESG Report") provides an annual update on the environmental, social and governance (ESG) impact, policies and initiatives of ASMPT Limited and its subsidiaries (collectively "ASMPT" or the "Group") for the year ended 31 December 2023 ("the Reporting Period"). The Reporting Period aligns with the Group's financial year.

The ESG Report has been prepared in accordance with the Global Reporting Initiative (GRI) Universal Standards. It has referenced the mandatory and "comply or explain" provisions outlined in the Environmental, Social and Governance Reporting Guide in Appendix C2 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules").

The ESG Report has been prepared in accordance with the following four reporting principles contained in the listing rules:

- **Materiality**: Stakeholder communication and materiality assessment have been incorporated into the preparation of this ESG Report as a basis for identifying material ESG issues.

- **Quantitative**: The ESG Report presents environmental and social KPIs in the form of quantitative data, accompanied by explanations to illustrate their purposes and impacts. We also provide comparative data on environmental KPIs in the ESG Report.

- **Balance**: This ESG Report follows the principle of balance and presents our ESG performance in an impartial manner.

- **Consistency**: The methodologies for working out this ESG Report are consistent with those adopted in the 2022 and 2021 ESG Reports to ensure comparability of information.

The ESG Report covers the global operations of the Group's Semiconductor Solutions Segment (SEMI) and SMT Solutions Segment (SMT) in Greater China, Rest of Asia, Europe, Africa, and North and South America during the Reporting Period. It aims to provide an overview of the Group's approaches, priorities, targets and performance in the key areas of environmental protection, social standards, and corporate governance.

This ESG Report covers key issues relevant to the Group 's various stakeholders including shareholders, employees, customers and business partners and society. It is published only in electronic form, and the ESG Reports for 2016 onwards are available online at:

https://www.asmpt.com/en/company/substainability/

1.1 Chairman's Message

Dear Shareholders, Employees, Customers and Business Partners,

I am pleased to present the eighth edition of ASMPT's ESG report, which highlights our sustainability efforts in 2023 and outlines our focus on integrating climate-positive and people-centric approaches into our business practices. 2023 was marked by significant challenges posed by climate disruption and geopolitical pressures. Extreme weather events like heatwaves and floods tested operational resilience, while international armed conflicts threatened supply chain stability and energy security. Undeterred by these uncertainties and challenges, ASMPT not only remained resilient, but also stayed agile and committed to leading the industry in sustainability, and delivering responsible and sustainable services worldwide.

Firmly anchored in ASMPT's strategy and our POWER values, our declared aim is to create a bright and sustainable future for all stakeholders. To achieve this, we have aligned our ESG strategy around four key pillars: "Minimising Environmental Impact", "Creating Value through Innovation", "Nurturing our Employees" and "Supporting our Communities". You will find below some examples of the measures taken in 2023 in connection with these pillars. Embracing the goal of "ASMPT net-zero 2035", which aims to minimise environmental impact, ASMPT remains steadfast in its commitment to reducing our Scope 1 and Scope 2 emissions to net-zero by 2035 relative to the baseline year of 2020. A detailed decarbonisation action plan with interim targets of reducing Scope 1 and 2 emissions by 30% by 2026 and 50% by 2030 has been put in motion. Our focus in 2023 has been on implementing the emissions reduction levers of "Energy Demand Reduction" and "Renewable Energy Self-generation" at major facilities in China, Germany, and the UK.

While we are still in the process of developing our Scope 3 reduction target, ASMPT is actively contributing to emissions reduction throughout the semiconductor value chain. We are proud to lead the Semiconductor Climate Consortium (SCC) Scope 2 Emission Working Group, as part of a collaborative effort to guide the entire semiconductor value chain towards a low-carbon future. By engaging with key stakeholders in targeted geographies worldwide, the working group aims to drive the industry towards larger scale clean energy utilisation, as well as exploring new energy opportunities for the industry. Through these initiatives,

ASMPT is committed to playing a pivotal role in addressing the environmental impact of our operations and promoting sustainability within the semiconductor industry.

Under the pillar of "Nurturing Our Employees", we are dedicated to fostering a diverse, equal, and inclusive work environment globally. ASMPT is currently in the process of evolving its Diversity, Equity & Inclusion (DEI) framework from an introductory stage to a more advanced action stage. In 2023, we implemented various initiatives such as establishing Country Women's Chapters at major facilities and undertaking activities to address potential unconscious biases. ASMPT strongly believes that our DEI efforts contribute to creating a supportive and fulfilling workplace.

Our "Governance" pillar is distinguished by the establishment of a robust governance structure, serving as the cornerstone of our operations and ensuring accountability alongside rigorous process controls. Our pursuit of ethical business practices is anchored in a bedrock of corporate integrity, a commitment that finds expression in our zero-tolerance policy towards corruption and regulatory breaches. In parallel, we have set ourselves as the industry trailblazers in quality and safety standards, with a continuous drive to exceed our customers' expectations. This synergistic approach to governance excellence is fundamental to foster trust and deliver unparalleled value to our stakeholders.

I would like to express my deepest gratitude to our employees for their unwavering loyalty and dedication throughout this challenging year. Our staff are invaluable assets, contributing significantly to ASMPT's shared success. I would also like to thank our customers and suppliers for their continuous support and trust on this sustainability journey, which collaboratively drive us to greater achievements. Moving forward, we are passionately committed to working together to build a bright and sustainable future for generations to come.

Orasa Livasiri

Chairman

1.2 | About ASMPT

ASMPT Limited is a leading global supplier of hardware and software solutions for the semiconductors and electronics manufacturing industries. Headquartered in Singapore, ASMPT's offerings encompass the semiconductor assembly & packaging, and SMT (surface mount technology) industries, ranging from wafer deposition to the various solutions that organise, assemble and package delicate electronic components into a vast range of end- user devices, which include electronics, mobile communications, computing, automotive, industrial and LED displays. ASMPT partners with customers very closely and, with continuous investment in R&D, helps to provide cost-effective, industry-shaping solutions that achieve higher productivity, greater reliability, and enhanced quality.

ASMPT is listed on the Stock Exchange of Hong Kong (HKEX stock code: 0522), and is one of the constituent stocks of the Hang Seng Composite MidCap Index under the Hang Seng Composite Size Indexes, the Hang Seng Composite Information Technology Industry Index under Hang Seng Composite Industry Indexes, the Hang Seng Corporate Sustainability Benchmark Index , and the Hang Seng HK 35 Index. To learn more about ASMPT, please visit us at www.asmpt.com.

Effective from September 4, 2023, ASMPT is included in the Hang Seng Corporate Sustainability Index Series. This selection is in recognition of ASMPT's high environmental, social, and corporate governance standards. The Hang Seng Corporate Sustainability Index Series, reviewed annually, comprises companies excelling in corporate sustainability. The selection process involves a rigorous evaluation conducted by the Hong Kong Quality Assurance Agency (HKQAA), ensuring objectivity and reliability.

Hang Seng Corporate Sustainability Index Series Member 2023-2024

Our global presence

>2,500
Global R&D staff

>2,000
Patents on leading edge technologies

15
R&D locations across Asia, Euope, Americas

Awards and recognition

JobsDB The Hong Kong HR Awards 2022/23 — Grand Award of PEOPLE

ASMPT Technology (Shenzhen) Co. Ltd. recognised as a 2023 Shenzhen Longgang District Green and Low-Carbon Pioneer Enterprise

ASMPT Ltd. received the CT goodjobs Best HR Awards 2023 Grand Award (Best in HR Digitalisation Award) **and Gold Award** (Best Employee Health & Safety Programme Award)

ASMPT Technology (Shenzhen) Co. Ltd. received the Manufacturing Industry Best Employer Award

ASMPT GmbH & Co. KG (Munich) received the Employer of the future Award

ASMPT awarded as "Employer of the future"

ASMPT strives to be an employer of choice and of the future, and adopted different policies and practices to enhance its ability to attract new and retain talent.

This is confirmed by the lower than industry attrition rate in 2023 and the high response rate to a new global employee engagement survey. The "Employer of the future" award by the prestigious German Innovation Insititute for Digitalisation and Sustainability (DIIND) is a further testimony of our efforts.

The seal is awarded in various categories following a demanding assessment process. They include the following assessment criteria:

· Modern leadership
· Innovative strength
· Status of the digital transformation
· Employee friendliness
· Strategies for recruiting

The seal confirms ASMPT's sincere efforts to introduce and sustainably implement change management processes. It also highlights the company's ability to react flexibly and agilely to changing situations without neglecting its high level of resilience and stability.

ASMPT receives one of the most coveted business awards in Germany.

One of ASMPT's awards

"Global diversity is key to our success. ASMPT brings together experts and talent from around the world in teams that innovate for the future. Our people are our most valuable asset."

Gim Wee Pua, Chief People Officer, ASMPT

Sustainability Strategy

2 Sustainability Strategy

- **Sustainability as an integral part of our business strategy based on quality, people and innovation**
- **Clear fields of actions and ambitions along our POWER values**
- **Driving growth towards a sustainable future, based on ASMPT's sustainability framework with the four pillars, "Minimising Environmental Impact", "Creating Value through Innovation", "Nurturing our Employees" and "Supporting our Communities"**

The ASMPT Group strategy is focused on **"Shaping a bright and sustainable future for shareholders, employees, customers and business partners and society"**.

ASMPT makes a difference through innovation, excellence, social & environmental responsibility as an enabler of the digital world. As ASMPT expands its market leadership and influence, it also helps ensure the long-term success of its customers.

COMPANY SUCCESS
Shaping a bright & sustainable future for customers, employees, investors, partners and society.

DIFFERENTIATION
- Superior customer experience
- Value creation via best of breed solutions
- Premium brand recognition

MARKETS
- Clear #1 in semiconductor & SMT solutions
- Partner of choice for smart factory solutions
- Leading player in key emerging applications

QUALITY
- Highest quality in all we do
- Recognised as the quality leader
- Operational excellence

PEOPLE
- Embrace change & diversity
- High performance leadership behaviour & culture
- Great place to work

INNOVATION
- Success through innovation
- Foster agile innovation capabilities
- Pioneer in advanced technology implementation

Passion – **O**wnership – **W**in – **E**xcellence – **R**espect

2.1 | The ASMPT Group Strategy

Two key elements spur ASMPT's global market leadership:

- **DIFFERENTIATION** – ASMPT is truly distinct from the competition in key ways.

- **MARKETS** – ASMPT is the leader in its businesses, in its technologies and as a partner.

The drivers of ASMPT's success are:

- **QUALITY** – ASMPT's unwavering commitment to quality permeates every facet of the company and is evident in the daily actions of our people.

- **PEOPLE** – ASMPT´s success is the result of its people's experience, commitment and performance. The strong corporate culture of ASMPT promotes diversity, inclusion and equal opportunity.

- **INNOVATION** – ASMPT creates success through innovation and invests in advanced technologies.

The foundation of ASMPT's success are:

The **POWER VALUES.** In the ASMPT Corporate strategy, people are at the heart of the company's success.

The people of ASMPT are guided by the POWER values. These provide guidance and highlight not just employee rights, but also employee duties and obligations.

"Thanks to our exceptional expertise in the use of technologies and processes for electronics production and a consistent focus on the needs of our customers, we have become the undisputed number one in the SEMI and SMT segment. The expertise of our employees around the world is at the heart of this success."

Robin Ng, Chief Executive Officer, ASMPT

"The integration of Environmental, Social, and Governance factors into business practices is an imperative. We have clearly structured our corporate strategy and have defined our company success to shape a bright and sustainable future for our customers, our employees, our shareholders, our partners and society."

Guenter Lauber, EVP & Chief Strategy and Digitalisation Officer, ASMPT

2.2 | The ASMPT POWER Values

POWER stands for Passion, Ownership, Win, Excellence, Respect

ASMPT *enabling the digital world*

PASSION — to be the #1 "Go to Partner"
OWNERSHIP — of all actions and behaviours
WIN — with our customers
EXCELLENCE — in all that we do
RESPECT — for one and all

We embrace change and diversity

- Change is vital for growth and enhancing organisational capabilities

- Appreciation and respect for diverse backgrounds, skills and experiences; these enable better decisions and makes ASMPT a very fulfilling company to work in

We appreciate our high performance and POWER culture

- Always support and empower employees, striving for the best while being open to suggestions on how to do better

- Distinctive culture is a strength, making ASMPT a globally strong, competitive and contributing company

- Embrace high-performance behavioural model that provides critical skills to interact, commit, and partner well both internally & externally

ASMPT is a great place to work in all our locations around the world

- Opportunities, environment and guidance to help each employee enjoy their work and develop to their full potential

- Fair and performance-oriented remuneration and benefits

- Constantly engaging employees and seeking active feedback

"As guidelines for our joint work, the POWER values shape the rights and duties of every single employee worldwide. They underline the commitment, ethical behaviour and moral at ASMPT at all levels of the corporate structure. Values such as diversity, equality, respect and open communication are key components of ASMPT's corporate strategy."

Katie Xu Yifan, Chief Financial Officer, ASMPT
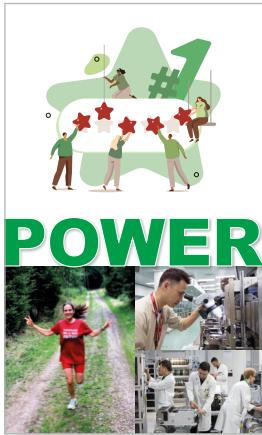
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PASSION

to be the #1 "Go to Partner"

- We aim to be the natural choice for customers, employees, business partners and investors.
- We are true global team players, positive and engaging.
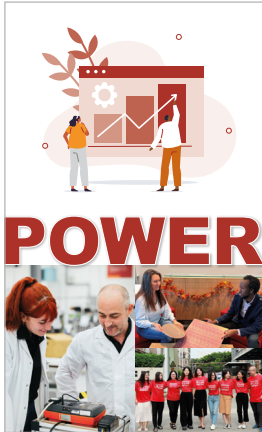- We are great to work with.

POWER

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OWNERSHIP

of all actions and behaviors

- We are confident decision makers. We never give up.
- We lead by example. We admit to and learn from mistakes.
- We are open, honest and trustworthy.

POWER

WIN

with our customers

- We drive innovation and strive to deliver ahead of the competition.
- We commit to the highest ethical business standards.
- We consistently deliver on promises made and persevere until the job is done.

POWER
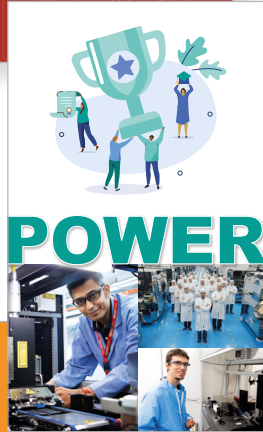
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EXCELLENCE

in all that we do

- We make a difference. We strive for excellence – learning and continuously adding value.
- We are enthusiastic contributors. We are determined to succeed and to consistently deliver on quality.
- We work well together to provide innovative smart solutions. We see all challenges as opportunities.
- We are willing to change and execute.
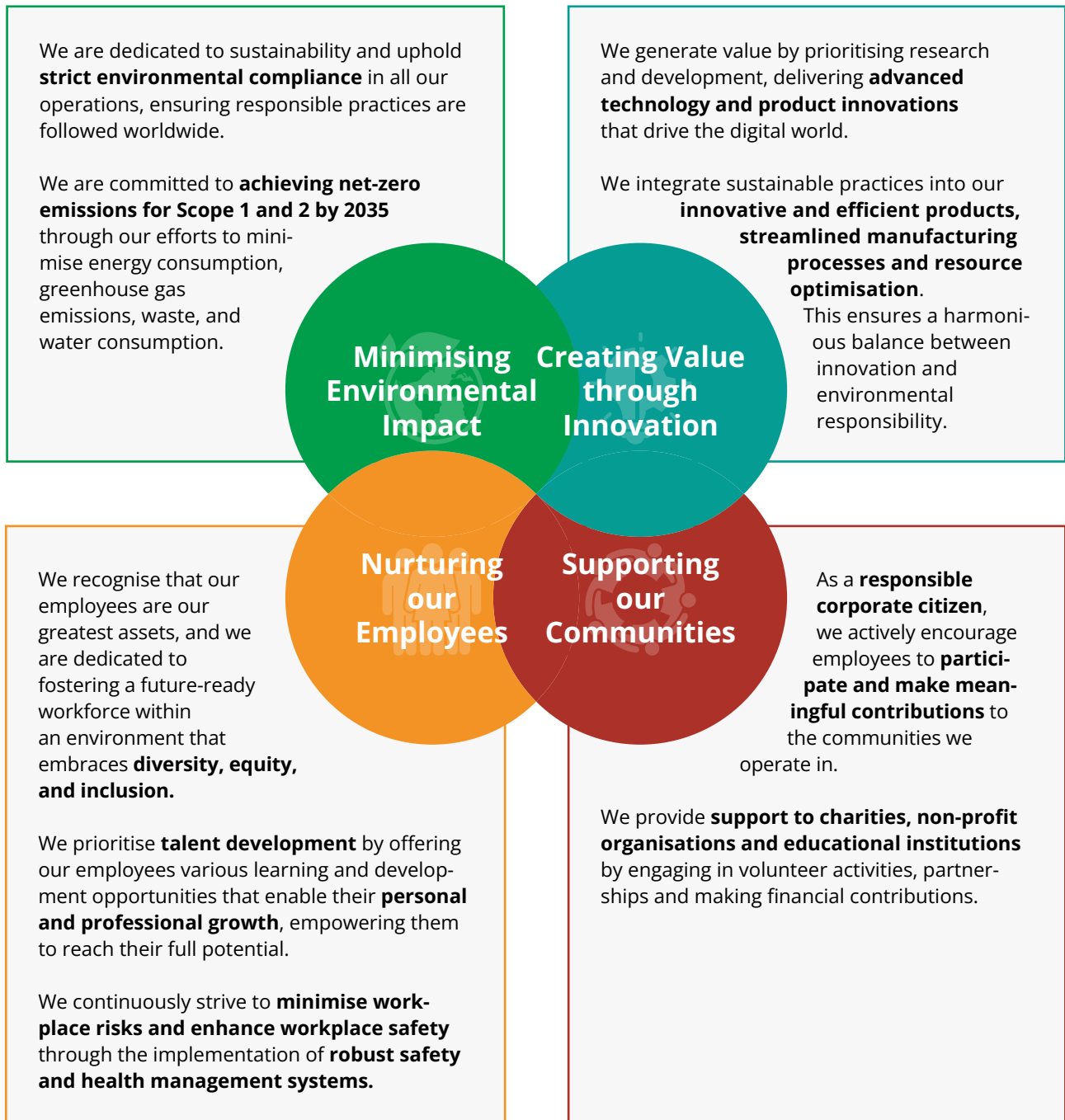
POWER
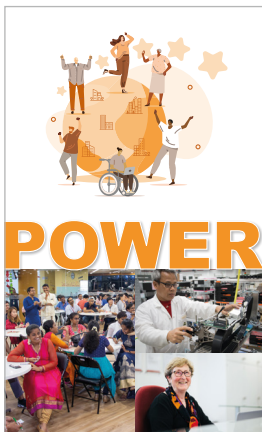
RESPECT

for one and all

- We respect and value all internal and external partnerships.
- We promote and foster an inclusive work environment.
- We embrace the strengths of our global diverse talents and cultures.

POWER

2.3 ASMPT's Sustainability Framework

The Group's Sustainability Framework has been built on four Pillars.

The Group's sustainability framework has been built on this four pillars: "Minimising Environmental Impact", "Creating Value through Innovation", "Nurturing our Employees" and "Supporting our Communities". They are precisely aligned with ASMPT's strict governance requirements and form the cornerstones of ASMPT's sustainability strategy.

We are dedicated to sustainability and uphold **strict environmental compliance** in all our operations, ensuring responsible practices are followed worldwide.

We are committed to **achieving net-zero emissions for Scope 1 and 2 by 2035** through our efforts to minimise energy consumption, greenhouse gas emissions, waste, and water consumption.

We generate value by prioritising research and development, delivering **advanced technology and product innovations** that drive the digital world.

We integrate sustainable practices into our **innovative and efficient products, streamlined manufacturing processes and resource optimisation**. This ensures a harmonious balance between innovation and environmental responsibility.

Minimising Environmental Impact

Creating Value through Innovation

Nurturing our Employees

Supporting our Communities

We recognise that our employees are our greatest assets, and we are dedicated to fostering a future-ready workforce within an environment that embraces **diversity, equity, and inclusion.**

We prioritise **talent development** by offering our employees various learning and development opportunities that enable their **personal and professional growth**, empowering them to reach their full potential.

We continuously strive to **minimise workplace risks and enhance workplace safety** through the implementation of **robust safety and health management systems.**

As a **responsible corporate citizen**, we actively encourage employees to **participate and make meaningful contributions** to the communities we operate in.

We provide **support to charities, non-profit organisations and educational institutions** by engaging in volunteer activities, partnerships and making financial contributions.

2.4 | Stakeholder Engagement

ASMPT accords critical importance to the valuable opinions of our stakeholders including shareholders, employees, customers, business partners, society, and regulators. The Group builds and maintains symbiotic relationships with these stakeholders through regular, two-way communications channels to gather their opinions on and suggestions to the Group, which then enable us to make continuous improvements. The relevant channels for receiving stakeholders' expectations and broadcasting our responses are set out as follows:

Key Stakeholders	Expectations of ASMPT	Solutions	Engagement Channels
Shareholders	Provide accurate and timely information on the Group's operations and financials as well as ESG strategies, performance and plans.	The Group strives to create long-term shareholder value by generating optimum returns on investment through leading ESG practices, providing transparent and timely disclosures, and deliver sustainable and long-term growth.	• Annual General Meetings • Annual and Interim Reports • Announcements and Circulars • Quarterly updates on financial results • Investor conference calls • Investor meetings and roadshows
Employees	A conducive environment where employees are treated with respect and dignity, supporting their personal development, and helping to achieve career growth and work-life balance.	The Group adopts HR policies and practices that promote a fair, safe and comfortable working environment, reward good performance, provide opportunities for learning and development, ensure career growth, and enable work-life balance. Employees can provide feedback to management through open communication platforms such as networking sessions and regular update sessions.	• Collaboration and communication tools • Regular town hall meetings for leaders led by the CEO, with timely cascade of information to team members • Staff publications and videos • Networking sessions • Team building activities • Regular management communications • Performance reviews • Employee engagement surveys • In-house recreational facilities
Customers	High quality and on-time delivery of efficient products and services. Environmentally responsible and ethical business operations.	The Group is dedicated to delivering innovative and sustainable products and services to our customers while maintaining high-quality standards and ensuring on-time delivery.	• Regular communication and meetings • Customer training and support • Site visits • Trade shows • Customer satisfaction surveys

Key Stakeholders	Expectations of ASMPT	Solutions	Engagement Channels
Suppliers & Partners	Build long-term business relationships based on ethical and responsible business practices for mutual benefit.	The Group treats all suppliers fairly and with respect. The Group strives to establish ethical and responsible business practices, promote transparency and mutual growth in long-term business relationships.	• Supplier Code of Conduct (SCoC) • Responsible Business Alliance (RBA) standards • Supplier management meetings and engagement • Communications platforms • Supplier assessment system • Supplier audits
Communities	A responsible and caring corporate citizen serving the community.	The Group actively engages with communities through initiatives such as partnerships with social enterprises and charities, as well as enabling staff and their families to participate freely.	• Employee community involvement programmes • Social enterprises involvement programmes • Corporate sponsorships and donations • Special open house activities • Scholarships and internships
Government Bodies, Regulators, Standards Bodies, and Ratings Agencies	Ensure that the Group complies with local laws, regulations and policies, and addresses pertinent issues.	The Group operates in accordance with the laws of the countries where it conducts business. The Group also establishes internal control policies and procedures to ensure compliance and promote sustainability.	• Regular compliance reviews, policy development and performance reporting • Regular communication via meetings, calls and emails

2.5 | Materiality Assessment

ASMPT believes that sustainable growth hinges on meeting and exceeding the expectations and needs of its key stakeholders. The Group's material ESG factors are those that carry significant environmental, social, governance and economic impact on its business and influence the assessment and decision-making of internal and external stakeholders.

The Group has conducted a thorough review and prioritisation of the material ESG factors. A three-stage materiality assessment process was adopted:

Stage 1 Identification

ASMPT identified the sustainability issues applicable to the Group via wide-ranging research, engagement and analysis. Main sources of input include shareholders, employees, customers, peers, regulatory and standards bodies, and ratings agencies. 19 sustainability issues that are considered relevant and important to our business and stakeholders were identified.

Stage 2 Prioritisation

The material sustainability issues have been prioritised based on the expectations of our various stakeholders and a thorough analysis conducted by the Group. Priority is given to issues with the potential to make a significant impact on our business, operations, and to generate sustainable ESG value.

Stage 3 Implementation

The Board has endorsed this ESG Report, which encompasses the materiality matrix below. The endorsed list of material ESG factors serves as a guide for developing corporate strategies and goals, ongoing stakeholder engagement, as well as disclosures in the Annual Report, ESG Report and other corporate communication channels. Periodic assessments are conducted to determine the materiality of ESG factors to prevailing business contexts and external conditions.
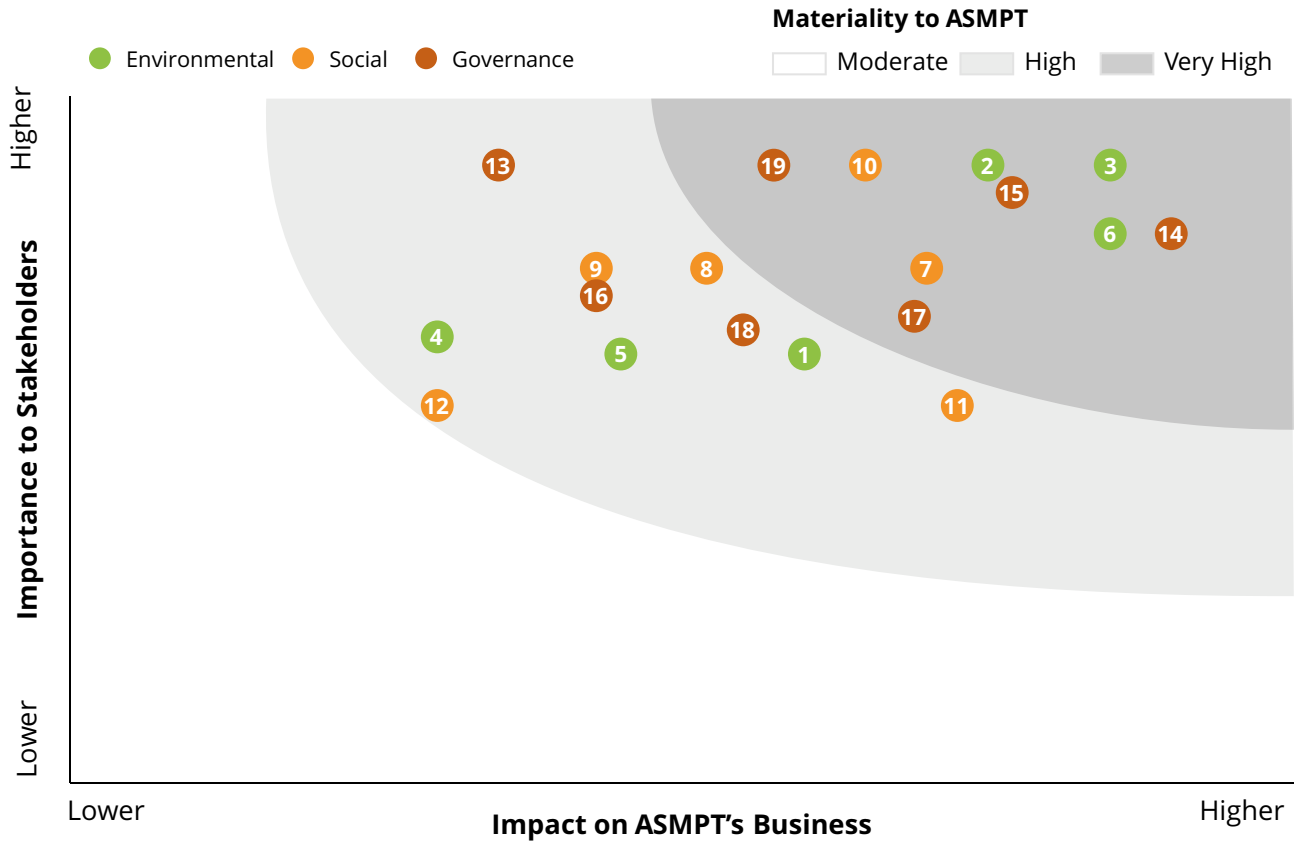
The assessment identified nine "very high materiality" factors and ten "high materiality" factors that cut across the environmental, social and governance domains ("ESG Material Factors"), as shown in the figure below. All 19 ESG Material Factors are elaborated upon in this Report.

Compared to 2022, the updated materiality matrix incorporates four additional ESG Material Factors, including "Product sustainability & Innovation", "Customer Relationship Management", "Environmental Compliance", and "Cybersecurity & IP Protection". These factors have been identified based on the common expectations of key stakeholders, as well as recommendations from industry standards bodies and ESG ratings agencies.

To enhance clarity, consistency and alignment with recognised standards and practices in the industry and ESG arena, the Group has made some adjustments to the ESG Material Factors. Similar factors have been combined - they include combining "Energy Management" and "Product Energy Efficiency" into "Energy Management & Product Energy Efficiency" as well as "Business Ethics" and "Corporate Governance" into "Business Ethics & Corporate Governance". Moreover, certain factors have undergone name revisions to reflect their topics better and align with common terminology. These changes include "Regulatory Compliance" (formerly "Transparency, Accountability & Reporting"), "Green House Gases (GHG) and Air Emissions" (formerly "GHG Emissions"), "Human Capital Development & Talent Management" (formerly "Human Capital Development"), and "Labour Practices" (formerly "Labour Rights").

ASMPT Materiality Assessment

Material Factors to ASMPT have been redefined based on materiality matrix

Materiality to ASMPT

Moderate · High · Very High

Legend: ● Environmental ● Social ● Governance

Y-axis: Importance to Stakeholders (Lower → Higher)
X-axis: Impact on ASMPT's Business (Lower → Higher)

Category	No.	Material Factors
Environmental	1	Environmental Compliance
	2	GHG and Air Emissions
	3	Energy Management and Product Energy Efficiency
	4	Water Resource Management
	5	Waste Management
	6	Product Sustainability & Innovation
Social	7	Diversity, Equality & Inclusion
	8	Labour Practices
	9	Human Rights
	10	Workplace Health & Safety
	11	Human Capital Development & Talent Management
	12	Community Investment
Governance	13	Regulatory Compliance
	14	Product Quality & Safety
	15	Business Ethics & Corporate Governance
	16	Cybersecurity & IP protection
	17	Supply Chain Management
	18	Customer Relationship Management
	19	Climate Risk Management

2.6 Alignment between SDGs and ASMPT's Material Factors

As the leading semiconductor and SMT equipment solutions company, ASMPT plays a crucial role in supporting all our stakeholders in the transition to a net-zero future. It is essential for us to demonstrate our commitment and align our actions with the global objectives outlined by the UN Sustainable Development Goals (SDGs). In 2023, the Group mapped 15 out of its 19 ESG Material Factors to the relevant SDGs, ensuring our activities contribute to these important sustainability targets. The remaining four ESG Material Factors — "Business Ethics & Corporate Governance", "Customer Relationship Management", "Environmental Compliance", and "Regulatory Compliance" — are equally significant in guiding our operations to be responsible and transparent, even if they may not have a direct impact on the SDGs.

	Material Factors	Aligned SDGs	Addressed in this Report
Governance	Cybersecurity and IP Protection	11 SUSTAINABLE CITIES AND COMMUNITIES	• Intellectual Property and Cybersecurity • Intellectual Property
	Product Quality & Safety	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	• Product Responsibility
	Supply Chain Management	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	• Supply Chain Management and Responsible Sourcing Material
	Climate Risk Management	13 CLIMATE ACTION	• Climate Risks Management
	Regulatory Compliance		• ESG Governance Structure • About this Report
	Business Ethics & Corporate Governance		• Anti-Corruption
Minimising Environmental Impact	GHG and Air Emissions	13 CLIMATE ACTION	• Net-zero Initiatives • Environmental Management
	Energy Management and Product Energy Efficiency	7 AFFORDABLE AND CLEAN ENERGY / 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	• Net-zero Initiatives
	Water Resource Management	11 SUSTAINABLE CITIES AND COMMUNITIES	• Conserving the Environment
	Waste Management	11 SUSTAINABLE CITIES AND COMMUNITIES / 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	• Conserving the Environment
	Environmental Compliance		• Environmental Management

	Material Factors	Aligned SDGs	Addressed in this Report
Creating Value through Innovation	Product Sustainability & Innovation	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	• Technological Innovation
	Customer Relationship Management		• Serving our customers with Excellence
Nurturing our Employees	Diversity, Equity & Inclusion	5 GENDER EQUALITY 8 DECENT WORK AND ECONOMIC GROWTH	• Diversity, Equity and Inclusion
	Labour Practices	8 DECENT WORK AND ECONOMIC GROWTH	• Employee Overview
	Human Rights	8 DECENT WORK AND ECONOMIC GROWTH	• Employee Overview
	Workplace Health & Safety	8 DECENT WORK AND ECONOMIC GROWTH 3 GOOD HEALTH AND WELL-BEING	• Ensure Employee's Health and Safety
	Human Capital Development & Talent Management	4 QUALITY EDUCATION	• Human Capital Development
Supporting our Communities	Community Investment	3 GOOD HEALTH AND WELL-BEING	• Contributing Local Communities

Governance

3 Governance

- **Ethics and integrity are the foundation of our sustainable business practices**
- **Zero tolerance for violations of applicable laws and internal policies and regulations**
- **A robust global risk-based compliance system is installed**
- **Climate-related risk is identified through the use of scenario analysis**

ASMPT believes that effective governance is built on a robust foundation of ethical behaviour and morals. We are committed to operating with the highest standards of integrity and accountability across all areas of our business. A collaborative approach with our stakeholders is essential in maintaining transparency and driving continuous improvement of our governance practices. Regular consultation with our key stakeholders such as shareholders, employees, customers and business partners is integral to enhancing our corporate responsibility and ensuring the quality that our customers have come to expect. We communicate openly to foster trust and ensure that ASMPT's business practices align with our commitment to ethical conduct and compliance with all applicable laws and regulations.

Within our supply chain, we work closely with our partners to promote responsible sourcing and to uphold our shared commitment to sustainability and human rights. Protecting our Intellectual Property, along with that of our partners and customers, is vital for fostering innovation and maintaining a competitive edge. Moreover, in an era where data breaches are increasingly common, we prioritise robust cybersecurity measures to protect sensitive information from emerging threats.

Through this philosophy of appreciation, equality, respect and open communication, ASMPT is dedicated to upholding a governance structure that not only meets but exceeds the expectations of our stakeholders.

Our actions and strategies on governance are aligned with the following SDGs:

3.1 | ESG Governance Structure

The Group's robust governance structure, which is embedded at all levels of the Group, is organised as follows:

ASMPT's **Board of Directors** consists of ten directors as at 31 December 2023. Among them, two are female, including the Chairman and an independent non-executive director. The Board's has six independent non-executive directors, two non-executive directors, and two executive directors. Each member of the Board brings a wealth of experience and expertise in various fields such as finance, business, legal, technical, and industrial sectors.

The **Executive Committee (EXCO)** comprises the Group Chief Executive Officer and other senior management members of the Group.

The **Strategic Risk Review Committee (SRRC)** includes senior executives from key functions across the organisation. They are responsible for identifying and analysing both external and internal strategic risks faced by the Group.

The **Climate-Related Risk Task Force** consists of staff from different regions and functional groups. They are responsible for assessing and reporting climate-related risks and opportunities within the Group.

The international cross-functional **ESG Coalition** consists of staff who work with the ESG Team to formulate and implement ESG-related practices along the front lines.

The **ESG Team** operates as a dedicated unit under the leadership of Guenter Lauber, Executive Vice President and Chief Strategy and Digitalisation Officer. It formulates and implements ESG strategy, as well as provides guidance on the Group's overall ESG-related practices.

The responsibilities for each group are detailed below. For more information on ASMPT's corporate governance and risk management practices for the 2023 financial year, please refer to the Group's 2023 Annual Report.

"Our steadfast commitment to integrity, honesty and transparency is encapsulated in our Code of Conduct, which serves as a beacon guiding the behaviour of every individual within the Group, from senior management to junior staff. Thus, we have fostered an environment of trust, accountability and ethical conduct, ensuring that our actions consistently align with our values and principles."

Jupiter Kong, Group General Counsel, ASMPT

ESG and Climate-related risk governance structure

Board of Directors

- Oversee the ESG strategy, policies, implementation and matters, with a view to the corporate objective of growing responsibly in the interest of all stakeholders.
- Communicate with the EXCO to set up ESG-related goals and track progress.
- Develop and review Group policies and practices on corporate governance, including the Group risk management framework.
- Evaluate and determine the nature and extent of the risks and mitigation actions the Group is willing to accept in achieving its strategic objectives.
- Ensure that the Group establishes and maintains an appropriate and effective climate-related risk management system.

EXCO

- Provide strategic direction, implementation guidance and resources for the Group's ESG strategy and actions.
- Evaluate and review long-term business and organisational goals.
- Approve and endorse overall enterprise risk and mitigation plans and actions.
- Assess the effectiveness of the Group's risk control and management systems.

SRRC

- Identify and analyse strategic external and internal risks facing the Group.
- Incorporate TCFD-aligned ESG risk analysis into the enterprise risk management framework.
- Review recommendations from the Task Force.

ESG Team

- Formulate, implement and monitor the Group's ESG policies and practices.
- Provide guidance on ESG strategy and compliance, assess ESG related risks and opportunities, and evaluate ESG management performance.

Climate-Related Risk Task Force

- Perform TCFD-aligned ESG reporting to the SRRC, incorporating scenario analysis.
- Identify ESG-related risks and opportunities, as well as possible mitigation pathways.

ESG Coalition

- Assist ESG Team in developing, implementing and monitoring Group's ESG policies, processes, and initiatives.
- Report ESG related performance and matters to ESG Team.

3.2 | Climate Risk Management

Why it Matters

Combating climate change is a global imperative that resonates with forward-thinking companies across all industries. ASMPT, as a leading semiconductor and electronics solutions provider, recognises the critical role it plays in this arena. We understand that our operations and products have direct and indirect impacts on everything from consumer electronics to renewable energy systems. Therefore, addressing climate change is not just a corporate responsibility but also a strategic business imperative.

At the 28th session of the Conference of the Parties (COP28) in 2023, it was emphasised that semiconductors are the building blocks of modern technology and crucial for the development of renewable energy systems, energy storage solutions, and energy-efficient devices. These technologies underpin global efforts to reduce carbon emissions and transition to sustainable energy sources. The Group is cognisant of its role in climate change mitigation and is thus not only focused on minimising the environmental footprint of our operations but also on strengthening our climate-related risk management and strategy development.

Our Commitment

ASMPT is commited to tackling climate change underpinned by our dedication to transparent reporting and disclosure. We maintain our commitment to sustaining and enhancing our disclosures to align with the Task Force on Climate-related Financial Disclosures (TCFD) framework. In 2023, we enhanced our disclosures by providing a deeper insight into how climate-related risks tangibly affect our business and strategy, according to a range of climate-related scenarios.

Our Approach

Climate Risk and Opportunity Identification

ASMPT is dedicated to enhancing the information quality regarding the Group's approach to climate-related risks, opportunities, and impacts. The Group has created and publicised our strategy for climate resilience, referencing TCFD guidelines, to outline clearly our approach to climate issues and show our dedication to tackling them.

We have recognised key climate risks that could impact us in the short-term (up to 5 years), medium-term (5-10 years), and long-term (over 10 years), both from physical changes to our environment and from the transition to a low-carbon economy.

Risk Type	Risks	Time Period	Impact	Mitigation Measures
Physical Risk				
Acute Physical Risk	Extreme weather incidents	Short-term	Increased severity of extreme weather events (e.g. cyclone, floods) affecting ASMPT operations and impacting our supply chain, including sites close to coastal areas.	Engage third party expertise to assess and insure assets at risk.
Chronic Physical Risk	Long-term climate change	Long-term	Extreme prolonged impact from climate change, such as heat stress, rising sea levels, and coastal flooding.	Monitor trends and factor them into infrastructure developments and decision-makings.

Risk Type	Risks	Time Period	Impact	Mitigation Measures
Transition Risks				
Policy and Lagal Risk	Mandatory emissions disclosures and decarbonisation targets	Short-term	Additional disclosures and targets could be mandated by entities such as regulators, stock exchanges and customers. Possible new requirements for emissions auditing.	Pre-empt such requirements by setting and disclosing clear decarbonisation targets and pathways aligned with global standards.
	Slow progress in decarbonisation of local electricity grids in countries where ASMPT operates	Medium to long-term	If emission factors of local grids do not decrease over time, this could impact ASMPT's ability to reduce its emissions from purchased electricity.	Explore renewable energy and other alternatives to reduce the reliance on local electricity grids. Proactively lead initiatives such as the SCC Scope 2 Working Group to increase low-carbon energy access and availability where we operate.
Technology Risk	Uncertainty of green technology advancement	Medium-term	Uncertainty of green technology advancement in terms of investment risks, time to market and ability to meet market's current and future needs.	Investing in R&D to ensure ASMPT stays ahead in green advancements. This involves training our R&D team, integrating sustainability into our technology plans, and forging partnerships with universities and customers to bolster our R&D projects.
	Cost increases and supply shortages for magnets and rare earth elements due to rising global demand	Short to medium-term	This will affect the supply chain and cost competitiveness as such materials are heavily used in assemblies for ASMPT's linear motors.	Diversify rare elements' supply chain, and embed climate-related clauses to shield against future supply and price shocks.
Market Risk	Customers are requesting more energy-efficient products	Short to medium-term	Failure to respond to these customer requirements could lead to decline in sales and customer retention for energy-intensive equipment such as moulding machines.	Operate various R&D and innovation centres striving to identify green and energy-efficient product designs that fulfill customers' needs.
	Green supply chain	Short to medium-term	Potential increase in cost of products given requirements to source for greener components.	Explore low carbon footprint product designs and incorporate emissions considerations into supply chain development and decision making.
Reputation Risk	Perceived lack of investment and leadership in climate action	Short-term	Risk of decline in corporate reputation and market standing amongst shareholders, customers and other stakeholders.	Establish clear net-zero ambition and implementation pathway, and communicate the strategy and plans to stakeholders regularly.

Opportunity Type	Opportunities	Time Period	Impact
Market Opportunity	Business growth and access to new markets	Short to medium-term	Rising demand for low-carbon technologies, including electric vehicles, charging infrastructure, renewable energy systems, and LEDs, all of which necessitate advanced packaging and display technologies. ASMPT's product offerings, being key components of the value chain, are poised for strong growth in these green sectors. Our advancements in energy-efficient semiconductor packaging could also further increase the Group's market share.
Resource Efficiency	Direct cost savings	Short to medium-term	Implementing and upgrading to energy-efficient systems, such as chillers, heating, ventilation, and air conditioning (HVAC), can reduce energy consumption and operational costs. By leveraging AI technology, we can create more sustainable product designs with optimised material flow, which will decrease material use and streamline supply chains and manufacturing processes.
Product Opportunity	Increased competitive advantages	Short to medium-term	More energy efficient products with lower carbon emissions strengthen product competitiveness, meet customers' needs, and enhance ASMPT's overall branding and reputation among shareholders, employees and customers.
Resilience	Improved operational and financial resilience	Short to medium-term	Responsible and green sourcing improves supply chain resilience, attracts investors, and increases the likelihood of securing backing from key shareholders. Assessing the climate risks allows ASMPT to pinpoint potential threats and take action to maintain operational resilience.

Climate Scenario Analysis

For a better understanding of the climate-related risks' effects, ASMPT conducted a scenario analysis to determine the likelihood of occurrence and potential financial impact under two divergent Shared Socioeconomic Pathways (SSPs) extracted from the Sixth Assessment Report on climate change by the Intergovernmental Panel on Climate Change (IPCC):

Low GHG Emissions Scenario (SSP1–2.6)

SSP1–2.6 represents a positive scenario whereby global CO_2 emissions would be reduced to net-zero around 2075, and the projected global average temperatures may increase by 1.8°C by 2080-2100.

High GHG Emissions Scenario (SSP3–7.0)

SSP3–7.0 represents a negative scenario whereby global CO_2 emissions would double by 2100, and the projected global average temperatures may increase by 3.6°C by 2080-2100.

Under the two selected scenarios, ASMPT conducted a thorough analysis and identified a comprehensive range of climate risks that have potential effects on the Group. These risks were then assessed and prioritised by engaging with various business units and stakeholders, taking into consideration the likelihood of occurrence and the positive or negative impacts across short, medium, and long-term timeframes.

	Scale	Definition
Impact	Critical	– Sustained loss of market potential / position / reputation – Significant impact in long-term competitive edge
	Moderate	– Some impact on market potential / position / reputation – Some impact in long term competitive edge
	Minor	– No or minimal impact on market potential / position / reputation – No or minimal impact in long term competitive edge
Likelihood	High	High chance of occurrence
	Medium	Medium chance of occurrence
	Low	Low chance of occurrence

SSP 1-2.6 **Low GHG Emissions Scenario**		**Likelihood**		
		Low	**Medium**	**High**
Impact	**Critical**	– Lack of Government-led initiatives – Uncertainty about technological advancements	– Lack of action affects ASMPT's reputation	– Mandatory emissions disclosure – Customers require more efficient products – Need for greener supply chain
	Moderate	– Long-term climate change	– Need for complex product portfolio – Stigmatisation of semiconductor industry – Extreme weather incidents	– Government-imposed decarbonisation targets – Magnet and rare earth cost increases
	Minor			– Carbon pricing & taxes

SSP 3-7.0 **High GHG Emissions Scenario**		**Likelihood**		
		Low	**Medium**	**High**
Impact	**Critical**	– Lack of action affects ASMPT's reputation – Need for greener supply chain	– Mandatory emissions disclosure – Customers require more efficient products	– Extreme weather incidents – Lack of Government-led initiatives – Uncertainty about technological advancements
	Moderate	– Need for complex product portfolio – Stigmatisation of semiconductor industry	– Long-term climate change – Government-imposed decarbonisation targets – Magnet and rare earth cost increases	
	Minor		– Carbon pricing & taxes	

3.3 | Anti-Corruption

Why it Matters

Business ethics serve as the foundation for moral and ethical behaviour within our organisation. In an era of heightened governmental and regulatory standards and escalating stakeholder expectations, our commitment to ethical practices is more vital than ever. Upholding the highest standards of integrity is a strategic imperative that strengthens the trust we receive from our stakeholders. This trust is essential for attracting, retaining, and fully engaging with the best talents, as well as forging partnerships with suppliers and business collaborators that share our ethical values.

Our Commitment

ASMPT is firmly committed to achieving the highest ethical standards, with a clear objective of eliminating corruption as well as regulatory or compliance breaches. Our dedication to business integrity, honesty, and transparency has been vindicated this year and our targets have been successfully met. No instances of corruption have been found. The ASMPT Code of Business Conduct continues to provide a comprehensive framework for fostering ethical behaviour that all our personnel, from the Board to rank-and-file employees, are required to comply with. The Board, including the Executive Directors, vigilantly oversees our compliance efforts, ensuring that ASMPT not only commits to these ethical benchmarks but also consistently achieves them.

Our Approach

Code of Business Conduct

ASMPT rigorously implements its Code of Business Conduct and establishes clear standards guiding all employees to perform their duties with honesty, diligence, and responsibility. The provisions of this Code are aligned with and comply with the guidelines promulgated by Responsible Business Alliance (the world's largest industry coalition dedicated to electronics supply chain responsibility), as well as with local laws and other international regulations in every jurisdiction where the Group operates, including the Foreign Corrupt Practices Act (USA), Bribery Act (UK), OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, Modern Slavery Act 2015 (UK), Anti-Money Laundering and Counter-Terrorist Financing Ordinance (Cap. 615 of the Laws of Hong Kong), and Prevention of Bribery Ordinance (Cap. 201 of the Laws of Hong Kong). The Code is regularly reviewed and updated as needed.

The Group employs various communication channels, including its intranet portal, notice boards, new hire orientation programme, internet webpage, and regular compliance communications, to effectively disseminate the Code to all employees. The Group also ensures that vendors acknowledge their awareness and understanding of the Code's requirements through ASMPT's Supplier Code of Conduct. Anti-corruption briefings and training sessions are regularly conducted for Directors and employees to remind them of the importance of abstaining from, and the severe consequences of, offering or accepting bribes or using any improper means to gain advantages in any business dealings.

Whistleblowing Policy

ASMPT's Whistleblowing Policy is implemented as part of its compliance framework, establishing a reporting mechanism for employees and external business partners to report any actual or suspected fraudulent activities or financial irregularities within the Group. This policy is aligned with international and national standards such as the Sarbanes-Oxley Act of 2002, Hong Kong Stock Exchange Corporate Governance Guide for Boards and Directors, and data protection laws in various countries where ASMPT operates.

ASMPT's Compliance Office, which comes under the Group's Legal Department, assists the Audit Committee to manage the operation of the Whistleblowing Policy and its reporting channels. The confidentiality of all reports is strictly maintained. Where cases involve allegations of bribery and corruption, thorough investigations are conducted and appropriate corrective actions are taken by the stakeholders based on the investigation findings. The Compliance Office reports these investigations and the findings thereof to the Audit Committee.

The Audit Committee provides Board-level oversight to ensure the adequacy and effectiveness of the fraud risk management framework, policies, and processes. This oversight includes reviewing investigations relating to allegations of fraud, corruption, and whistleblowing complaints. The Board itself oversees the Group's ethics and compliance programme and receives quarterly updates on any ongoing investigations into Whistleblowing reports from the Compliance Office. Such independent administration of the Whistleblowing Policy helps to maintain the highest levels of confidentiality and impartiality so as to foster a culture that encourages individuals to speak up when necessary. During the Reporting Period, no cases of corruption were raised by whistleblowers.

3.4 | Product Responsibility

Why it Matters

In the highly scrutinised semiconductor and electronics equipment manufacturing industry, ASMPT recognises the critical importance of delivering products that are superior in quality and meet the stringent safety and environmental standards expected by customers, consumers and regulators alike.

The rising demands for transparency and quality assurance in product development compels ASMPT to rigorously ensure that every product meets the relevant safety and quality benchmarks. Excellence in our products is non-negotiable as it underpins our reputation, customer trust, and our commitment to advancing industry standards.

Our Commitment

ASMPT's pledge to Zero Defects per Million Opportunities (DPMO) is a testament to our unwavering commitment to product excellence. This commitment is foundational to delivering exceptional value to our customers, ensuring their utmost satisfaction through continuous innovation and meticulous quality control. We understand that in the semiconductor industry, the margin for error is minimal, and our dedication to maintaining the highest standards of quality and safety is paramount. By initiating rigorous self-scrutiny and performance improvement protocols, we not only meet but strive to exceed the stringent quality benchmarks set by our industry, regulators, and consumers. This relentless pursuit of perfection in every product we create is an intrinsic aspect of our Group's ethos, reflecting our deep-seated responsibility to provide flawless products that drive progress and engender trust.

"In our industry, the margin for error is minimal. That's why our commitment to the highest quality and safety standards is paramount. We don't just meet the standards, we strive to exceed them. This relentless pursuit of perfection is part of our ethos and reflects our responsibility to deliver flawless products."

Lim Choon Khoon, Co-CEO, ASMPT Semiconductor Solutions

Our Approach

Design for Excellence (DFE)

ASMPT's DFE programme embodies our holistic commitment to quality and environmental stewardship from the inception of each product. Grounded in key design principles, our product development teams ensure that every aspect of design aligns with our rigorous standards for quality and sustainability. The DFE programme drives ongoing improvements throughout our extensive product portfolio, enhancing performance and incorporating the use of recyclable and reusable materials during production.

The DFE programme is also integral to ensuring customer safety. Each piece of equipment undergoes stringent tests and obtains necessary certifications from our Quality and Reliability Departments before it reaches our customers.

Quality Management System

ASMPT obtained ISO 9001 Quality Management System certifications for its main business locations in China, Germany, United Kingdom, the USA, Singapore, and Malaysia. The Group also adheres to stringent testing and certification processes to guarantee that the equipment meets the highest safety standards before it reaches our customers. Whenever a potential safety concern arises, whether internally or through customer feedback, our Field Service team conducts prompt reviews. These reviews enable us to swiftly address any issues and alleviate customer concerns. By prioritising safety and taking swift action, we demonstrate our commitment to customer satisfaction and our unwavering dedication to delivering reliable and secure products.

During the Reporting Period, no sold or shipped products were recalled due to safety or health reasons. The Group also has policies to comply with advertising, labelling and privacy matters relating to its products and services provided.

"Excellence is a firmly anchored corporate value at ASMPT. Our declared aim is to exceed our customers' expectations with our products, processes and services. In doing so, we want to enable them to achieve the highest level of quality in their production and, in turn, meet the requirements of their demanding customers."
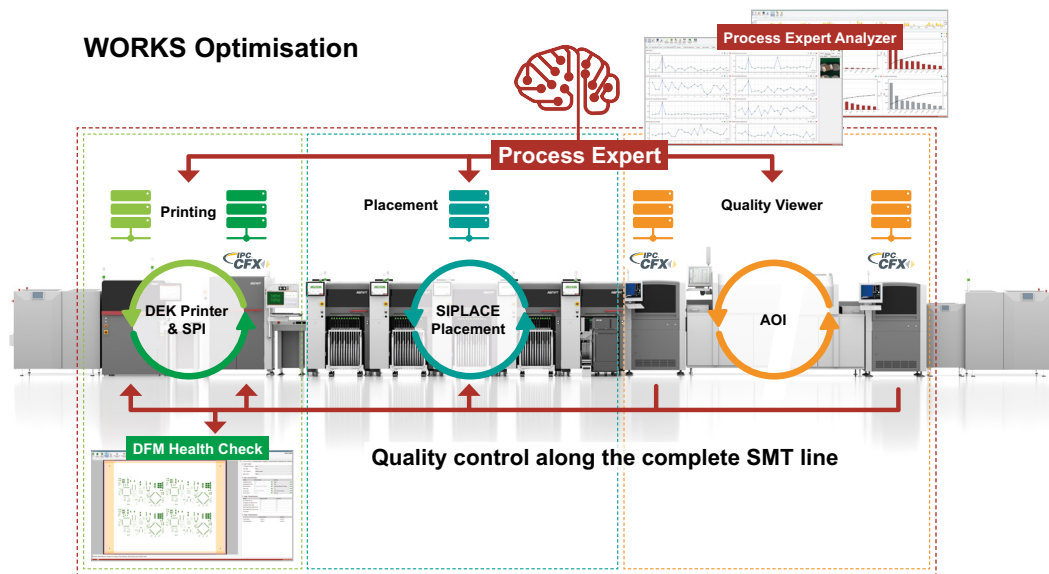
Joe Poh, Co-CEO, ASMPT Semiconductor Solutions

WORKS Optimisation

Process Expert Analyzer

Process Expert

Printing

Placement

Quality Viewer

DEK Printer & SPI

SIPLACE Placement

AOI

DFM Health Check

Quality control along the complete SMT line

The application WORKS Optimisation ensures process optimisations throughout the SMT line in collaboration with SPI and AOI systems.

Zero DPMO through Collaboration and Integration

The Group aims to achieve zero DPMO through the integration of intelligent quality control along the entire SMT line with ASMPT's hardware and software.

In terms of hardware quality control, ASMPT utilises the Process Lens solder paste inspection (SPI) system that can measure each solder paste deposit and detects even the smallest deviations and trends. The exceptional performance of the SPI system makes it possible to carry out comprehensive measurements without significantly affecting the overall production time. This capability facilitates more stable printing processes, resulting in increased throughput and higher yields.

In contrast to prevailing inspection systems that focus on individual products and manufacturing stations, ASMPT's intelligent inline system, WORKS Optimisation, takes a comprehensive view of the entire operational process on the software side. Using the standardised IPC-2591-CFX interface, the intelligent application from the WORKS Software Suite includes all machines on the line in its defect analysis as it integrates and visualises the data. In combination with the Process Lens from ASMPT or a third-party SPI system, the printing process can run completely autonomously without any operator assistance. The system can also trigger an automated offset correction, a cleaning cycle when needed or print parameter optimisation.

One of ASMPT's quality projects

3.5 | Supply Chain Management

Why it Matters

ASMPT places a high priority on supply chain management as a cornerstone of operational efficiency and market leadership. A robust supply chain is essential for seamless operations, fostering innovation and securing the resilience necessary to meet the demands of our customers and the industry. By collaborating with our extensive network of suppliers, we emphasise our mutual commitment to ethical, environmental, and safety standards.

Our Commitment

The Group strictly enforces its Supplier Code of Conduct (SCoC), aligning with global standards to ensure suppliers adhere to sustainable and ethical practices. This SCoC mandates new suppliers to endorse the Code as part of our partnership initiation, while existing suppliers are required to reaffirm their adherence annually, fostering a culture of responsibility and continuous improvement within our supply chain.

Our Approach

Supplier Management

The collaborative partnerships between the Group and the extensive network of Suppliers and External Manufacturing Vendors & Partners (EM Vendors) are essential to achieving the Group's strategic and operational objectives. With over 2,000 Suppliers and EM Vendors dispersed globally in regions such as China, the USA, Singapore, Malaysia, and various European countries, the Group has developed a stringent procurement system. This system promotes equitable competition and ensures that the selection of Suppliers and EM Vendors is conducted with utmost transparency, considering five key factors: Quality, Costing, Delivery, Service, and Technology.

Suppliers and EM Vendors are systematically classified into three distinct categories by the Group:

Certified Strategic Suppliers (CSS)	CSS are distinguished by their ability to adapt swiftly to the Group's fluctuating needs for additional capacity and emergency supplies within a limited timeframe. They provide essential components and excel in areas like Technological Capabilities, Vendor Managed Inventory (VMI), On-Time Delivery (OTD), and other critical support metrics.
Certified Preferred Suppliers (CPS)	CPS represents the second level of Suppliers and EM Vendors, with historical lead-times usually ranging from one to three months. They have demonstrated the capacity to meet the Group's market needs quickly, delivering solid VMI, OTD, and Quality metrics.
Approved Firefighter Suppliers (AFS)	AFS are noted for their capability to source and expedite the delivery of specific items on short notice, albeit at a higher cost. AFS vendors are particularly valuable during periods of significant market expansion when the demand may exceed the capacity of other suppliers.

"At ASMPT we are proud that our global manufacturing network has been recognised Factory of the Year several times, a benchmark where we regularly challenge ourselves. This repeated success is based on our global supplier network and a resilient partnership with our suppliers that we can also rely on in all ESG matters."

Andy Lieu, COO, ASMPT Semiconductor Solutions

Critical Suppliers and EM Vendors are kept informed of performance expectations through quarterly reviews. Suppliers and EM Vendors can review their own performance and the feedback provided via the "ASMPT Procurement — Suppliers" (APS) portal. This proprietary platform enhances the Group's supply chain responsiveness by fostering direct communication with the Suppliers and EM Vendors. Through the APS, the Group conveys our market projections periodically throughout the year, allowing Suppliers and EM Vendors to align their planning with ASMPT's operational and procurement requirements. Consequently, the Group benefits from optimised delivery schedules and inventory levels, ensuring a highly efficient supply chain. The continuous evaluation of the supply chain management practices allows us to deliver sustainable value consistently to our customers and stakeholders.

Supplier Code of Conduct

ASMPT's SCoC is a foundational document that applies to all suppliers and vendors of ASMPT, including product and service providers, to foster ethical conduct.

The SCoC adopts principles of international standards and conventions such as the RBA Code of Conduct, ensuring that ASMPT aligns with global norms. Social criteria adopted include respect for employees, adherence to regulations concerning working hours, wages, benefits, and the prohibition of discrimination

and harassment. It also emphasises the importance of freedom of association, the prohibition of child labour, the safeguarding of employee health and safety, measures against money laundering, and the strict prohibition of corruption and bribery. ASMPT requires its major suppliers to comply with the RBA Code of Conduct by accepting and adhering to ASMPT's SCoC, thereby promoting ethical business practices across its supply chain.

The SCoC also establishes criteria for environmental protection, mandating suppliers to act in accordance with statutory and international standards such as ISO 14000. This encompasses a wide range of environmental concerns, including pollution prevention, air emissions control, responsible management of hazardous substances, and waste disposal. Suppliers must establish and maintain controls to minimise environmental impact and strive for continuous improvement in environmental protection. Moreover, the SCoC requires suppliers to conduct thorough due diligence to ensure that the minerals in their products, specifically tantalum, tin, tungsten, gold (3TG), and cobalt, do not originate from conflict-affected or high-risk areas. This due diligence, as part of RBA's Minerals Initiative, extends throughout the supply chain. Suppliers must be prepared to demonstrate their compliance with these standards and communicate the importance of responsible sourcing to their own suppliers, ensuring traceability and ethical procurement of 3TG and cobalt throughout the entire supply chain.

3.6 | Intellectual Property and Cybersecurity

Why it Matters

Being a frontrunner in our industry, ASMPT places immense value on Intellectual Property (IP) and Cybersecurity due to their critical role in safeguarding innovation and maintaining competitive advantage. In a field driven by technological advancements, IP protection ensures that ASMPT's investments in research and development are secure, driving continuous innovation and protecting the company's unique designs and processes. In addition, robust cybersecurity measures are vital defences against the increasing threat of cyber-attacks that can lead to theft of sensitive data, dis-

ruption of operations, and erosion of customer trust. Together, IP and Cybersecurity form the backbone of ASMPT's commitment to technological excellence and market leadership.

Our Commitment

We are determined to elevate our cybersecurity system's maturity score, continuously enhancing our security capabilities to ensure the utmost data accuracy and compliance. This determination is exemplified by our Global People system (GPS), where we

strive for the highest quality HR data management, upholding the integrity and confidentiality of our data as a fundamental corporate responsibility.

Our Approach

Information Security Management Systems

We have developed robust information security management systems to ensure the protection of these invaluable assets. Our management systems are aligned with internationally recognised standards such as ISO 27001, ISO 27018, General Data Protection Regulation (GDPR) and Trusted Information Security Assessment Exchange (TISAX). We regularly review and update our IT security policy to adapt to the evolving cyber landscape. Furthermore, our annual security assessment provides a structured evaluation of our cybersecurity posture, allowing us to implement improvements proactively. We deploy key cybersecurity tools throughout our network, endpoints, and applications to create a fortified barrier against potential cyber threats. Our proactive monitoring and rapid response protocols for critical security incidents ensure that we can detect and mitigate risks swiftly and effectively. To guarantee the robustness of our cybersecurity measures, ASMPT engages in an annual security penetration test. This critical evaluation serves to simulate cyber-attack scenarios to assess the resilience of our cybersecurity measures, ensuring they can withstand real-time threats. For the Reporting Period, the Group is not aware of any complaints regarding the breach of customer privacy or the loss of customers' data.

HR Cybersecurity and Data Protection

The Group's GPS is a comprehensive HR and talent management platform that also includes the design to protect our employees' personal information. GPS exemplifies the pinnacle of data security standards, certified by ISO 27001, and aligned with ISO 27017, ISO 27018, and ISO 27701.

The GPS safeguards the HR data through four key measures. First, our robust physical security allows our HR data to be monitored tightly by security personnel and fortified by multiple layers of authentication that must be navigated to gain access. Besides, we maintain the integrity of our employees' personal data through separate storage tenants provided by our service provider. This prevents unauthorised access by ensuring that both data and access privileges are inextricably linked to individual tenants. Moreover, every piece of data within GPS is encrypted both at rest and in transit, ensuring that all information stored in the database, or transmitted over the internet, is shielded from potential breaches. Furthermore, we ensure that any data transmission across the internet is encrypted. Our employees connect to the HR data through the service provider's TLS-encrypted connection, bolstering network security and safeguarding against eavesdropping, tampering, or message forgery. These measures collectively form a formidable defence, keeping our HR data secure and reinforcing the trust our employees place in ASMPT's GPS.

"I strongly believe in the integration of Business and IT. They should operate as intertwined partners, leveraging unique strengths for collective success. We unlock the full potential of business-IT partnerships to deliver better results for the business outcomes and drive ESG objectives. We also continue to drive Greener IT initiatives to reduce greenhouse gas emissions in our IT operations and vendor selection processes."

Dr. Henning Bork, Chief Information Officer, ASMPT

Minimising Environmental Impact

4 Minimising Environmental Impact

- **Our commitment: Net-zero in 2035 for Scope 1 and 2**
- **On-going engagement in developing Scope 3 targets**
- **Leadership role in the Semiconductor Climate Consortium to work together with partners and other participants in the Semiconductor and SMT industry**
- **A robust environmental management system makes sure environmental goals are met**

At ASMPT, we recognise that sustainability is integral to being the premium brand within our industry. Our ambition goes beyond compliance. We aim to lead by example, demonstrating how innovative technologies and sustainable practices can be seamlessly integrated into both operational workflows and product development life cycles. By doing so, we are actively reducing our Group's carbon footprint, conserving resources, and fostering a culture of environmental responsibility.

Our strategy is multifaceted, focusing on climate actions, energy efficiency, green energy and resource conservation of our operations. We have invested in state-of-the-art facilities that are designed to minimise waste and maximise energy efficiency. Renewable energy sources are increasingly powering our operations, and we are constantly exploring mitigation measures to reduce the impact related to climate change.

By championing these initiatives, ASMPT is not just contributing to a greener planet, but also setting a benchmark in the industry for environmental stewardship. With our dedication to continuous improvement, we recognise that minimising our environmental impact is a journey that evolves with each innovation and every step that we take towards a more sustainable future.

Our actions and strategies on minimising environmental impact are supported by the following SDGs:

4.1 Net-zero Initiatives

Why it Matters

ASMPT's pursuit of net-zero carbon emissions, a strategic embodiment of our role as an industry innovator, influences every facet of our operations while recognising the serious implications of climate change. Incorporating net-zero goals is essential to our strategic planning and corporate governance and it is seamlessly integrated into our business model. Our commitment to this goal, a testament to our environmental responsibility, underscores our proactive approach to environmental challenges and sets us apart as a leader in sustainable practices within the electronics and semiconductor manufacturing industry.

Reflecting our understanding that long-term business success is inextricably linked to environmental stewardship, this pursuit of net-zero aligns with our vision of creating a sustainable future for our stakeholders and reinforces our commitment to not only adapt to, but also actively influence a greener industry standard.

Our Commitment

ASMPT is firmly committed to achieving net-zero emissions for both Scope 1 and Scope 2 by 2035, reflecting our aggressiveness in sustainability. By setting this ambitious timeline, we are accelerating our efforts in carbon reduction.

The Group also established clear decarbonisation milestones in three implementation stages. Compared to the baseline year of 2020, we aim to reduce our carbon emissions by 30%, 50%, and 100% for Phase 1 (2020-2026), Phase 2 (2026-2030) and Phase 3 (2030-2035) respectively.

"We firmly believe that we must play a leading role in the fight against climate change – both as a company and as individuals. In order to achieve a CO_2-free footprint as quickly as possible, we decided some time ago to switch to renewable power and to save energy in all parts of the company, where possible."

Guenter Lauber, EVP & Chief Strategy and Digitalisation Officer, ASMPT

Our Approach

Performance Highlights

100% renewable energy for Singapore (Corporate Headquarters), Regensburg (AMICRA), and Munich (SMT Headquarters)	**26%** reduction of Scope 1& 2 carbon emissions from 2022 to 2023	**20%** reduction of total electricity consumption from 2022 to 2023	**5%** Solar panels installed in Singapore, Weymouth (UK), and Huizhou (China) sites contributed to around 5% of total energy consumption

Net-zero Roadmap for Scope 1 & 2

ASMPT has developed a comprehensive and detailed roadmap to achieve our net-zero goals. Our net-zero ambitions focus on six key emissions reduction levers. These levers are prioritised based on their effectiveness, alignment with best practices, stakeholder perception and anticipated financial investment.

Each of our major operating sites has conducted an in-depth assessment based on these six key levers and concluded on specific action plans and measures.

Lever 1: Energy Demand Reduction

ASMPT is focusing on reducing energy usage by upgrading our equipment to more efficient, low-emission alternatives. We are also continually improving our production energy efficiency and optimising our facility energy management systems. Most of the projects will be implemented in Phases 1 and 2.

Lever 2: Renewable Energy Self-Generation

ASMPT strives to increase energy independence and sustainability by installing on-site renewable energy generation, such as photovoltaic (PV) systems. This initiative is a cornerstone in our efforts to curtail reliance on fossil fuels and establish a greener, more resilient energy network for our daily operations. Projects will be implemented in Phases 1 and 2.

Lever 3: Electrification

The Group aims to replace all fossil fuel-powered equipment with electrified ones whenever possible. We are transitioning our in-plant gas combustion heating systems to electrified alternatives and replacing our fleet, including trucks, with electric vehicles. Such projects will be mainly implemented across Phases 1,2 and 3.

Corporate Headquarters Solar Panel Tour

Successful Performance of the Sembcorp Solar's Management system (SSMS) at Corporate Headquarters

The Corporate Headquarters in Singapore successfully installed a total of over 1,200 solar panels with a peak power of 698 kWp, across its buildings in 2022. The SSMS provides real-time monitoring and historical data analysis, which helps identify trends and areas for improvement. The SSMS is also able to detect and diagnose faults in the solar system, allowing it to minimise downtime and maximise energy production. In 2023, the SSMS performed extraordinarily with a yield of 1.17 MWh electricity generated across Corporate Headquarters, covering 5.4% of its consumption. Together with the utilisation of Renewable Energy Certificates (RECs) from projects such as a hydro-electric facility in Vietnam for the remaining energy consumption, the Corporate Headquarters has achieved net-zero in its Scope 1 and 2 emissions.

One of ASMPT's environmental projects

Efficient energy generation: Huizhou plant utilises waste heat from air compressors and photovoltaics to reduce emissions

Energy Reduction Action in Huizhou plant

ASMPT's Huizhou plant installed an air compressor heat recovery system to capture and utilise excess heat generated during operation of the air compressor. Since the system became operational in June 2023, it has already saved about 700 MWh of electricity and approximately 40 tCO$_2$e of emissions in 2023.

To further reduce the emissions, PV panels were also installed on two buildings of the plant in July 2023. Around 402 MWh of electricity has been generated in the Reporting Period, equivalent to 234 tCO$_2$e of emissions reduction.

One of ASMPT's environmental projects

Lever 4: Renewable PPAs

To further our commitment to sustainability, ASMPT is engaging in Power Purchase Agreements (PPAs) with 100% renewable energy sources. These agreements allow us to contract power directly from renewable-source producers, ensuring that our energy consumption is environmentally responsible and supports the growth of clean energy. Projects will be implemented within Phases 1,2 and 3.

Lever 5: Renewable VPPAs & RECs

For locations where PPAs are limited or not yet developed in the market, we will leverage Virtual Power Purchase Agreements (VPPAs) and RECs. These instruments enable us to support renewable energy projects and claim the environmental attributes of the renewable power generation, even if it's not directly delivered to our facilities.

Lever 6: Carbon Offset Credits

Recognising that not all emissions can be eliminated, ASMPT may invest in carbon offset credits as part of our comprehensive strategy to minimise our environmental impact. By purchasing credits from reputable carbon offset projects, retailers, and exchanges, we would contribute to global efforts in reducing carbon emissions and promoting sustainable development.

Total Greenhouse Gas Emissions

ASMPT Limited, 2021 – 2023 in ktCO$_2$e

	146.5	78.1	64.5	47.5
	2020	**2021**	**2022**	**2023**

Reduction	46.7%	17.4%	26.4%
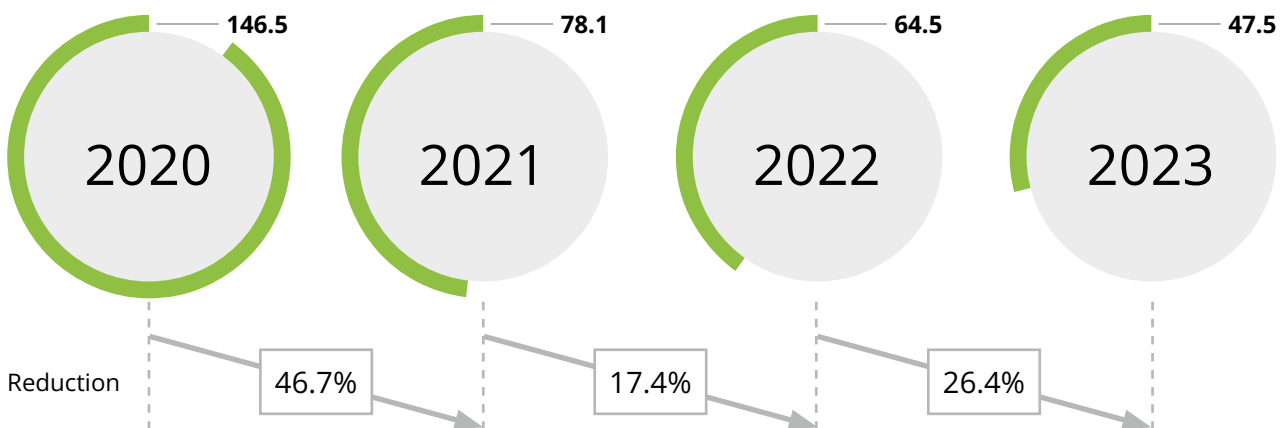
Our Current Action and Performance

In 2023, our Scope 1 & 2 emissions reduction efforts focused on three key areas: Energy Demand Reduction (Lever 1), Renewable Energy Self-generation (Lever 2), and Renewable PPAs (Lever 4).

To reduce energy demand, we enhanced our system and equipment efficiency by replacing outdated equipment with more energy-efficient alternatives, installing waste heat recovery systems for tempering furnaces and air compressors, and strengthening our management of equipment leakage inspections. We also optimised our production schedules by integrating resources across different departments, which improved production efficiency and reduced system operating hours.

We also actively embarked on solar generation projects, deploying PV systems across our operating locations in the UK, Germany, and China. These projects have lessened our dependence on traditional energy sources and bolstered our commitment to sustainable operations on a global scale.

Moreover, our manufacturing plants in Germany transitioned to purchasing all their electricity from renewable PPAs, which mainly comes from the hydro-power plants on Austria's waterways. Meanwhile, our Corporate Headquarters continues to procure renewable energy PPAs and RECs that cover 100% of its energy usage.

Our comprehensive strategy and dedicated reduction efforts have yielded significant results in reducing our environmental impact. During the Reporting Period, we achieved a substantial reduction in greenhouse gas emissions, registering a total of 47.53 kt CO_2e for Scope 1 and 2, alongside a notably low emission intensity of 0.0032 t CO_2e / HKD 1,000 of revenue. This represents a 68% reduction in cumulative GHG emissions and a 63% decrease in emission intensity from our 2020 baseline.

The Group's Scope 2 emissions, primarily from electricity consumption, account for 96% of our total emissions this year. Our energy consumption stands at 90 GWh, correlating to an energy intensity of 6.1 kWh / HKD 1,000 of revenue.

China Plants' Energy Reduction Monitoring System

In the 3 China plants, a multi-tiered system to monitor and assess energy reduction at the site, department, and equipment levels was implemented. This granular approach allows for precise monitoring, tailored solutions, and swift action, ensuring that every facet of our operations contributes to the cumulative impact necessary for achieving ASMPT's net-zero ambitions.

Monitoring Level	Examples of indicators monitored and assessed
Site	Energy consumption per total production value
Department	Energy consumption per unit area
Department	Coefficient of Performance (COP) for HVAC system

One of ASMPT's environmental projects

Scope 3 Reduction Strategy

ASMPT is in the process of measuring Group-wide Scope 3 emissions. Our objective is to identify the significant emission areas within the 15 categories defined in the GHG Protocol, and establish the Group's baselines for Scope 3 emissions, marking the initial step toward achieving Scope 3 net-zero. Once the Scope 3 emissions baseline is established, we will be able to set targets and develop mitigation pathways for Scope 3 emissions going forward.

Our Leading Actions in the Semiconductor Climate Consortium

Semiconductor Climate Consortium
Founding Member

Being one of the SCC founding members, ASMPT took a leading role in launching the SCC at COP27 in 2022. ASMPT is also the leader of SCC's Scope 2 Emission Working Group within the consortium. The Working Group aims to lower its members' Scope 2 emissions footprint, driving the semiconductor value chain to a low-carbon energy future. ASMPT's leadership contributions to the Working Group are another key component of our overall Scope 3 emissions reduction efforts, by increasing low-carbon energy access and availability to stakeholders upstream and downstream in our value chain. The SCC is focused on the challenges of climate change and works to speed up industry value chain efforts to reduce greenhouse gas emissions in member company operations and in other sectors of our value chain. We believe that with the collaboration of our member companies and our accumulated knowledge and innovative technology, the development of solutions to the most pressing problems will accelerate. Working together, we will address and solve issues no one company can do alone.

The SCC drives progress on climate challenges within our industry value chain and supports the Paris Agreement and related accords driving the 1.5°C pathway.

SCC Scope 2 Emission Working Group

Formed in April 2023, the SCC Scope 2 Emission Working Group (the "Working Group") has the mission to create a collaborative roadmap and execute it, to reduce and eliminate its members' Scope 2 emissions as well as impact the entire semiconductor value chain, and increase access and availability of low-carbon energy (LCE). ASMPT led many rounds of intense consultation and collaboration with the Working Group members, which resulted in five initial priority actions being identified as key drivers to achieving the mission:

Five countries were also identified by the Working Group members as priority areas to focus our efforts on, due to their criticality within the supply chain and resulting emissions. These priority countries are: China, Taiwan, South Korea, Japan and Singapore. Going forward, the Working Group will work to increase access and availability of LCE via engagement with key stakeholders such as governments, policymakers, financiers, utilities providers and developers.

1.
Access to
Low-Carbon Energy

2.
Decarbonising
Energy Sources

3.
Best Practice
in Scope 2 Reduction

4.
Explore
New Energy

5.
Computation,
Accounting
& Reporting

In 2023, the Working Group also focused on education and best practice sharing for our members. At many of our bi-weekly meetings led by ASMPT, invited Working Group members and external subject matter experts conducted insightful presentations on low-carbon technologies, practices and landscapes globally.

ASMPT presented its net-zero 2035 goals to SCC members during productronica 2023 in Munich.

SCC Meeting Hosted by ASMPT SMT Solutions Headquarters

As a prelude to SEMICON Europa and productronica 2023, ASMPT hosted fellow SCC members at our Munich offices on 13 November 2023. A full day of in-depth working group discussions and sharing by external speakers provided valuable insights and set the course for SCC going forward.

As leader of the SCC Scope 2 Emissions working group, ASMPT chaired a deep discussion on the ambitions and targets of our working group, especially key action areas in 2024 and beyond.

One of ASMPT's environmental projects

4.2 | Environmental Management

ASMPT has a robust environmental management system in place across our key business locations, including China (inclusive of Hong Kong), Germany, the UK, the USA, Singapore, and Malaysia. Our system adheres to relevant local and international standards such as ISO 14001 Environmental Management ("ISO 14001") and ISO 50001 Energy Management ("ISO 50001"). These systems are audited regularly to identify, report and mitigate any issues regarding their effectiveness and compliance. Internal auditor trainings are also provided to ensure our employees are well-informed about the latest requirements of ISO 14001 and ISO 50001. With our effective environmental management system and practice, the manufacturing sites in China and Germany successfully received third-party ISO 50001 accreditation in 2023.

Establishing an Environmental Management System – Best Practice lead by China

To foster a culture of sustainability, the China plants' ESG steering committee organised a range of activities and trainings including talks, games and competitions to enhance employees' environmental awareness, regarding energy conservation and emissions reduction. The committee also helped establish the Environmental Protection and Energy Saving Ambassador Team ("Environmental Ambassador Team") in furtherance of such objectives with the aim to encouraging employees´, active participation in energy-saving work for environmental conservation, and integrating carbon reduction into work and daily life.

The Environmental Ambassador Team is composed of key colleagues nominated by various departments in the China operation plants. The ambassadors will undergo a series of trainings and assessments every year. In 2023, representatives from a leading solar panel company attended the ASMPT forum and shared the working principle and operational management of PV panels with our ambassadors. On a separate occasion, a number of ambassadors were provided with detailed information on a PV project by the on-site staff during their site visit.

In order to obtain the Environmental Ambassador Certificate, the trained ambassadors are required to pass an examination and in 2023, they achieved excellent grades in the examinations, thereby laying a solid foundation for future work.

"The Environmental Management System is crucial for business competitive advantage and sustainability. The team has demonstrated good energy efficiency improvement, waste reduction, re-use and recycling programmes."

Richard Ooi, Global Head of ESG, ASMPT

Environmental Award Campaign

Organised by the China plants' ESG steering committee, the Environmental Award Campaign aims to encourage all employee to share their thoughts on energy reduction opportunities based on their daily experiences and observations. Participaction in the projects can be made by department, team, or across departments. Participants can submit their projects anytime throughout the year, which will be reviewed annually. Ideas could range from hardware enhancements to management approaches. In 2023, the campaign achieved a participation rate of over 40% with 77 projects received.

Environmental award ceremony

9 projects stood out and were successfully selected by the judges during the first round of selection. After the second-round presentation, the first, second and third places were chosen.

One of ASMPT's environmental projects

Our young talents participating in One Young World 2023

One Young World

As environmental sustainability becomes increasingly important for our Group, we continued with the "One Young World" programme in 2023. The programme aims to cultivate an internal network of young employees who help steer the Group toward sustainable practices and to address the various sustainability dimensions in accordance with the 17 SDGs.

The 2023 Summit took place in Belfast, Northern Ireland, covering topics such as diversity, mental health, leadership, circular economy, climate change and hunger crisis. Inspiring keynotes from global leaders, politicians and personalities from the One Young World community provided valuable insights and put the knowledge into specific context.

In an effort to deepen employee understanding of sustainability issues, we expanded the programme's reach beyond our German young talents to include junior employees from the UK. This expansion facilitated a collaborative cross-site project that contributes to our company-wide activities aimed at raising awareness about ESG issues, building knowledge on key sustainability concepts, and empowering every employee to make individual contributions.

Participants of the Summit have returned as energised sustainability ambassadors. They serve as "multiplicators", within their respective teams and departments. Their experiences have served as a wellspring of inspiration and motivation for implementing sustainable projects at ASMPT, demonstrating the tangible impact of the „One Young World" programme on ASMPT's organisational culture and sustainability initiatives.

One of ASMPT's environmental projects

4.3 | Conserving the Environment

Why it Matters

ASMPT places a high priority on the conservation of environmental resources, recognising the vital role it plays in our long-term sustainability and operational excellence. Across the diverse aspects of our operations—from marketing and production to maintenance, logistics, and assembly—we are acutely aware of the resources we consume and the waste we generate. It is our goal to not only minimise this footprint but also to innovate and optimise every facet of our business to promote eco-efficiency.

Our Commitment

We are actively refining our manufacturing processes to address the sources of pollution, such as air emissions from vehicles and gaseous fuel consumption, and to reduce waste production. By integrating advanced waste management practices and improving our water conservation efforts, ASMPT is taking steps to deepen our commitment to environmental protection and the sustainable use of vital resources.

Our Approach

Water Management

The Group is driven to reduce water consumption within its operations, recognising the critical importance of water conservation in fostering sustainable production practices. By incorporating advanced water recycling and reclamation systems along our production lines, we have taken significant strides towards minimising our water footprint. These facilities are not only a testament to our innovative approach but also reflect our proactive stance on environmental stewardship. In 2023, of water consumption was reduced by 12% compared to 2022.

Our excellent water management practices have even been recognised by local government. Our Longgang plant in China received an award from the Shenzen Government as one of twenty-five water-saving industrial enterprises.

Water Reclamation Facilities

The ASMPT plant in Longgang has implemented evaporation equipment allowing water reclamation and reuse within the machining workshops. This results in a 29% reduction in water consumption, compared to the traditional approach with over 100 tonnes of wastewater produced each year. Building upon this success, in 2023, further improvements to the equipment's system led to a remarkable 76% reduction in water usage.
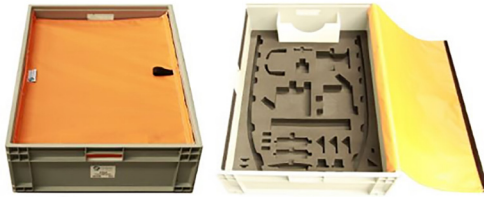
One of ASMPT's environmental projects

Packaging Materials and Waste Management

The Group continues to promote the reuse of equipment materials. "Materials Recycling Days" are regularly organised to collect used materials from the production floor and store them for internal reuse. If materials are identified as not reusable, they will be handled by the external recycling parties.

We also established a comprehensive waste handling management system for the Huizhou plant, including disposal of hazardous waste. For example, slag removal techniques diminish the volume of cutting fluid waste, and advanced filtration systems enable the reuse of grinding wastewater.

The Group endeavours to use reusable and recyclable materials in its products to reduce the consumption of raw materials. Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) Certified wood and paper pack- aging is already adopted in Singapore, China, and Germany. Recyclable crates are adopted for large industri- al equipment products whenever possible. Besides the choice of material types, the reduction of packing material is considered from the design stage.

Pioneering Packaging Design

Packaging waste is carefully considered from the design phase to the product assembly stage. The Group's focus extends beyond providing reliable and compatible product parts. We also prioritise pack parts that offer effective protection and optimal use of space within the packing box. This also reduces the amount of packaging waste.

Our packaging design example

Avoiding Waste during Component Feeding

SMT and die assembly continues to generate large quantities of packaging waste. This is mainly generated during production by the material belts: disposable containers made of various plastics, which are often difficult to recycle. ASMPT is breaking new ground in waste avoidance. A good example of this is the SIPLACE CA placement machine, which can pick up and place dies directly from pre-separated wafers. This not only eliminates a complete work step, the taping of the dies, but also saves many tons of waste. In the SMT sector, tray units are on the rise, which no longer feed the components from component reels and blisters, but from bar and surface magazines - another important contribution to environmentally friendly and sustainable production.

The SIPLACE CA hybrid placement machine can also place components directly from the pre-separated wafer, saving tons of tape waste.

Sustainability starts here: More than 90% of this booth is going to be reused or recycled.

Our Recycling Action at trade shows

Our determination to minimise environmental impact was clearly demonstrated through the over 90% of ASMPT booth material being recycled and reused at Productronica 2023, the world's leading trade fair for electronics development and production.

We instituted a comprehensive recycling and upcycling programme for our booth's construction materials. The textile elements that grace the fronts and ceiling of our booth were not discarded post-event, instead, they found new life upcycled into stylish and functional bags and backpacks, embodying both environmental responsibility and innovative design. The wooden fronts were sent to our booth builder's incineration facility, where they were repurposed as a source of heating, thus contributing to a circular economy.

Moreover, we uphold a paperless promotion strategy, eschewing printed materials in favour of digital alternatives, including our business cards. Visitors interact with our machines at experience areas through the PVC-free QR code stickers, seamlessly merging technology with eco-friendly practices.

Practising environmental responsibility: The textiles at our stand at productronica 2023 were upcycled into stylish bags and backpacks by specialised companies in Europe.

One of ASMPT's environmental projects

Creating Value through Innovation

5 Creating Value through Innovation

- **The requirements of customers guide us in developing our market-driven hardware and software innovations**
- **Our Intelligent Factory and leading Advanced Packaging Solutions are vital to digital transformation, which can bolster sustainable development.**
- **The delivery of quality and value to our customers' satisfaction is our top priority**

Digital transformation, Artificial Intelligence (AI), Natural Language Processing (NLP), machine learning, sustainable products, sustainable production: our industry, our society, our future is driven by continuous innovation. For ASMPT, innovation means being open to new ideas and concepts, and thinking outside the box. Global, cross-cultural, diverse and interdisciplinary teams create the concepts and solutions that help us and our customers progress as well as protect our environment.

Based on our vision "Enabling the digital world", we want our hardware and software solutions to contribute to sustainable development and thus support various Sustainable Development Goals (SDGs).

Our portfolio of hardware and software solutions has a positive impact on the decarbonisation efforts of our partners and customers. Some of our products, particularly in areas such as electrification, digitalisation and automotive, are important system enablers for a sustainable economy, although they cannot currently be directly attributed to our emissions avoidance. However, they play a critical role in reaching global environmental goals by enabling systems for the transition to a lower carbon economy.

For example, ASMPT's products help our customers to produce smart products for the utilisation of renewable energy, charging infrastructure for electric transport or digital simulation environments.

In this chapter, we highlight some examples of our contributions to a low carbon future.

Our actions and strategies on creating value through innovation are supported by the following SDGs:

5.1 | Innovation as Culture

Why it Matters

In our globally interconnected industrial ecosystem, value is created primarily through innovation. And only those who can quickly and effectively translate ever-changing trends and needs into products can remain competitive and expand. Without continuous innovation, revolutionary developments such as digitalisation, Industry 4.0, and artificial intelligence are inconceivable. However, it's imperative that innovations also always align with environmental considerations, ensuring a balance between prosperity and environmental protection to preserve our world.

Our Commitment

ASMPT's passion for innovative technologies is a driving force that, together with the motivation, commitment and dedication of its employees, creates added value for its customers. Environmental aspects play a decisive role in the innovation efforts, as ASMPT sees sustainability as an important prerequisite for shaping a future worth living. Our excellent network of partners ensures open and goal-oriented cooperation – integrating both technological innovation for economic success and environmental protection.

Our Approach

Mobile devices, cameras, computers, internet infrastructure, cars and electric vehicles, smart home systems, healthcare and industrial electronics – any device containing electronics has probably been developed or built using ASMPT's innovative hardware and software solutions in some way.

ASMPT has a truly unique, broad-based portfolio in the market. The depth and scope of our solutions set us apart from other equipment manufacturers, making ASMPT the technology pioneer and key solutions provider in electronics manufacturing. It offers leading edge hardware and software solutions across microelectronics, SMT, semiconductors, photonics, and optoelectronics industries, as well as holistic, data-driven and integrative concepts for the Intelligent Factory.

ASMPT's customers include leading semiconductor and electronics manufacturers across the world. We work closely with them to understand their needs and develop solutions to bring their creative product ideas to life. Key to these are ASMPT's R&D capabilities. ASMPT continuously invests in R&D, enabling it to build a deep R&D talent pool and significant inhouse process and development capabilities and expertise.

In 15 R&D centres across Asia, Europe, and the Americas, our dedicated engineers are working to create a product portfolio that sets new standards in areas such as technology, profitability, and environmental impact.

Reducing Scope 3 Emissions

As part of our overall climate change strategy, we are in the process of identifying additional opportunities to reduce CO_2 emissions in the use phase of our hardware and software solutions, as well as in their manufacture. This will significantly reduce Scope 3 emissions generated in the upstream and downstream portions of our value chain. Our approach is to act where we can make the biggest contributions to help our customers protect the environment, e.g. by using less energy, less compressed air, producing less waste, being more resource efficient, making machines last longer and making machines easy to modify.

"*Innovation is in our DNA. We are committed to delivering superior value to our customers through our products and our mastery of leading-edge technologies. Never satisfied with the status quo, we are always listening to the market and our customers to prepare today for tomorrow's needs – from a technological, economic and environmental perspective.*"

Wong Yam Mo, CTO, ASMPT

Reducing Energy Use

ASMPT is continuously developing electro-mechanical and digitalisation solutions to improve our machines' efficiency. Our success in these areas also increases our contributions to resource conservation and climate protection – and brings us another step closer to our ambitious CO_2 targets.

Extension of Machine Life

Another way to reduce our environmental impact is to extend the life of our products. To this end, ASMPT offers (refurbished) pre-owned equipment, is active in retrofitting existing systems (e.g. SIPLACE SX) which can double their productivity, and offers technical solutions to bring machines up to the latest digitisation standards with modern communication interfaces and sensor technology (e.g. IPC-HERMES-9852).

5.2 | Serving our Customers with Excellence

Why it Matters

Our customers are the foundation of our businesses. Understanding the demands and needs of our highly diverse customer group is paramount. We strive to forge strong, enduring relationships through close partnerships with our clients. By actively engaging with our customers and incorporating their insights, we continuously enhance our products to meet or even surpass service targets. This customer-centric approach ensures that we not only keep pace with their evolving needs but also reinforce our bond with them.

Our Commitment

ASMPT is committed to offer its customers hardware, software and services that meet the highest quality standards today, tomorrow and in the future. In this way, we not only consolidate our position as a technology and market leader, but also support our customers in establishing world-class manufacturing – in technological, economic and environmental terms. Our pursuit of excellence not only relates to the quality of our products, processes and services, but we strive for excellence in every interaction between ASMPT employees and all our stakeholders.

Our Approach

Providing Leading Edge Hardware Technology

Our goal is to set standards in the development and manufacture of our hardware in terms of productivity, precision and quality, high degree of automation and comprehensive connectivity. With innovative technologies and a passionate development team, we aim to provide our customers with products that exceed their requirements and give them a sustainable competitive advantage. Our machines are designed to save as

much space and energy as possible with maximum floorspace performance, high precision and high processing speeds. Low reject rates, machine longevity, retrofittability, refurbishment of used machines, elimination of waste through savings in the taping process in SMT manufacturing are just a few examples of the environmental excellence of our hardware.

Supporting the Digital Transformation

With the increasing digital transformation, software is becoming more and more important in the manufacturing industry. We are driving forward the development of modern software solutions for the Intelligent Factory on a massive scale to meet current and future challenges such as the shortage of skilled workers, supply chain problems, cost pressure and increasing quality and sustainability requirements. Our modern solutions integrate pioneering technologies such as AI, NLP (natural language processing) and machine learning. They help our customers to establish more efficient, reliable and flexible processes in their production. Big data processing enables automated process optimisation throughout the entire production process. Production and material flow are optimised holistically, maintenance is only carried out when actually required and support and training are mainly provided remotely and online. In this way, digitalisation significantly saves resources, optimally supports employees in their activities and has a positive impact on the environmental impact of production.

Portfolio Extension with MES

Those who want to stay competitive in electronics manufacturing cannot afford to ignore changes in the industry. Increased process integration, more efficient staffing and a commitment to sustainability are not choices anymore – they are requirements. This is Industry 4.0 in action, where manufacturing execution systems (MES) play a crucial role in providing comprehensive control and visibility across the entire factory. MES serves as the cornerstone in enabling an Intelligent Factory that is automated, efficient, connected, flexible, sustainable and reliable, ensuring synchronised and streamlined operations. With Critical Manufacturing, an ASMPT company, we offer the most advanced MES system for electronics manufacturing.

Customer Response Mechanism

ASMPT provides open and efficient communication channels for customer feedback. We have established regional offices in most countries, serving as direct touchpoints for our customers. These offices are crucial for facilitating both pre-sales and post-sales interactions, ensuring that our customers have immediate access to the support they need.

To further strengthen our commitment to customer involvement, our factory support and engineering teams are actively engaged in customers' early-stage projects, including New Product Introduction (NPI) and New Product Development (NPD) programmes, as well as ongoing continuous improvement initiatives. This hands-on approach allows us to align our technical expertise with our customers' evolving requirements from the outset.

Understanding that feedback is vital for service excellence, we place great emphasis on listening to our customers. We have instituted a systematic process that involves multiple organisational levels in ongoing communication and responsive follow-up actions. This structure ensures that from our top management to our design engineers, regular reviews are conducted with customers to maintain alignment across all levels of the company, from strategic decision-making to execution.

Additionally, our Customer Satisfaction Survey Review (CSSR) serves as an annual, consolidated channel for gathering customer feedback. This allows us to capture a holistic view of customer experiences and perceptions, driving our continuous efforts to provide high-quality services and products.

"ASMPT's software strategy aims to maximise our customers' productivity. By implementing Industry 4.0, we help our customers to achieve significant resource savings, optimise employee support and have a positive impact on the ecological footprint of production."

Francisco Almada Lobo, CEO, Critical Manufacturing, An ASMPT Company

5.3 | Bringing the Digital Future to Life

The semiconductor and electronics manufacturing industries face constant challenges due to enormous product diversity, digital transformation trends, increased customer requirements including progressive miniaturisation, plus constant time-to-market pressure. ASMPT's SEMI Segment enables its customers to meet these challenges and innovate in the development of the digital devices of today and tomorrow - devices that make people's lives easier in a more intelligent and environmentally friendly way.

SEMI offers solutions ranging from deposition interconnect on organic substrate, glass carrier or glass substrate, to first level die interconnect on organic substrate, wafer, panel or wafer carrier interconnect. It also offers unique solutions such as those for LED displays, silicon photonics (SiPh) and CMOS image sensors (CIS). SEMI's solutions are widely used in a very wide variety of end-application markets.

On the Cutting Edge

With wafer nodes becoming more difficult and expensive to miniaturise, Advanced Packaging (AP) and Heterogeneous Integration capabilities have increased in importance. SEMI is focused on growing with its customers in this high-end segment with what is probably the industry's most comprehensive range of AP solutions catering to diverse customers across many industries.

Unique Solutions

Micro LED and Mini LED technologies are core solutions for next generation energy saving display technologies. SEMI provides total solutions for high brightness / resolution / quality Mini & Micro LED display applications.

Within SiPh, higher accuracy & compact size are key development directions for HPC applications. SEMI develops accurate and reliable SiPh solutions with its high precision bonders capable of achieving +/- 0.2um XY placement accuracy.

As the leader in the mobile device CIS equipment market, SEMI provides leading active camera module assembly technology, plus high-quality bonding and cleaning solutions to its large global client base. It is bringing these significant core competencies to bear on CIS in expanded areas such as autonomous vehicle system.

The new highly efficient AMICRA NOVA Pro is the perfect fit for advanced packaging in the field of e-mobility.

Flexible, Fast, and Precise Die Bonding with AMICRA NOVA Pro

The new version of the AMICRA NOVA Pro is one of the most advanced die bonding systems. The platform combines high placement accuracy with short cycle times and innovative bonding technologies for zero DPMO in a highly efficient and energy-saving production process. The AMICRA NOVA Pro ensures its trend-setting placement accuracy with its unique dynamic alignment method in combination with laser-based substrate heating technology. Thanks to its Active Bond Force Control, the machine can dose bonding forces with exceptional precision. Using an epoxy resin stamp with volumetric dosing, the dies can be affixed with adhesives that get UV-cured in place. The AMICRA NOVA Pro is the ideal technology to produce for example active optical cables for 400/800 Gigabit/sec networks or co-packaged optics. The AMICRA NOVA Pro is the ideal solution for connectivity applications in the field of future-oriented e-mobility.

One of ASMPT's innovations

5.4 Intelligent Factory –
The Next Level of Digital Transformation

Efficient Use of Resources

Intelligent Factory means the best possible interaction between human, machine and data. The right networking and strategic use of information is crucial for success. Significantly accelerated digitalisation will enable CO_2 savings through more efficient processes and better use of resources.

ASMPT's solutions support this development and help customers to realise the full potential of their production equipment and the required resources. With the Industry 4.0 concept of the Intelligent Factory, ASMPT optimises manufacturing processes and ensures that they remain adaptable.

This increases efficiency and also helps to conserve valuable resources. As systems and machines are connected to each other via a digital backbone and the significant data is read out in real time, the value chain in the factory can be transparent at all times. ASMPT intelligent software solutions can quickly and accurately show where resources can be saved and processes can be made more efficient. This enables production processes to be optimised by controlling heat, electricity and compressed air using intelligent algorithms.

The Intelligent Factory has ushered in an era of intensive and integrative data use. It offers unprecedented opportunities to make factories more productive, more resilient and more environmentally friendly. The key to an Intelligent Factory is to collect data holistically, prepare it in a user-friendly way, and make it available in the right places.

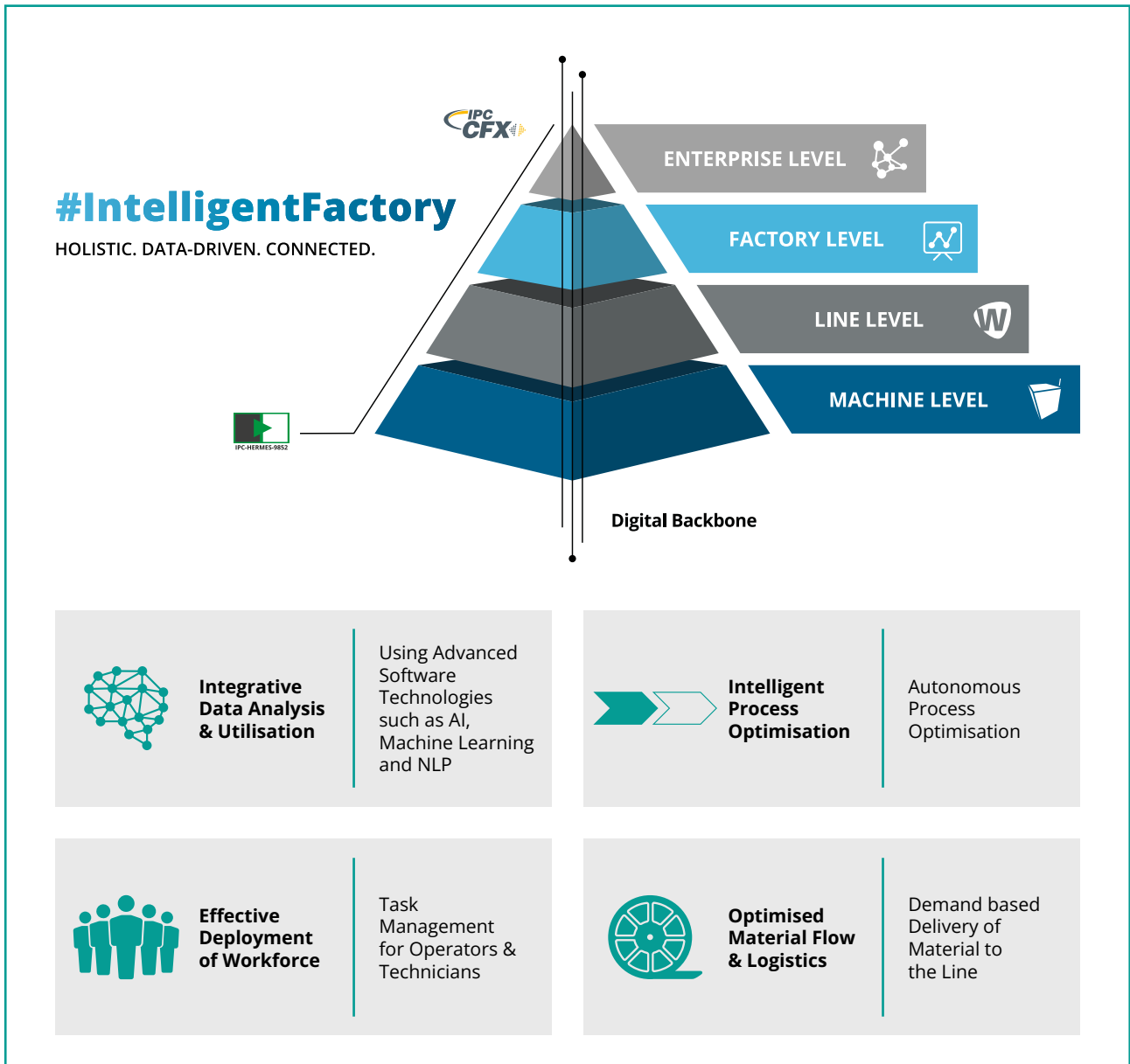## Holistic, Data-driven, Connected

The Intelligent Factory leverages the potential of highly networked and largely automated SMT production by taking a holistic view of the "data lake" and analysing, integrating and optimising processes on all levels – from the machine to the line, the factory, and the enterprise. The result is an important impetus for digital transformation that increases profitability and optimises the use of resources throughout electronics production.

Big Data Processing Ensures Zero DPMO

The target of ASMPT's SMT Solutions Segment (SMT) is to help our customers to reach a future-proof intelligent SMT factory, in which yield, efficiency and productivity are increased through big data processing, workforce is deployed effectively and the material flow is optimised throughout the factory. Intelligent, automated process optimisation significantly reduces production times and avoids rejects. The result: less energy and material consumption, less costs and waste.

To reach this Intelligent Factory, ASMPT offers a wide range of innovative hardware and software solutions. The use of open industry standards, machine learning and artificial intelligence make electronics manufacturing even more efficient and environmentally friendly.

Highlights of the Intelligent Factory

#IntelligentFactory

HOLISTIC. DATA-DRIVEN. CONNECTED.

IPC CFX

IPC-HERMES-9852

ENTERPRISE LEVEL

FACTORY LEVEL

LINE LEVEL

MACHINE LEVEL

Digital Backbone

Integrative Data Analysis & Utilisation — Using Advanced Software Technologies such as AI, Machine Learning and NLP

Intelligent Process Optimisation — Autonomous Process Optimisation

Effective Deployment of Workforce — Task Management for Operators & Technicians

Optimised Material Flow & Logistics — Demand based Delivery of Material to the Line

> "The industry is changing: persistent skills shortages, productivity pressure and scarce manufacturing space, dynamic markets, demanding industries, uncertain supply chains, and the continuing trend toward complexity and miniaturisation. With our holistic and integrative Intelligent Factory approach, based on easy to be integrated SMT equipment & line level software, electronics manufacturers will become more efficient, sustainable, and future-proof in challenging times."

Josef Ernst, CEO, ASMPT SMT Solutions
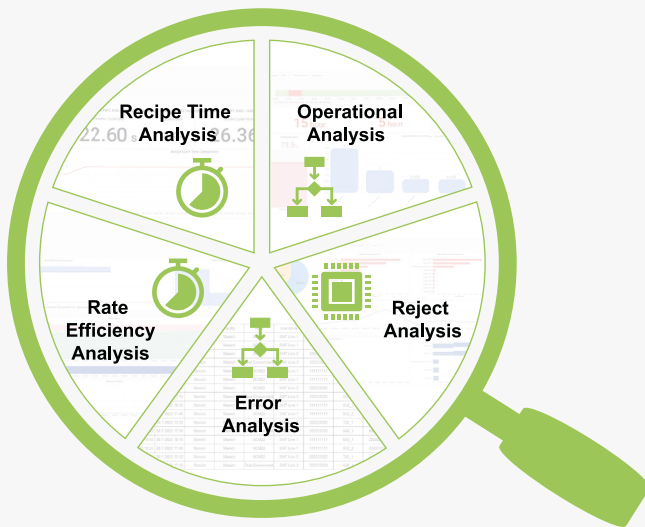
In-depth analysis of the three application fields "Time", "Condition" and "Material" on placement, machine, line and facility level enables resource efficiency through holistic process optimisation.

Throughput Analysis and Optimisation with SMT Analytics

Why is the production status like that? How was the performance in the past? Why do I not achieve the target? SMT Analytics has the answers to these and many other questions about quality and efficiency in electronics manufacturing factories.

SMT Analytics analyses the SMT process in depth by detecting and localising issues down to the specific placement location. Otherwise, such issues often remain unnoticed in the system and can lead to efficiency and performance reductions, such as lost build time, material, or cycle time. The innovative software supports employees in analysing the causes, identifies performance impacts, and highlights optimisation potentials to increase the overall production efficiency and sustainability of the factory.

One of ASMPT's innovations

Intelligent Software Solutions Supports Operators and Technical Teams

In times of skilled labour shortages and steadily rising customer requirements there is no way around the digital transformation for electronics manufacturers if they want to support their employees.

The WORKS Software Suite's powerful applications for all workflows on the shop floor reduce operator workload and control and optimise production and material flow. WORKS Operations, for example, the application for smart working in the Intelligent Factory bundles, prioritises and distributes tasks from production across lines and skill-based to operators with mobile devices. This intelligent guidance shortens response times and provides the most effective support for operators. With our Factory Solutions for efficient troubleshooting as well as the central administration and maintenance of all manufacturing assets, we provide technical and maintenance teams with pow-

Prioritised information about upcoming tasks with sufficient lead time makes the operator's work on the shop floor much easier.

erful applications that allow them to execute their duties more effectively and with less stress – all while significantly reducing the downtime of systems and production lines.

One of ASMPT's innovations

Efficient and Sustainable Training with ASMPT Academy

ASMPT Academy provides a diverse range of courses thoughtfully designed for specific audiences, including customers, field service engineers, and employees. The training options span various formats, such as face-to-face sessions, e-learning modules, virtual reality experiences, and blended training programmes. These courses support the ongoing expansion of knowledge and ensure technical proficiency.

Users can update and enhance their professional expertise effortlessly through our target group-specific e-learning courses. ASMPT's Virtual Reality 2D/3D courses offer a dynamic learning experience, allowing for a comprehensive understanding in an engaging yet authentic manner. Guidance from our qualified product experts and the refinement of skills through practical exercises on our machines and within virtual software environments contribute to a well-rounded learning experience.

In alignment with our commitment to environmental responsibility, ASMPT Academy acknowledges the importance of minimising environmental impact. We recognise the sustainable aspect of our training programmes, as participants can benefit from valuable learning experiences without the need for extensive travel. This not only reduces the carbon footprint associated with commuting but also aligns with our ecoconscious approach to professional development. Our Blended Learning offerings seamlessly integrate e-learning with instructor-led training, providing an optimal combination of both methods, contributing to a comprehensive and effective learning experience tailored to individual needs.

One of ASMPT's innovations

eLearning
Continuous education for specific target groups in their own work environment

Virtual Reality
Game-like and realistic knowledge acquisition with courses in 2D/3D virtual reality

Instructor-led
Practical exercises with experts on machines and in virtual software environments

Blended Learning
Combine the best of eLearning and instructor-led training environments

"With ASMPT Academy, knowledge is at everyone´s fingertips, ASMPT employees, field service engineers, customers, partners .... We are proud to enable seamless education and skill development, promoting rapid learning with minimal environmental impact, ensuring consistent knowledge acquisition around the world."

Ken Richey, Training Manager Americas, ASMPT SMT Solutions

AI-Driven Innovation for Enhanced Productivity and Sustainability

In addressing the intricate challenges associated with Surface Mount Technology (SMT) production lines, ASMPT has developed the "Virtual Assist" smartphone application—a sustainable solution aiming to improve working conditions, enhance resource efficiency, and reduce the carbon footprint by minimising travel requirements for field service engineers.

Given the interdependence of each production step in an SMT line, a minor defect on one machine can lead to a complete line halt. Technicians, working under significant time pressure to rectify issues promptly, benefit from the "Virtual Assist" application. It serves as a reliable knowledge base, offering intelligent guidance for efficient troubleshooting, providing full visibility into equipment service activities, and granting immediate access to all pertinent information through a unified user interface.

The sustainable aspect of this solution not only contributes to improved working conditions and resource efficiency, leading to resource savings but also aligns with environmental responsibility. By reducing the need for travel, the application plays a role in lowering the CO_2 footprint associated with field service activities. Notably, the application has reduced the time spent on information retrieval by up to 95%, increased overall productivity by up to 25%, and cut knowledge loss in half.
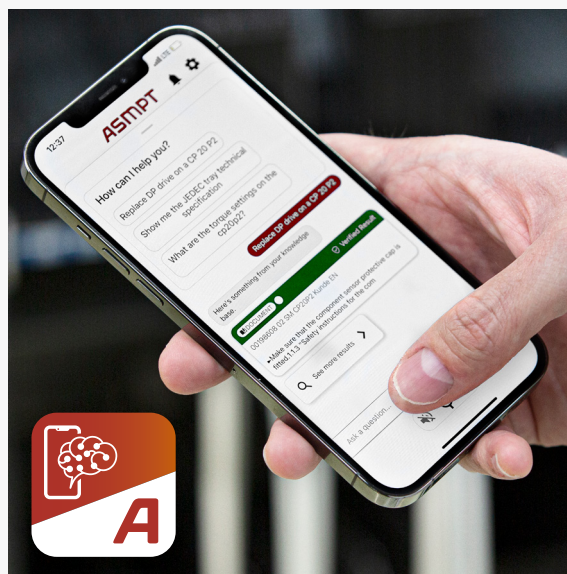
ASMPT's "Virtual Assist" smartphone app revolutionises SMT line troubleshooting, reducing information search time by up to 95%, increasing overall productivity by 25%, and minimising knowledge loss. A sustainable solution for improved work conditions and resource efficiency.

Harnessing the power of AI, the "Virtual Assist" application continuously learns from global interactions, further refining and enhancing the user experience. This innovative approach reflects ASMPT's commitment to sustainable solutions that streamline operations, contribute to improved working environments, and actively address environmental considerations in the field of Surface Mount Technology.

One of ASMPT's innovations
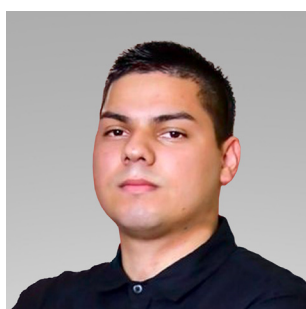
> *"For me as a field-service engineer Virtual Assist is really a game-changer, serving as my dedicated digital AI assistant. With just my smartphone, I can now swiftly access essential information in an easy-to-understand language, significantly enhancing my workflow efficiency in complex production settings. It makes my work easier and helps me to reduce my CO_2 footprint."*

Matheus Silva e Silva, Field Service Engineer, ASMPT SMT Solutions Brazil

5.5 | Smart Automotive Solutions / Advanced Packaging
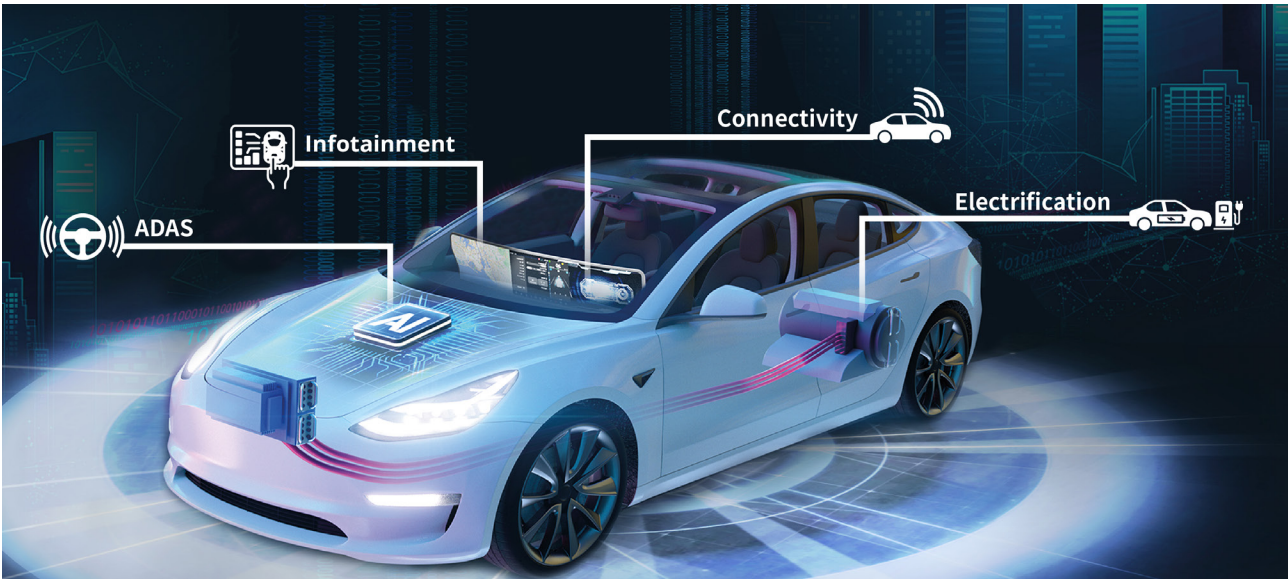
The future belongs to e-mobility. ASMPT supports tier manufacturers in the areas of ADAS, connectivity and electrification with innovative advanced packing solutions.

Fostering Sustainability and Advancing Automotive Electronics

ASMPT's commitment extends beyond technological excellence to support the automotive industry actively in achieving greater sustainability and safety. We firmly believe that the future of mobility should have a positive impact on the environment and air quality while remaining accessible to the general public. Our products play a crucial role in aiding first-tier manufacturers, facilitating the development and production of environmentally conscious and affordable automotive solutions through a holistic approach.

With a longstanding focus on automotive electronics and their unique process requirements, ASMPT has honed its core competence. The evolving intelligence and connectivity of automobiles necessitate continuous innovation in automotive electronics production. Overcoming challenges such as precision amidst miniaturisation, maintaining quality amidst speed, and ensuring seamless traceability of product, process, and machine data are critical factors in this dynamic landscape.

In essence, the trajectory of our mobile future is shaped by innovative electronics, forming the hardware basis for AI applications like autonomous driving, high-performance optoelectronics, and efficient elec-

trification. These advancements demand a new generation of production technology, characterised by performance that not only meets the rapidly increasing demand but also aligns with the ever-higher quality expectations of discerning customers.

ASMPT actively supports electronics manufacturers in the critical areas of Advanced Driver Assistance Systems (ADAS), connectivity, and electrification. By addressing specific requirements in these domains, we contribute to the realisation of sustainable, safe, and technologically advanced automotive solutions that define the future of transportation.

Driving Technological Innovation with a Focus on ESG Principles

In the dynamic landscape of ADAS, our commitment goes beyond delivering solutions for highest precision and reliability. Electronics manufacturers, cognisant of the environmental impact, are tasked with processing high-precision sensors and systems that play a pivotal role in ensuring reliable data acquisition and real-time evaluation. This not only contributes to environmental sustainability but also aligns with our dedication to developing technologies that positively impact the world we live in.

ADAS takes into account the complex environmental conditions prevalent on the roads, including varying weather and lighting conditions, as well as diverse traffic situations. By developing manufacturing solutions for electronics manufacturers to address these challenges, ASMPT actively supports our customers in enhancing road safety for the benefit of society.

The paramount importance of our solutions in ensuring the safety and functionality of autonomous driving functions places a strong emphasis on reliability. Achieving this level of dependability necessitates not only technological innovations in our manufacturing equipment but also meticulous adherence to strict quality controls. Intelligent software solutions play a key role in these quality controls, further solidifying our commitment to governance principles.

At ASMPT, our pursuit of excellence in ADAS technologies is deeply rooted in ESG principles. By driving technological innovation with a conscious focus on environmental sustainability, social well-being through enhanced safety, and robust governance practices, we are driving the future of mobility through a holistic and responsible approach.

Enhancing connectivity for sustainable automotive solutions

Connectivity applications in the automotive industry demand the seamless integration of various components, ranging from SiPs and tiny microchips to larger sensors and connectors. The strategic use of smaller components not only enables high integration density and complex circuitry for wireless communication and data processing but also aligns with sustainability goals by promoting resource efficiency in manufacturing.

Smaller components contribute to a reduced environmental footprint through more efficient use of materials, addressing sustainability concerns associated with resource consumption and waste generation. Additionally, the emphasis on high integration density supports energy-efficient devices, further contributing to sustainable automotive electronics.

Lens assembly and alignment in one with CMAT-S

CMAT-S is an all-in-one system for assembling and dynamically aligning lenses in ADAS cameras. With this machine, ASMPT AEi introduces a powerful implementation of its patented Continuous Sweep Alignment process, which is significantly improving the throughput of the system without compromising on the quality of cameras installed in advanced driver assistance systems. The main advantage of the CMAT-S is its ability to reduce the process cycle time by 50 percent with the same footprint, making the CMAT-S extremely floor-space-saving and energy-efficient.

Thanks to the high quality of CMAT-S assembly and the dynamic alignment of lenses in ADAS cameras, it makes a significant contribution to safe and comfortable driving. ADAS helps to improve the safety, efficiency and user-friendliness of vehicles and therefore plays an important role in the further development of e-mobility.

This highly innovative all-in-one solution is primarily aimed at the high-volume production of cameras in electric cars, a market segment that is growing rapidly with the increasing introduction of advanced driver assistance systems.

One of ASMPT's innovations

The ACAMLine™ for highly efficient, fully automated production. The modular and scalable design ensures quick process changes, increased volume, and thus a more sustainable, traceable production environment.

Game Changing Automation Line

High productivity thanks to fully automated production lines, high consistency and minimal operator intervention have always been the objectives of our customers, who want highly efficient production. ASMPT CIS Automotive is proud that major Tier 1 customers have chosen our ACAMLine™ to handle this enormous task. The line is designed for modular machine integration and scalability, with in-depth process of the CIS automotive assembly process. Manufacturers benefit from the ability to change the production process quickly thanks to the modular design of the machine, and additionally from the increase in volume due to the simple modular scalability of the machine. Fewer machines mean less energy and floorspace. The entire line enables the traceability of units, process parameters and results, which are essential for the safety and quality of products on the market. The modularity and scalability of the ACamLine not only allows for a more space, equipment and energy efficient set-up

and production environment, but the fully automated process also allows for less material waste due to higher reliability and fewer errors due to human operation and intervention.

The line is designed to achieve further significant savings per produced unit in both electricity consumption and waste volumes in further phases.

Phase 1: Introduction of ACAMLine™ for annual production of 1 million units (2025), fully automated line, reducing waste by increasing consistency and efficiency.

Phase 2: Implementation of Phase 1 upscaling with new modular machines to enable 100% increase in production volume, 2 million units (2027) by upscaling selected machines. Further significant improvements in floor space utilisation and energy efficiency.

One of ASMPT's innovations

> *"ASMPT's global network of R&D professionals fosters a diverse, intercultural talent pool. These diverse teams of experts from around the world are the catalysts for leading innovation."*
>
> Kelly Chua, Global Head Human Resources, ASMPT Semiconductor Solutions

Nurturing our Employees

6 Nurturing our Employees

- **The ASMPT POWER values set out the rights and obligations of all employees**
- **Diversity, Equity and Inclusion are main drivers**
- **Support for more than 11,000 employees globally through attractive employer benefits and offers**

At ASMPT, we recognise that at the heart of our success are our people. We have developed strong values with them. We call them POWER – Passion, Ownership, Win, Excellence, Respect. These POWER values motivate us, flank our corporate goals and set out the rights and obligations for all of us. They reinforce commitment, ethical and moral behaviour, in everything we do, daily and at all levels of the organisation.

With a steadfast commitment to nurturing a thriving workplace, we focus on cultivating an environment where every individual feels valued, safe, and inspired to grow. By embracing a holistic approach to employee well-being and development, we strive to create a ripple effect of positive change that extends beyond the confines of our company, fostering innovation, excellence, and community impact that resonates throughout the industry and society at large. We have implemented a holistic approach to nurturing our workforce across four fundamental objectives: Promoting DEI; Enhancing Labour Practices; Ensuring Employee Health and Safety; and Fostering Human Capital Development.

In 2023, our dynamic workforce comprised over 11,000 dedicated employees, of whom about 24% are female. The overall turnover rate in 2023 is approximately 18%, which is a reduction of 20% compared with 2022.

Our actions and strategies on nurturing our employees are supported by the following SDGs:

6.1 | Employee Overview

Why it Matters

The success of ASMPT is largely attributed to our employees, our most precious asset. Understanding the importance of a nurturing environment, ASMPT has crafted an employee value proposition a modern workforce demands.

Our Commitment

We are committed to providing a workplace where employees feel valued and empowered to grow both professionally and personally. We comply with all applicable laws and regulations relating to employment; we are eliminating inequalities and ensuring that there is a safe, inclusive and respectful workplace for all employees. We have zero-tolerance stance on forced and child labour. We also actively foster an environment where employees can find fulfillment through competitive remuneration, continuous learning and development opportunities.

Our Approach

The Group's approach is rooted in providing a friendly and equitable working environment that is conducive to the growth and development of its talent.

To put into effect this value proposition, ASMPT has introduced flexible work arrangements, actively participated in global corporate social responsibility initiatives, and promoted transparent communication through regular town hall meetings. These measures are designed to align with and support the overarching ASMPT strategy, ensuring that every member of the team is moving in unison towards common goals.

Recognising the importance of digitisation a modern work landscape, ASMPT has made significant investments in a global HR system, the Global People System (GPS) that has been mentioned in the earlier parts of this report. The System aims to improve the employee digital experience by streamlining transactions and fostering engagement. Its implementation allows the Group to achieve a balanced and optimised mix of repair, reinforcement, and reinvention strategies.

Enhanced Labour Practices

ASMPT's Code of Conduct is drawn up to comply with labour laws including, for instance, the Modern Slavery Act 2015 (UK). Our Code of Business Conduct aligns with the Responsible Business Alliance's (RBA) Code of Conduct, which itself is constructed in accordance with international labour laws. This includes adherence to the International Labor Organization (ILO) International Labor Standards, the United Nation's Universal Declaration of Human Rights and the United Nations Convention on the Rights of the Child. If child or forced labour are discovered within our operations or supply chain, we are committed to following procedures and guidelines from applicable local and international laws and regulations to eliminate the practice. By integrating these regulations, ASMPT's Code of Conduct stands as a bulwark against child and forced labour, ensuring our business practices honour and protect human dignity and rights.

With our Supplier Code of Conduct, we also collaborate with our partners to integrate our human rights and labour standards, which explicitly ban child labour. Regular audits are carried out to verify that our partners meet these established standards.

Furthermore, the Group fosters robust ties with key industry bodies to facilitate ongoing dialogue and the exchange of best practices. For example, our Singapore team has forged strong connections with the Singapore National Employer Federation and the Singapore Semiconductor Industry Association for such purposes. Additionally, we align our human resource policies with the benchmarks set by Singapore's Tripartite Standards of Fair and Progressive Employment Practices.

"For ASMPT, diversity is not just a checkbox exercise, but an unwavering commitment to fostering an environment where unique perspectives come together to spark creativity and lead to powerful solutions."

Katrin Damaschke, Head of HR, ASMPT SMT Solutions EMEA

Employee Profile for 2023:

Gender Distribution
■ Male | ■ Female

24%
76%
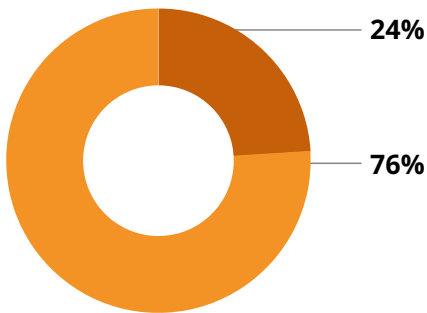
Employment Type Distribution
■ Full time | ■ Part time

2%
98%
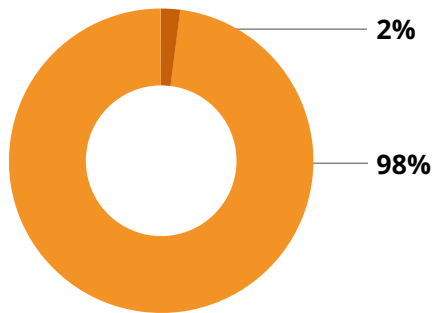
Age Group Distribution
■ Below 30 | ■ 30-50 | ■ Above 50

19%
20%
61%
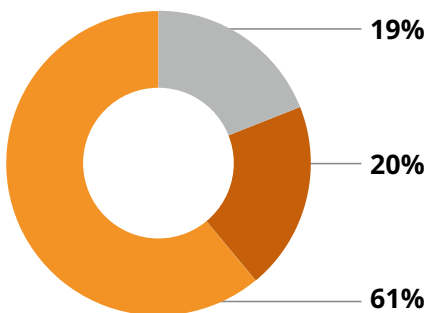
Geographical Region Distribution
■ Greater China | ■ Europe, Middle East and Africa
■ Rest of Asia | ■ North and South America

19%
24%
4%
53%
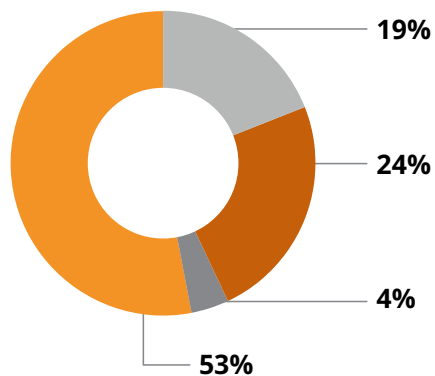
Overall Employee Turnover Rate

6.2 | Diversity, Equity & Inclusion (DEI)

Why it Matters

With a global footprint across more than 30 countries, employing over 11,000 people and with a huge mix of different languages and dialects being spoken within the Group, ASMPT recognises that DEI is not merely a moral imperative but a strategic one, that is critical to our success. Embracing a varied workforce helps us mitigate the risks associated with high turnover and t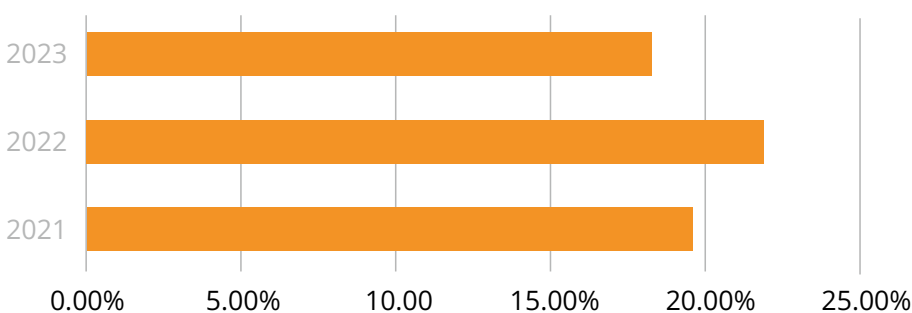alent shortages, particularly in the rapidly evolving semiconductor and electronics manufacturing sector, while promoting a flexible and inclusive culture is essential for attracting and retaining top talent in a competitive global landscape.

Our Commitment

In our journey, ASMPT has moved from introducing to implementing and living a culture of DEI. This progress underlines our continued efforts to foster an inclusive environment. We aim to equip our employees with the necessary tools and an environment conducive to professional growth, underpinned by values of candour, courtesy, adaptability, and profound respect for individual dignity and privacy. We have pledged to achieve 25% female representation on our Board by 2025, a step that reinforces our commitment to gender diversity and leadership balance. As at 31 December 2023, 20% of our Board members (2 out of 10) is female.

Our Approach

DEI Ring Team

ASMPT has taken a step forward in building an inclusive workplace by establishing a DEI Ring Team, bolstered by Regional Diversity groups. This team highlights the efforts made by ASMPT in fostering a work environment where every individual can excel and represent the rich tapestry of regions where ASMPT operates. Our DEI Team spearheads various activities, all designed to raise awareness of the needs and strengths of our people. Through these activities, we aim to shape a workplace culture that opens doors for everyone, regardless of their background. The DEI Team has successfully achieved the following initiatives in 2023:

1. Set up Country Women's chapters;

2. Trialled blind recruitment practices; and

3. Organised Science, Technology, Engineering, and Maths (STEM) events, such as Girls' Day, STEM Careers and outreach programme.

The DEI Ring Team's central mission is to devise and implement a strategic framework that eradicates bias and promotes fairness, aligning with the seven dimensions of personality outlined by the Diversity Charter—age, ethnic origin and nationality, gender and gender identity, physical and mental abilities, religion and belief, sexual orientation, and social origin. By doing so, ASMPT is commited to creating not just a bias-free workplace, but an ecosystem where diversity is celebrated, equity is the norm, and inclusion is the culture we live by daily.

eLearning

ASMPT actively tackles unconscious bias, fostering self-awareness and education. In 2023, over 500 colleagues in China engaged in an "Unconscious Bias" e-learning course.

Promote Awareness of Unconscious Bias

Although eliminating unconscious bias presents challenges, ASMPT actively confronts it, acknowledging its influence on inclusion, performance, and innovation. Through self-awareness and education, we empower employees to navigate and challenge their biases. In 2023, our DEI promotion group in China launched an "Unconscious Bias" e-learning course via ASMPT Academy, where over 500 colleagues participated. In the UK, we continue to offer the POWERful workshop, providing staff with the necessary tools to recognise and remedy bias. To enhance our commitment to understanding unconscious bias, a company-wide rollout of related courses is planned for 2024 and beyond, furthering this vital initiative.

One of ASMPT's people projects
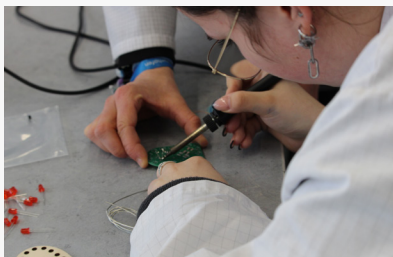
On Girls Day, teenage girls immerse themselves in the world of electronics production and discover their passion for technology.

Girls' Day 2023

We see it as a vital necessity to get girls interested in technology at an early age and to break down outdated stereotypes. That's why we invited schoolgirls to our SMT headquarters in Munich, Germany, for Girls' Day, an activity that provides girls from the age of 10 to 16 years old with the opportunity to explore jobs that are often seen as "for males only".

Throughout this interactive day, they learnt about our machines and people, and did some soldering themselves. The enthusiasm was high, and the girls provided feedback that they could imagine studying or training in a technical field.

One of ASMPT's people projects
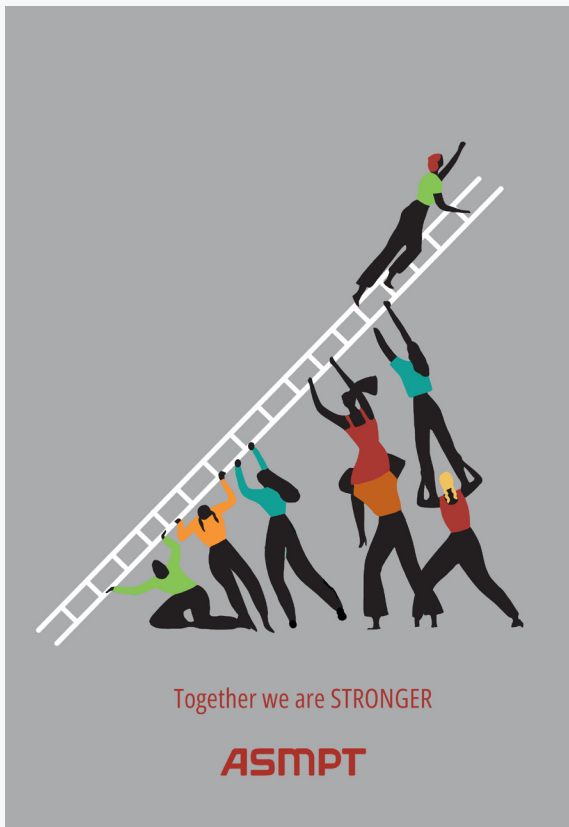
This applies to women and men alike: Together we are stronger in ASMPT.

International Womens' Day 2023

ASMPT has installed many very active Women's Chapters around the world. Thus, for the 2023 International Women's Day (IWD), the German Chapter brought together over 50 of the female colleagues for a panel discussion with two external inspiring speakers from the tech sector. Both hold a leadership position – but their ways into that position could not be more different. By outlining their experiences as leaders in the technology industry they served as role models, allies, and coaches at the same time. Both speakers made it clear that obstacles and glass ceilings don't necessarily mean stagnation but can offer opportunities for growth. Women serve as valuable role models, trailblazers, and can pave the way for others. This effect gets bigger when they are partnered by male allies and dense networks of people at different career levels.

Being an global event, at our many locations worldwide women celebrated IWD with local activities as well.

In China the Group's HR department orchestrated the "Embrace Equity Pose" activity, emphasising the vital role and vast contributions of our female employees, featuring an award and further engaging the ASMPT team in fostering an enterprise-wide atmosphere of fairness.

Proud winners of the "Embrace Equity Pose" Award.

One of ASMPT's people projects

Many women demonstrate the strength and solidarity of a women's network in ASMPT's key regions.

Female Networks

At ASMPT a fair treatment and full participation of all employees, particularly of groups of people that are still underrepresented, it is our target. Diversity, Equity and Inclusion are not just words for us. We are convinced: Only if we uncover and activate all strengths of all our employees, we are successful as a company and as individuals.

This is why we have established female networks and installed Women´s Chapters in our key regions. Across functions, ages, career levels our targets are:

- Promote an inclusive environment where all women feel welcome and valued, regardless of background or perspective.

- Build strong networking platform for women to connect, collaborate, and build meaningful relationships that support personal and professional growth. Provide a supportive community for women to thrive and succeed via encouragement and mentorship.

- Promote personal and professional growth through continuous learning, skills building, and self-improvement to help women achieve their goals and aspirations.

- Inspire to share stories, experiences, and knowledge to motivate women to reach their full potential.

- Cultivate strength and resilience, empowering women to overcome challenges and setbacks.

- Empower women and equip them with the tools, knowledge, and confidence to take on leadership roles, achieve their goals and make a positive impact.

One of ASMPT's people projects

6.3 | Ensure Employee's Health and Safety

Why it Matters

At ASMPT, the health and safety of our employees are of utmost importance, especially given the intricate nature of the semiconductor industry, which encompasses inherent risks such as exposure to chemicals, sophisticated equipment accidents, and ergonomic challenges. Inadequate safety measures not only increase operation costs but also inflict severe or irreparable damage to our corporate reputation if work-related incidents were to occur. Therefore, robust health and safety protocols are vital to most, if not all, of our operations, ensuring that our occupational risks are mitigated and our workforce remains safe and secure.

Our Commitment

At ASMPT, our commitment to health and safety is unwavering, with a clear target set to achieve a Recordable Incident Rate (RIR) of 0.12. This goal places us ambitiously ahead of the USA semiconductor industry's average RIR of 0.24, showcasing our commitment to not just meet but exceed industry standards. We are thrilled to report a remarkable achievement in this endeavour: for 2023, our manufacturing sites in China, Malaysia and Singapore achieved a significant safety milestone, with the RIR dropping to an outstanding 0.098. This accomplishment reflects our rigorous safety protocols and the collective effort of our team to foster a culture where the health and safety of every employee are placed in prime position in our operations. We also ensure strict compliance with all relevant laws and regulations relating to health and safety in our operating countries.

Our Approach

Occupational Health and Safety (OHS) Management Systems

Our OHS Policy underlines the right of every individual, including employees, contractors, and visitors, to a secure and health-conscious work atmosphere. This policy is the cornerstone of our approach to workplace safety, guiding us to:

- Establish and maintain comprehensive policies and programmes that foster a safe and wholesome work environment.

- Ensure working conditions are secure, aiming to pre-empt work-related injuries, ill health, and prevent occupational as well as infectious diseases.

- Vigilantly identify and eliminate hazards, while minimising OHS risks through proactive measures.

- Regularly monitor, inspect, and reassess the efficacy of our safety policies and initiatives to pursue continuous improvements.

> *"In our continuous quest for excellence, product quality is of paramount importance to us. We also set high standards for the quality of all our internal processes. This includes the way we work with our employees, whose health and safety is of the utmost priority."*

Cheong Shuan Pei, Vice President Corporate Quality Management, ASMPT

The Group's OHS standards and policy align with global best practices. We have obtained the ISO 45001 certification at our three plants in China, as well as in Hong Kong and Singapore. Additionally, our facilities in Germany proudly uphold the OHSAS 18001 standard, a testament to our rigorous safety protocols. In Singapore, we have further solidified our commitment to safety by meeting the requirements of SS 506 Part 1/ OHSAS 18001. The UK site continues to be accredited to ISO 45001.

During the Reporting Period, we recorded a total of 699 lost days due to work-related injuries, a 13% reduction from the previous year. No work-related fatalities for three consecutive years.

Happy finishers at the B2Run Munich 2023! The biggest business run in Germany.

B2Run & Giro di Monaco "Run for Peace"

Promoting physical fitness by engaging our people in running activities. At the Munich site, more than 50 people took part in regional company runs in 2023 and prepared together to take part in these events. Cheered on by colleagues they all managed to cross the finish line and contribute to their individual fitness. 48 Colleagues joined the B2Run; and six of our people took part in the Giro di Monaco "Run for Peace", a charity run in favour of refugees.

One of ASMPT's people projects

Awards ceremony at the First Longgang District Occupational Health Popular Science Competition

1st Runner-Up in the First Longgang District Occupational Health Popular Science Competition

In April 2023, an ASMPT team participated in the first Longgang District Occupational Health Popular Science Competition, aimed at elevating the occupational health expertise of management personnel. After two intense rounds of competition, ASMPT's representative's exceptional knowledge on occupational health and safety earned him the 1st Runner-Up position. This achievement not only honors the team but also allows them to share valuable insights with other colleagues, promoting a culture of high safety standards among workers.
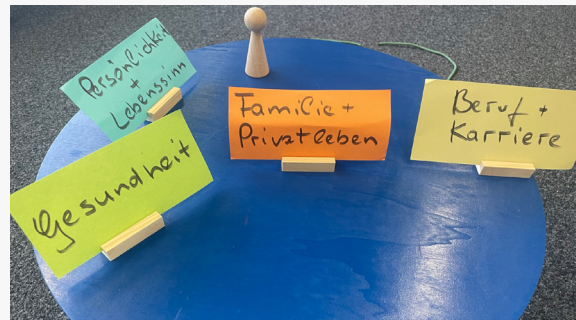
One of ASMPT's people projects

> *"ASMPT is excellently positioned in the area of safety and improvement initiatives. Our continuous training ensures that every employee is always up to date and actively contributes to the success and safety of the company."*

Andreas Ernst, Head of Global Quality, ASMPT SMT Solutions

Promoting our People's Wellbeing

Maintaining and promoting the resilience of our people and thus preserving the sustainability of our business has become increasingly important. Our focus on physical health, as well as on mental health. The professional health services, which include individual counselling services, are open to all employees at the Munich site, and we also offer various online training courses and internal training courses. These promote skills in resilience and stress management and contribute to health in the workplace through targeted relaxation and exercise training.

Preventive measures such as skin cancer screening and diabetes screening and the annual flu vaccination help to avoid sick leave and promote the health of our people sustainably. 150 people took advantage of our prevention activities. In 2023, we introduced the EGym Wellpass, which offers our German employees the opportunity to benefit from an extensive nationwide sports programme and promote physical fitness. More than 150 took advantage of this offer.

ASMPT SMT Solutions in Munich prioritises employee well-being with counseling, preventive screenings, and fitness programmes. Over 150 employees engaged in 2023, fostering resilience and health.

One of ASMPT's people projects

Zero Total Recordable Injury Rate (TRIR) for ASMPT Technology in Huizhou plant

ASMPT Technology (Huizhou) Co., Ltd achieved a remarkable zero TRIR in 2023, significantly lower than the industry average TRIR of 0.2. This milestone was attained through stringent risk assessments and control measures, with ATH's management setting a commendable example. Managers meticulously taught new employees to identify and mitigate risks before commencing work, ensuring the overall safety of the working environment. The introduction of any new processes, materials, machines, or technologies—collectively known as the "4N Risk"—underwent thorough pre-assessment, with any potential risks being addressed prior to implementation. The result is a workplace where safety is paramount, and the TRIR stands as a testament to ASMPT's dedication to maintaining a zero-incident environment since March 2022.

Astounding result of Zero TRIR at ASMPT plant in Huizhou

One of ASMPT's people projects

6.4 | Human Capital Development

Why it Matters

As a leading innovator at the forefront of technological progress, ASMPT's success hinges on the unique abilities of our workforce to spearhead product innovation, navigate intricate regulatory environments, and excel in market delivery. In an era where skilled professionals are scarce, investing in talent attraction, retention, and continuous development is not just a strategy but a necessity that underpins our competitive edge and propels our enduring expansion.

Our Commitment

The Group is committed to attracting and retaining a diverse talent pool through equitable, competitive remuneration and a nurturing work culture. We prioritise a safe, inclusive environment that promotes personal growth and aligns with our strategic objectives. Our comprehensive training programmes and development opportunities ensure our workforce's continuous advancement and the company's innovative leadership.

Our Approach

Remuneration Package

ASMPT emphasises a fair, market-responsive compensation system, rewarding employees and fostering achievement of personal and group objectives through a global remuneration strategy. Our policy ensures competitive pay by considering job-specific attributes and market benchmarks. Four core principles underpin our remuneration approach:

- **Fair and Appropriate**: Ensuring equitable, competitive compensation across the Group.
- **Shareholder and Business Alignment**: Structuring costs effectively to align with value creation and talent retention.
- **Driving the Right Behaviours**: Encouraging collaboration and linking rewards to performance.
- **Effective Implementation**: Complying strictly with regulations and governance.

We also provide different kinds of employee benefits including variable incentives, retirement support, insurance benefits, flexible spending accounts, flexible work arrangements, and wellness programmes, tailored by region and role. For senior management, transparent, market-aligned compensation procedures with clear KPIs ensure motivation and alignment with the Group's strategic goals, overseen by the Remuneration Committee. ASMPT continuously reviews and enhances our salary systems by conducting regular job evaluations, promoting internal equity among employees.

Talent Acquisition

ASMPT proactively recruits potential talents by leveraging a multifaceted approach, tailored to job types and levels. We utilise government job sites, recruitment agencies, and headhunting firms, ensuring precise job specifications from managers for optimal candidate sourcing. Further, we participate in target specific job fairs and collaborate with universities to attract talent to ASMPT.

Workshop at the University of Applied Sciences Munich

Academic Partnership Excellence

Collaboration with universities is vital for knowledge, resource, and idea exchange. For over 5 years, ASMPT has partnered with the Faculty of Electrical Engineering of the University of Applied Sciences Munich. Together, we have conducted research, delivered lectures, and integrated cutting-edge insights into our work. As part of that collaboration, several groups of students visited company to acquire an overview of technological advancements in flat assembly manufacturing, the requirements for various systems, and insights into SMT manufacturing. Moreover, colleagues from HR and R&D actively contributed to several events for this faculty's students, such as a workshop on placement technique during the orientation weekend, or the federal student council conference.

One of ASMPT's people projects

UK Placement Students

For the last 9 years the UK has developed a truly successful university placement scheme to attract future talent to ASMPT. Each year we attend strategically chosen university careers fairs to enable us to source talent to fill our future talent pipeline. The 13 month placement enables the students to fully experience the world of work by working on business projects some which are seen to completion during their time; to develop their business competence portfolio; complete their university projects; and, also to develop their behavioural competencies thus ensuring their careers are off to a great start. We also encourage the cohort to get actively involved with corporate social responsibility activities during their time with us. In 2023 we saw our first three graduates return to work at the UK site after successfully completing their respective degrees, thus seeing return on our investment.

One of ASMPT's people projects

Training and Development

Our employees are the key to our success. Strengthening a positive employee experience and resulting in a high level of commitment also involves continuously developing and promoting employees and managers. For that purpose, we offer trainings that are specific to the target groups and regions. We intensified our efforts in fostering employee engagement and skill enhancement through various target-specific training initiatives, such as lean management, negotiation for buyers, cost calculation, project management.

Our Learning Management System (LMS) ASMPT Academy that we rolled out across our company between 2019 and 2021, serves a technical infrastructure that enhances administration and orchestration of trainings of different types for our manifold employee groups and increases efficiency for staff to find relevant training content. Training content does not only cover mandatory company trainings, but particularly technical and soft skills contributing to our intention to upskill and reskill our people. Aligned with our vision of "enabling the digital world," we strategically tailored training to cultivate engineering expertise and leadership acumen.

We streamlined the integration of new hires with comprehensive orientation programmes, reinforcing our commitment to a cohesive corporate culture. Following that goal, we implemented both global and country-specific training initiatives:

HPBM

ASMPT is dedicated to nurturing a high-performance culture and leadership excellence through our Leadership Development Centre and the High Performance Behavioural Model (HPBM). Since 2021, we have honed leadership skills and identified high-potential employees, pivotal to our People Strategy. Our comprehensive approach includes HPBM training—delivered by over 50 trained facilitators—to integrate its principles into core HR functions and business processes, supported by the ASMPT Academy's infrastructure.

One of ASMPT's people projects

Happy 10 "rising talents" of our Munich site

"Rising Talent Programme"

Rising talent programme: this programme brings together 10 talented people from our different departments at the Munich site for a two-year development programme. Focusing on "intrapreneurship" this programme is tailored around the company's goals of bringing innovative ideas to the company and to contribute to the company culture and success by nurturing our people. The programme includes job shadowing, trainings on leadership and innovations, and networking opportunities with the management.

One of ASMPT's people projects

Beaming participants at the launch of the ASMPT Leadership Development Centre. A dynamic, experiential learning environment for global leaders promotes personal and professional growth.

Leadership Development

In line with John F. Kennedy's statement that "leadership and learning are indispensable to each other", ASMPT opened its Leadership Development Centre (LDC) on 1 December 2008. This strategic move underscores ASMPT's strong commitment to human resource development, career advancement and lifelong learning worldwide.

The inaugural event brought together director-grade employees from various organisations and functions around the world for a dynamic, experiential learning day. Through interactive exercises and challenging case scenarios, the executives enhanced their skills and fostered their personal and professional growth. Participants received online psychometric assessments, detailed development and feedback reports, and participated in personal coaching sessions that form the basis of individual development plans.

One of ASMPT's people projects

The ASMPT prerequisite: ONE ASMPT. The New Leaders' Program 2023 prepares managers for their new role and their contribution to the company's success.

New Leaders Programme

Re-launching the New Leaders programme: In 2023 we relaunched our training programme for new leaders at the Munich site. The programme brings together leaders who just transitioned to their new role or are about to do so. The programme is tailored around the competencies needed for this new role such as leading themselves, their teams and to contributing to the business success.

One of ASMPT's people projects

An ASMPT talent soldering by hand during a Professional Network activity. The Professional Network is designed to continually develop talent and strengthen personal and professional relationships within ASMPT.

Young Professional Network

Nurturing our young colleagues and adding to their personal and professional development, as well as growing their individual network in the company, is the aim of the Young Professional Network (YPN) that was established at the ASMPT Munich site in 2019. This programme brings together our apprentices, interns and, working students to nurture their skills and grow their network within the company. Various trainings imbue skills such as time management, communication skills and change management.

One of ASMPT's people projects
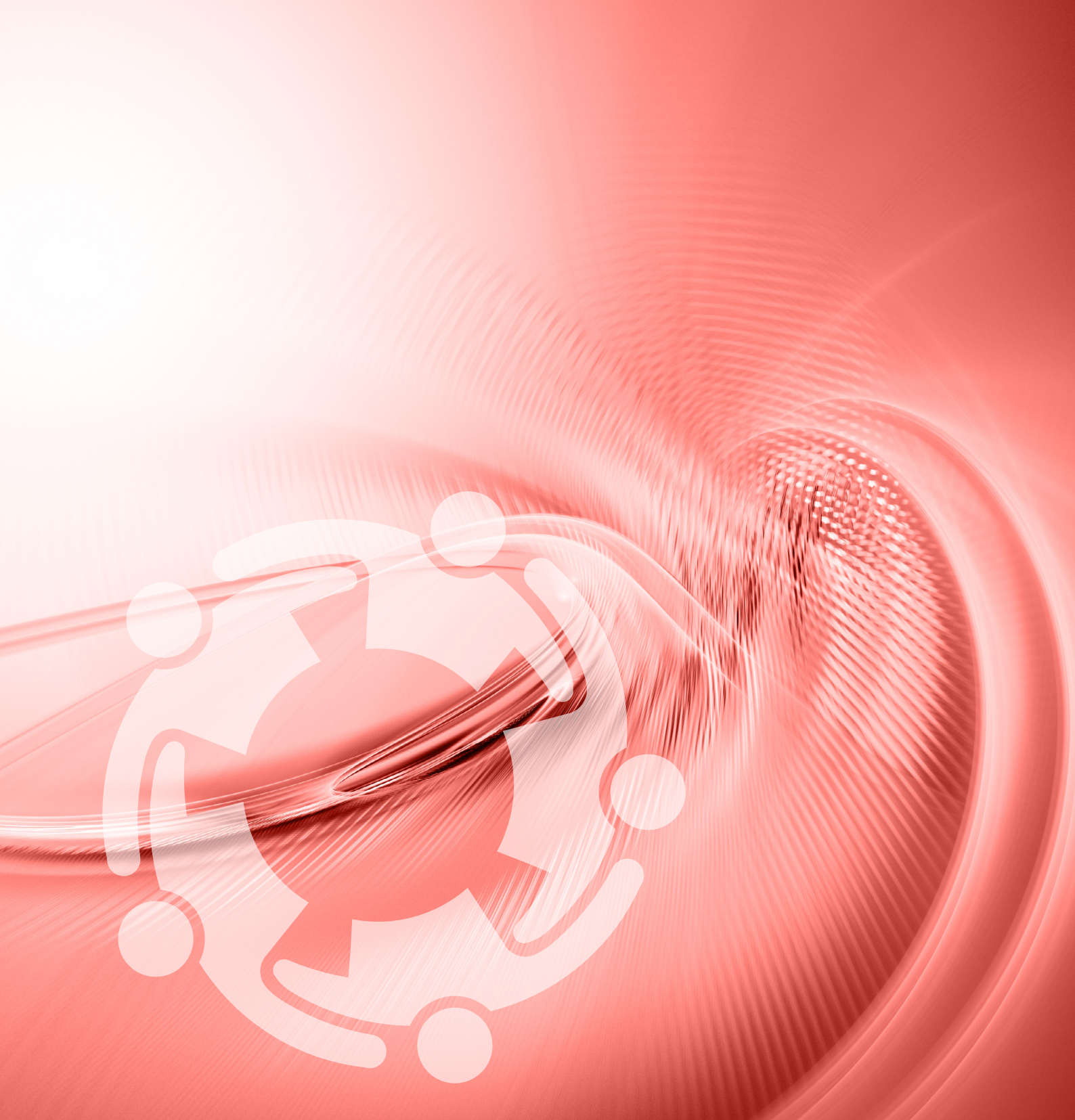
Supporting our Communities

7 Supporting our Communities

■ **Active encouragement of the ASMPT team in community work**
■ **Financial support through generous donations**

At ASMPT, our dedication to community support is a cornerstone of our identity. We actively engage in initiatives that uplift and empower, creating a symbiotic relationship where our growth is intertwined with the prosperity of the communities we serve. This section highlights our unwavering commitment to fostering collective well-being and sustainable development.

Our actions and strategies on supporting our communities are supported by the following SDG:

7.1 | Contributing to Local Communities

Why it Matters

In line with our vision of "Enabling the Digital World" and our mission to create a bright and sustainable future, ASMPT is inherently committed to supporting local communities. Our commitment goes beyond technological advancement; it integrates us deeply into the framework of local progress. By empowering communities, we cultivate a collaborative ecosystem, ensuring that technological benefits reach and uplift every individual, fostering sustainable growth and shared prosperity.

Our Commitment

ASMPT is steadfast in its commitment to community support, fostering long-term partnerships with Non-Governmental Organisations (NGOs), universities, and government bodies to nurture societal welfare collaboratively. The commitment is reflected in the vibrant volunteerism culture in our ethos, that targets key areas like community well-being, youth empowerment through education, and eco-conscious initiatives, and for which financial support is given.

Our Approach

ASMPT actively encourages its employees to get involved in the community and supports various charities and not-for-profit organisations through generous donations. ASMPT recognises the importance of actively engaging with the community and building strong relationships with its stakeholders. In addition to our core operations, we undertake various community initiatives, sponsorships, and donations that align with ASMPT's overall mission. These activities are aimed at maintaining a harmonious relationship with the community. We strategically allocates resources to projects, programmes, and initiatives that have a positive and lasting impact on community development.

Protecting the Environment
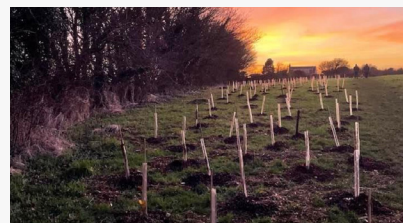
ASMPT Weymouth contributed to Tumbledown Farm project with donations and dedicated volunteers.

Tumbledown Farm

Every year on 28 January, Global Community Engagement Day inspires organisations, individuals, and businesses to deepen their connections with their communities.

This year, ASMPT Weymouth proudly contributed to the cause by sending four dedicated volunteers to Tumbledown Farm. Situated on a picturesque 27-acre expanse owned by Weymouth Town Council, Tumbledown Farm is transforming into a community asset where cultivating local fruits and vegetables are grown. Our engagement provides volunteering and learning opportunities, and champions environmental conservation for the betterment of our community.

Our recent donation of old office drawers, wood pallets, and storage tubs played a significant role in supporting Tumbledown Farm's initiatives. Thanks to these contributions, they were able to fully equip their new workshop, fostering a space for community-led growing, learning, and well-being.

One of ASMPT's community projects

Weymouth & Portland Marine Litter Project

Supporting the local community is a priority for us at ASMPT and we are proud to be involved in so many CSR initiatives.

The UK team continues to nurture its ongoing work with the Weymouth & Portland Marine Litter Project CIC, which do fantastic work in developing and managing environmental projects to reduce litter through community engagement.

As part of one of their recent projects, we supported them in placing bins around beaches and the harbour for people to recycle all their crabbing bits. This makes life that bit easier for their team of volunteers who regularly carry out beach cleans.

Our team gets its hands dirty in supporting the Weymouth & Portland Marine Litter Project to keep our beaches clean.

One of ASMPT's community projects

Support Community Health and Well-being
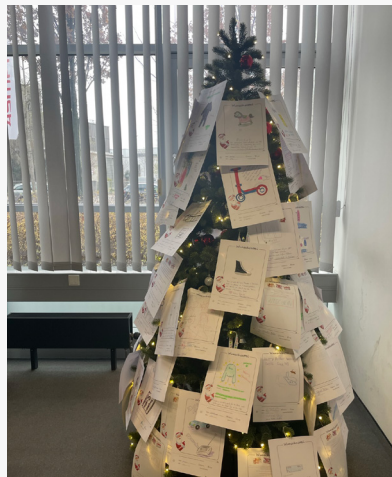
Our Munich branch has a long-standing partnership with a refugee home and fulfills children's Christmas wishes every year.

Christmas

At our Munich location, we embody humanity every year through diverse Christmas initiatives. One cherished tradition is our longstanding partnership with a local refugee shelter. Children craft vibrantly painted wish lists, from which our team members select one to make their Christmas wishes come true. Even in the 7th year, it remains heartwarming to witness the love and care the children invest in their artworks, and the dedication our team members display in choosing and wrapping gifts.

One of ASMPT's community projects

Blood Donation

In 2023, ASMPT organised a Blood Donation Day at both Hong Kong and Malaysia offices. In Hong Kong, nearly 40 altruistic employees contributed, saving an estimated 120 lives with their donations. Their commendable efforts marked the event's resounding success. Concurrently, the Malaysia office, in collaboration with Hospital Sultanah Aminah (HSA), experienced a remarkable turnout with the staff donating 76 units of blood. In the UK, one of the ASMPT employees recently even celebrated their 100th blood donation. These initiatives highlight ASMPT's commitment to community welfare, showcasing the impactful difference a collective effort can make in the critical area of healthcare support.

Blood Donation Day at Hong Kong and Malaysia offices.

One of ASMPT's community projects

Empowering our Future Talents

One Young World

In October 2023, ASMPT proudly sent our new cohort of One Young World (OYW) delegates to the OYW event held in Belfast to learn more about these five key sustainability themes:

| 1. Food crisis | 2. Education | 3. Climate emergency | 4. Mental health | 5. Peace and reconciliation |

As part of commemorating the 25th Anniversary of the Good Friday Agreement, the cohort participated in activities and learned lessons from peace architects.

By engaging in these critical topics, our team gained invaluable insights and connected with like-minded individuals. The delegates will then contribute to ASMPT's ESG social impact by organising various community events that focus on the needs of the communities.

After the summit, the delegates also become OYW Ambassadors, joining a community of over 15,000 people around the globe to accelerate change.

One of ASMPT's community projects

One Day Apprentice

We regularly open our doors to inspiring event days, including the Industrie- und Handelskammer (IHK) event "A Day as an Apprentice." Here, students have the unique opportunity to immerse themselves in the fascinating world of ASMPT's corporate culture. For this event, a total of six motivated students visited us and delved into the realms of IT and mechatronics.

They experienced firsthand what it means to kickstart their training at ASMPT. From a guided tour of our manufacturing facilities to informative discussions, soldering, and assembling and connecting a PC to a network – participants enjoyed a diverse day, gaining valuable insights into our company.

One of ASMPT's community projects

Showcasing the brightest minds in academia with the ASMPT Technology Award.

ASMPT Technology Award 2023

In July 2023, the ASMPT Technology Award illuminated the path for innovation by showcasing the brightest minds in academia. Collaborating with top universities in Hong Kong, the event saw student presenters unfurling the depth of their creativity and expertise, sharing their final year projects with an assembly of inspired peers. This platform was not just a competition, but a celebration of discovery, learning, and the relentless pursuit to make a tangible difference in the world. For participants, the ASMPT Technology Award represented a golden opportunity to be recognised, propelling their groundbreaking ideas into the limelight. Beyond the allure of victory, this event stood as a testament to ASMPT's unwavering dedication to nurturing young talent and fostering a cradle for revolutionary concepts that promise to shape our future.

One of ASMPT's community projects

Donations

In 2023, ASMPT demonstrated a profound commitment to social responsibility through a series of charitable initiatives, cumulatively investing over USD 200,000 and contributing more than 14,000 man-hours in a wide range of activities and fundraising event. Our activities spanned a diverse range of focus areas, reflecting our dedication to fostering a holistic approach to community development. These areas encompassed vulnerable groups, sports, health, environmental sustainability, and education, illustrating our understanding that a better world is built on multiple pillars of support.

One notable example of our philanthropic outreach was a generous donation exceeding USD 21,000 to a childcare centre in Munich. This contribution underscores our belief in nurturing the youngest members of our society, recognising that the foundation laid in early childhood can shape the trajectory of a person's life. Our hope is that this donation will not only provide immediate relief and support to the childcare centre but will also seed long-term growth and enrichment for the children it serves.

"Successful companies, as a matter of course, are socially and environmentally responsible. It gives me great pleasure to see our Passion value demonstrated by our global teams, through social progress and environmental improvements in a wide range of projects. I'm sure that their commitment to these causes will continue into the future."

Abi Cox, Senior Manager, HR & Corporate Services, ASMPT SMT Solutions UK

Appendix

8.1 | Environmental KPI Performance Table

Environmental KPIs	Unit	2021	2022	2023
Greenhouse Gas (GHG) Emission [1,2]				
Total GHG Emissions	$ktCO_2e$	78.1	64.5	47.5
– Scope 1: GHG Emissions from Gaseous Fuel Consumption	$ktCO_2e$	2.9	1.5	1.0
– Scope 1: GHG Emissions from Vehicles Usage	$ktCO_2e$	0.8	0.8	0.8
– Scope 2: GHG Emissions from Electricity Consumption	$ktCO_2e$	74.5	62.1	45.8
Total GHG Emission Intensity	tCO_2e/ $'000 HKD revenue	0.0036	0.0033	0.0032
Air Emission				
Total Air Emissions from Gaseous Fuel Consumption	tonnes	3.13	1.02 [3]	0.58
– Sulphur Oxides	tonnes	0.01	0.01	0.004
– Nitrogen Oxides	tonnes	2.87	1.01	0.57
– Particulate Matter	tonnes	0.25	0.00008	0.00005
Total Air Emission Intensity	kg/ $'000 HKD revenue	0.00014	0.0004	0.00004
Energy Consumption				
Total Energy Consumption [4]	GWh	133.1	113.7	90.2
Purchased Electricity	GWh	118.7	106.0	85.3
LPG	kg	4,980	4,965	4,800
Natural Gas	m^3	53,009	63,914	94,885
Town Gas	Units	1,077,668	550,166	305,138
Total Energy Intensity	kWh/ $'000 HKD revenue	6.1	6.0	6.1
Water Consumption [5]				
Total Water Consumption	million m^3	0.56	0.51	0.45
Water Consumption Intensity	m^3/ '000 HKD revenue	0.03	0.03	0.03

Environmental KPIs	Unit	2021	2022	2023
Packaging Material Consumption				
Total Packaging Material Consumption	tonnes	4,287	4,194	2,798
Packaging Material Intensity	kg/ $'000 HKD revenue	0.20	0.22	0.19
Waste Generation				
Hazardous Waste Generated	tonnes	1,008	557	304
Hazardous Waste Intensity	kg/ $'000 HKD revenue	0.05	0.03	0.02
Recycled Hazardous Waste	%	14	1	4
Non-Hazardous Waste Generated	tonnes	2,804	3,075	2,036
Non-Hazardous Waste Intensity	kg/ $'000 HKD revenue	0.13	0.16	0.14
Recycled Non-Hazardous Waste	%	76	73	71

[1] According to The Greenhouse Gas Protocol – Scope 1 (direct emissions) covers the greenhouse gas emissions directly from operations owned or controlled by the Group, while scope 2 (indirect emissions) covers "indirect energy" greenhouse gas emissions from the Group's internal consumption (purchased or acquired) of electricity, heat, cooling and steam.

[2] Indirect emissions (scope 2) for the Reporting Period are calculated using the relevant emission factors in Appendix 2: Reporting Guidance on Environmental KPIs in the latest edition of How to prepare an ESG Report published by the Hong Kong Stock Exchange

[3] Value of total air emissions from gaseous fuel consumption in 2022 has been revised due to the update in figure values.

[4] The total energy consumption and total energy intensity value for 2021 and 2022 have been updated to include the energy consumption from the gaseous fuels of LPG, natural gas, and town gas.

[5] There is no longer industrial water consumption since 2021 as such usage was entirely due to the lead frame manufacturing business of prior years.

8.2 | Social
KPI Performance Table

Social KPIs		2021	2022	2023
Number of Employee				
Total (Employees)		14,526	12,509	11,338
By Employee Type (Employees)	Full time	14,320	12,269	11,099
	Part time	206	240	239
By Gender (Employees)	Female	3,832	2,995	2,751
	Male	10,694	9,514	8,587
By Age Group (Employees)	Below 30	4,282	3,009	2,178
	30-50	8,212	7,365	6,959
	Above 50	2,032	2,135	2,201
By Region (Employees)	Greater China [1]	8,273	6,660	6,012
	Rest of Asia	3,379	2,760	2,194
	North and South America	408	419	426
	Europe, Middle East & Africa	2,466	2,670	2,706
Turnover Rate for Full-Time Employees [2]				
Overall		19.6%	21.9%	18.2%
By Gender	Female	19.3%	20.9%	17.3%
	Male	19.7%	24.9%	18.5%
By Age Group	Below 30	40.8%	49.1%	41.5%
	30-50	12.7%	13.2%	12.4%
	Above 50	8.5%	9.8%	12.3%
By Region	Greater China	12.0%	11.3%	14.1%
	Rest of Asia	42.1%	51.3%	30.2%
	North and South America	14.0%	15.6%	16.2%
	Europe, Middle East & Africa	31.7%	40.6%	24.1%

Social KPIs	2021	2022	2023
Work-Related Injury and Fatalities			
Number of Work-Related Injuries (Employees)	43	45	67
Number of Lost Days Due to Work Injury (Days)	1,131	806	699
Number of Work-Related Fatalities (Employees)	0	0	0
Percentage of Employees who Received Training			
Overall	69.2%	70.8%	78.8%
By Gender — Female	66.9%	73.7%	84.1%
By Gender — Male	70.0%	69.7%	77.1%
By Employee Category — Management	74.8%	67.1%	68.6%
By Employee Category — Engineers	68.3%	60.9%	75.0%
By Employee Category — Corporate Staff	74.9%	74.3%	80.0%
By Employee Category — Production Staff	66.5%	76.0%	85.9%
By Region — Greater China	85.9%	82.2%	85.0%
By Region — Rest of Asia	38.6%	48.3%	74.0%
By Region — North and South America	51.9%	23.6%	22.8%
By Region — Europe, Middle East & Africa	77.8%	74.3%	79.1%

[1] Greater China region includes operation locations in Mainland China, Hong Kong, and Taiwan.

[2] Turnover rate refers to full-time employees of the in-scope entities. It is calculated as "total number of full-time employees leaving employment during the reporting year divided by total number of full-time employees as of 31 Dec of the reporting year and then multiplied by 100%"

Social KPIs		2021	2022	2023
Average Hours of Training Per Full-Time Employee [3]				
Overall (Hours)		12.0	14.2	20.1
By Gender (Hours)	Female	14.4	14.4	27.9
	Male	14.1	14.1	17.6
By Employee Category (Hours)	Management	9.7	11.3	12.2
	Engineers	12.7	14.9	22.2
	Corporate Staff	14.5	15.4	17.0
	Production Staff	11.1	14.0	22.3
By Region (Hours)	Greater China	6.3	14.6	18.4
	Rest of Asia	1.6	11.6	22.1
	North and South America	18.3	0.7	9.0
	Europe, Middle East & Africa	6.3	19.0	23.7
Number of Suppliers [4]				
Total Number of Suppliers		2,334	2,139	2,040

[3] Average hours of training per employee are calculated by the following methodology:
(Total Number of training hours for employees in the specific category) / (Beginning Human Capital + New Hire in reporting year in specific category)

[4] Due to confidentiality concern, we will not disclose the number of suppliers by geographical region.

8.3 GRI and HKEX Content Index

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 2: General Disclosures 2021					
2–1	Organisational details			About ASMPT	P.6
2–2	Entities included in the organisation's sustainability reporting	Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	About This Report	P.3
2–3	Reporting period, frequency and contact point				
2–6	Activities, value chain and other business relationships	KPI B5.1	Number of suppliers by geographical region	About ASMPT Social KPI Performance Table	P.6 P.98
2–7	Employees	KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Employment Overview	P.71
2–9	Governance structure and composition			ESG Governance Structure	P.25
2–10	Nomination and selection of the highest governance body			Corporate Governance Report in the Annual Report	
2–11	Chair of the highest governance body			Corporate Governance Report in the Annual Report	
2–12	Role of the highest governance body in overseeing the management of impacts			Corporate Governance Report in the Annual Report	
2–13	Delegation of responsibility for managing impacts			Corporate Governance Report in the Annual Report	
2–14	Role of the highest governance body in sustainability reporting	Governance Structure	(i) A disclosure of the board's oversight of ESG issues; (iii) How the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	ESG Governance Structure	P.25

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 2: General Disclosures 2021					
2–15	Conflicts of interest			Corporate Governance Report in the Annual Report	
2–16	Communication of critical concerns			ESG Governance Structure	P.25
2–17	Collective knowledge of the highest governance body			Corporate Governance Report in the Annual Report	
2–18	Evaluation of the performance of the highest governance body			Corporate Governance Report in the Annual Report	
2–19	Remuneration policies			Employee Overview	P.71
2–20	Process to determine remuneration			Employee Overview	P.71
2–22	Statement on sustainable development strategy	Governance Structure	(ii) The board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses);	ESG Governance Structure Sustainability Strategy	P.25 P.10
2–23	Policy commitments			Governance Minimising Environmental Impact Nurturing our Employees	P.24-37 P.40-51 P.70-83
2–24	Embedding policy commitments			Governance Minimising Environmental Impact Nurturing our Employees	P.24-37 P.40-51 P.70-83
2–25	Processes to remediate negative impacts			Sustainability Strategy	P.10
2-26	Mechanisms for seeking advice and raising concerns	KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	Anti-Corruption	P.31

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 2: General Disclosures 2021					
2-27	Compliance with laws and regulations			Governance Minimising Environmental Impact Nurturing our Employees	P.24-37 P.40-51 P.70-83
2-28	Membership associations			Corporate member of Singapore Semiconductor Industry Association and SEMI	
2-29	Approach to stakeholder engagement			Stakeholder Engagement	P.15
2-30	Collective bargaining agreements			Approximately 22% of total employees are covered by collective bargaining agreements	
GRI 3: Material Topics 2021					
3–1	Process to determine material topics	Reporting Principle: Materiality	The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement.	Materiality Assessment	P.17
3–2	List of material topics				
HKEX Mandatory Disclosure Requirements					
NA	NA	Reporting Principle: Quantitative	Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed.	About This Report	P.3
NA	NA	Reporting Principle: Consistency	The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	About This Report	P.3

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
Topic-Specific Standards					
Governance Disclosures					
GRI 201: Economic Performance					
3–3	Management of material topics	GD A4	Policies on identification and mitigation of significant climate-re-lated issues which have impacted, and those which may impact, the issuer.	Climate Risk Management	P.27
201-1	Direct economic value generated and distributed	KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Contributing to Local Communities	P.87
201-2	Financial implications and other risks and opportunities due to climate change	KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Climate Risk Management	P.27
GRI 205: Anti-Corruption					
3–3	Management of material topics	GD B7	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Anti-Corruption	P.31
205–1	Operations assessed for risks related to corruption			Anti-Corruption	P.31
205–2	Communication and training about anti-corruption policies and procedures	KPI B7.3	Description of anti-corruption training provided to directors and staff.	Anti-Corruption	P.31
205–3	Confirmed incidents of corruption and actions taken	KPI B7.1	Number of concluded legal cases regarding corrupt practices broughtagainst the issuer or its employees during the Reporting Period and theoutcomes of the cases.	Anti-Corruption	P.31
		KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	Anti-Corruption	P.31

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 308: Supplier Environmental Assessment					
3–3	Management of material topics	GD B5	Policies on managing environmental and social risks of the supply chain.	Supply Chain Management	P.35
308–1	New suppliers that were screened using environmental criteria	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Supply Chain Management	P.35
308–2	Negative environmental impacts in the supply chain and actions taken	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Supply Chain Management	P.35
		KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Supply Chain Management	P.35
GRI 414: Supplier Social Assessment					
3–3	Management of material topics	GD B5	Policies on managing environmental and social risks of the supply chain.	Supply Chain Management	P.35
414–1	New suppliers that were screened using social criteria	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Supply Chain Management	P.35
414–2	Negative social impacts in the supply chain and actions taken	KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Supply Chain Management	P.35
		KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Supply Chain Management	P.35

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
Environmental Disclosures					
GRI 301: Materials					
3–3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	Environmental Management	P.47
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Environmental Management	P.47
		KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	Conserving the Environment	P.49
GRI 302: Energy					
3–3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	Environmental Management	P.47
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Environmental Management	P.47
302–1	Energy consumption within the organisation	KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Conserving the Environment	P.47
302–3	Energy intensity				
302–4	Reduction of energy consumption	KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Net-zero Initiatives	P.41
302–5	Reduction in energy requirements of products and services			Creating Value through Innovation	P.52-66
GRI 303: Water and Effluents					
3–3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	Environmental Management	P.47
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Environmental Management	P.47

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 303: Water and Effluents					
303-1	Interaction with water as a shared resource	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	As the Group obtained water from the municipal supplies, we did not face any problems in sourcing water that is fit for purposes.	
		KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Conserving the Environment	P.47
303-5	Water consumption	KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Environmental KPI Performance Table	P.94
GRI 305: Emissions					
3–3	Management of material topics	GD A1	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Net-zero Initiatives Environmental Management	P.41 P.47
305–1	Direct (Scope 1) GHG emissions	KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental KPI Performance Table	P.94
305–2	Energy indirect (Scope 2) GHG emissions				
305–4	GHG emissions intensity				
305–5	Reduction of GHG emissions	KP1 A1.5	Description of emissions target(s) set and steps taken to achieve them.	Net-zero Initiatives	P.41
305–7	Nitrogen oxides(NOx), Sulphur oxides (SOx), and other significant air emissions	KP1 A1.1	The types of emissions and respective emissions data.	Environmental KPI Performance Table	P.94

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 306: Effluents and Waste					
3–3	Management of material topics	GD A1	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Conserving the Environment	P.47
306–1	Waste generation and significant waste-related impacts	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Conserving the Environment	P.47
306–2	Management of significant waste-related impacts				
306–3	Waste generated	KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental KPI Performance Table	P.94
306–4	Waste diverted from disposal	KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental KPI Performance Table	P.94
306–5	Waste directed to disposal				
Social Disclosures					
GRI 401: Employment					
3–3	Management of material topics	GD B1	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promo-tion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	Employee Overview	P.71
401–1	New employee hires and employee turnover	KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Social KPI Performance Table	P.96

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 401: Employment					
401–2	Benefits provided to the full-time employees that are not provided to temporary or part-time employees			Employee Overview	P.71
GRI 403: Occupational Health and Safety					
3–3	Management of material topics	GD B2	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards	Ensure Employee's Health and Safety	P.77
403–1	Occupational health and safety management system	KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	Ensure Employee's Health and Safety	P.77
403–2	Hazard identification, risk assessment, and incident investigation			Ensure Employee's Health and Safety	P.77
403–3	Occupational health services			Ensure Employee's Health and Safety	P.77
403–4	Worker participation, consultation, and communication on occupational health and safety			Ensure Employee's Health and Safety	P.77
403–5	Worker training on occupational health and safety			Ensure Employee's Health and Safety	P.77
403–6	Promotion of worker health			Ensure Employee's Health and Safety	P.77
403–7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships			Ensure Employee's Health and Safety	P.77

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 403: Occupational Health and Safety					
403–9	Work-related injuries	KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Social KPI Performance Table	P.96
		KPI B2.2	Lost days due to work injury.	Social KPI Performance Table	P.96
GRI 404: Training and Education					
3–3	Management of material topics	GD B3	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Human Capital Development	P.80
404–1	Average hours of training per year per employee	KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Social KPI Performance Table	P.96
		KPI B3.2	The average training hours completed per employee by gender and employee category.	Social KPI Performance Table	P.96
404–2	Programmes for upgrading employee skills and transition assistance pro-grammes			Human Capital Development	P.80
GRI 405: Diversity and Equal Opportunity					
3–3	Management of material topics	GD B1	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promo-tion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	Diversity, Equity & Inclusion	P.73
405–1	Diversity of governance bodies and employees			Social KPI Performance Table	P.96

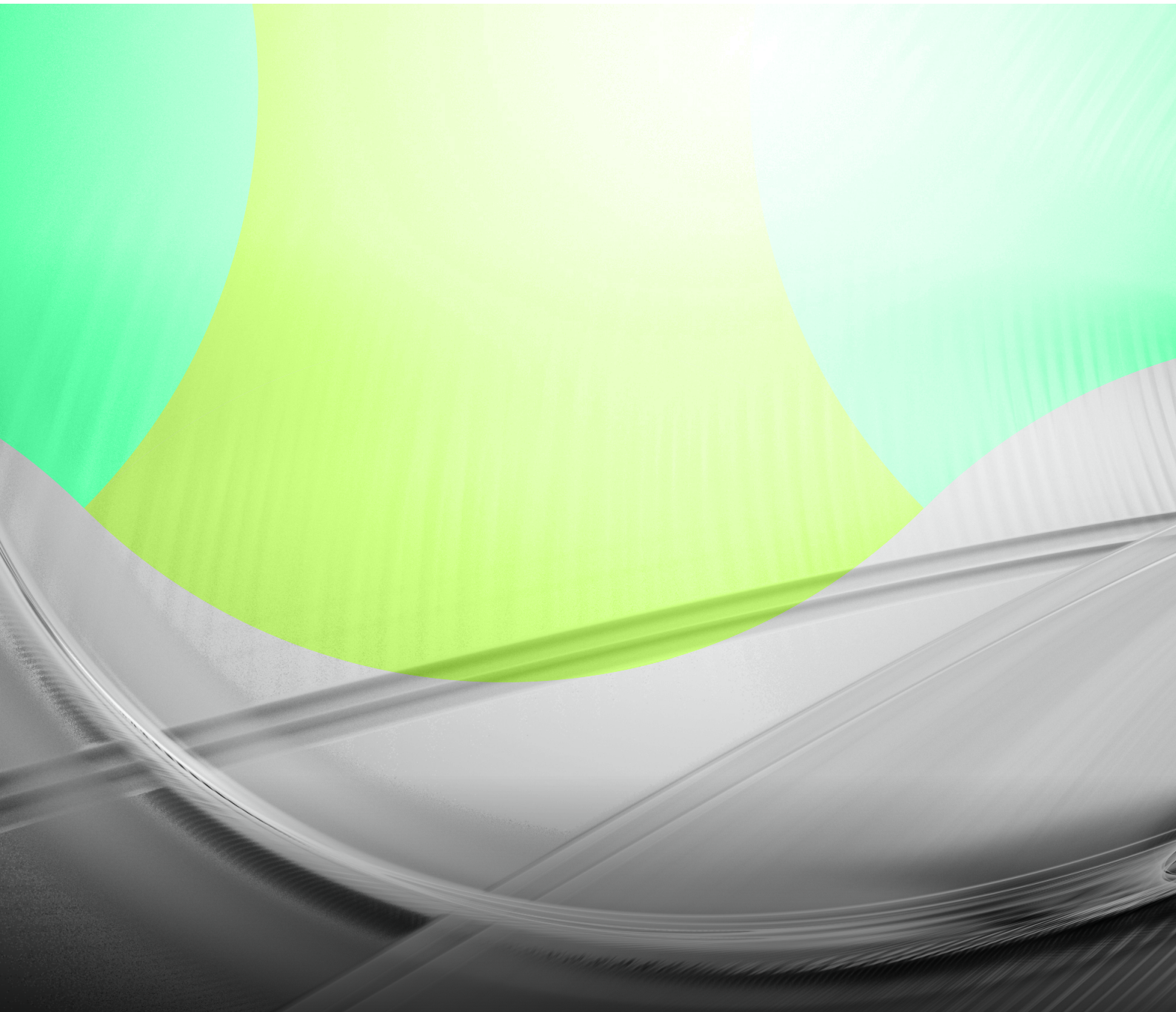| GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 406: Non-Discrimination					
3–3	Management of material topics	GD B1	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare	Diversity, Equity & Inclusion	P.73
406–1	Incidents of discrimination and corrective actions taken			Diversity, Equity & Inclusion	P.73
GRI 408: Child Labour					
3–3	Management of material topics	GD B4	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour	Employee Overview	P.71
		KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	Employee Overview	P.71
		KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Employee Overview	P.71
408–1	Operations and suppliers at significant risk for incidents of child labour			Supply Chain Management	P.35

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 413: Local Communities					
3–3	Management of material topics	GD B8	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests	Contributing to Local Communities	P.87
		KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Contributing to Local Communities	P.87
GRI 413: Local Communities					
413–1	Operations with local community engagement, impact assessments, and development programmes			Contributing to Local Communities	P.87
GRI 416: Customer Health and Safety					
3–3	Management of material topics	GD B6	(a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Product Responsibility Serving our Customers with Excellence	P.32 P.56
		KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Serving our Customers with Excellence Intellectual Property and Cybersecurity	P.56 P.37
416–1	Assessment of the health and safety impacts of product and service categories			Product Responsibility	P.32
416–2	Incidents of non-compliance concerning the health and safety impacts of products and services	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Product Responsibility	P.32

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
GRI 418: Customer Privacy 2016					
3–3	Management of material topics	GD B6	(a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Intellectual Property and Cybersecurity	P.37
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Intellectual Property and Cybersecurity	P.37
Product Responsibility					
N/A	N/A	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights	Intellectual Property and Cybersecurity	P.37
N/A	N/A	KPI B6.4	Description of quality assurance process and recall procedures.	Product Responsibility	P.32

8.4 | TCFD Disclosure

TCFD Thematic Areas	Recommended Disclosures	References and Remarks	Page
1. Governance Disclose the organisation's governance around climate-related risks and opportunities	a) Describe the Board's oversight of climate-related risks and opportunities	ESG Governance Structure	P.25
	b) Describe management's role in assessing and managing climate- related risks and opportunities	ESG Governance Structure	P.25
2. Strategy Disclose the actual and potential impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long- term	Climate Risk Management	P.27
	b) Describe the impact of climate- related risks and opportunities on the organisation's business, strategy, and financial planning	Climate Risk Management	P.27
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate- related scenarios, including a 2°C or lower scenario	Climate Risk Management	P.27
3. Risk Management Disclose how the organisation identifies, assesses, and manages climate-related risks	a) Describe the organisation's processes for identifying and assessing climate-related risks	Climate Risk Management	P.27
	b) Describe the organisation's processes for managing climate- related risks	Climate Risk Management	P.27
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management framework	Climate Risk Management	P.27
4. Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material	Disclose the metrics used by the organisation to assess climate- related risks and opportunities in line with its strategy and risk management process	Environmental KPI Performance Table	P.94
	Disclose Scope 1, Scope 2, and if appropriate, Scope 3 GHG emissions and the related risks	Environmental KPI Performance Table	P.94
	Describe the targets used by the organisation to manage climate- related risks and opportunities and performance against targets	Net-zero Initiatives	P.41

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