



# Environmental, Social and Governance Report

**ASMPT LIMITED**  
(Incorporated in the Cayman  
Islands with limited liability)  
(Stock Code: 0522)

# 2024

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# 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 2024 (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:** Following the principle of balance, our ESG performance is presented in an impartial manner.
- **Consistency:** The methodologies used to collate data for this ESG Report are consistent with those adopted in the 2023 and 2022 ESG Reports to allow for meaningful comparisons of the data presented.

The ESG Report covers the global operations of the Group’s Semiconductor Solutions Segment (SEMI) and SMT Solutions Segment (SMT) in Asia, Europe, Africa, and North and South America during the Reporting Period. Four subsidiaries from America and China were added to our reporting scope. 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. Previous ESG Reports for the years 2016 and beyond are available online at:

 [www.asmpt.com/en/sustainability/](http://www.asmpt.com/en/sustainability/)

# 1.1

## Chairman's Message



## Dear Shareholders, Employees, Customers and Partners,

I am delighted to present the ninth edition of ASMPT's ESG report, which highlights our achievements and steadfast commitment in embedding the concept of sustainability in our people, values and processes throughout 2024. The semiconductor industry faced various challenges, including climate change, slower-than-expected recovery in the semiconductor market, and the geopolitical tensions that disrupted energy supplies, customer demand, and operational processes. Yet, ASMPT stood firm and resilient, exemplifying its dedication to driving sustainable growth and innovation.

### Creating a Bright and Sustainable Future with our POWER Values

At ASMPT, our commitment to shaping a sustainable digital future is powered by our core POWER values: Passion, Ownership, Win, Excellence and Respect. These values form the foundation of our sustainability framework, which is built around four key pillars: Minimising Environmental Impact, Creating Value through Innovation, Nurturing our Employees, and Supporting our Communities.

This robust framework underpins our ESG strategies, ensuring that our actions align with our vision. For us, while our financial results and ESG report are essential for measuring performance, sustainability goes beyond reporting and compliance. We have integrated ESG principles into our organisational DNA that influences our decisions and actions, helping us to live and operate sustainably.

We believe that every one of us can make a difference. Our dedicated employees are passionate about achieving the company's goals and values. They take ownership, are committed to creating win-win situations, performing at the highest level, and working with one another while showing utmost respect. This commitment is critical to ASMPT's progress towards the net-zero pathway.

### Progressing towards ASMPT's Net-Zero Pathway

We reaffirm our focus to achieve net-zero emissions for both Scope 1 and 2 by 2035 through three distinct phases: a 30% reduction in carbon emissions during Phase 1 (2020-2026), a 50% reduction by Phase 2 (2026-2030), and achieving 100% net-zero emissions by Phase 3 (2030-2035). As of 2024, we have made significant progress, cutting our carbon emissions by 29% from the 2020 baseline, driven by increased energy ef-

iciency in our operations and our gradual shift to sourcing renewable energy. As we move forward, we are rigorously developing plans to achieve the objectives of Phases 2 and 3. Meanwhile, addressing Scope 3 emissions remains a critical and complex challenge. We are conducting a thorough evaluation of the processes and data of our value chain to assess the feasibility for Scope 3 near-term targets and comprehensive strategies for reducing Scope 3 emissions.

### Fostering an Empowerment Culture at ASMPT

People are at the core of ASMPT and we are dedicated to fostering diversity, equity and inclusion across the organisation, embracing differences in gender, culture, nationality and expertise. Our leadership team leads by example, promoting equity and diversity at the highest levels, including the boardroom and Executive Committee, cultivating global perspectives and inclusive decision-making. One of our goals is to achieve 25% female representation on our Board by the end of 2025. We have also invested in our people by establishing clear and transparent career development processes and organising targeted training programmes, empowering our employees to excel and embody our POWER values.

### Strengthening Governance for Ethical and Sustainable Leadership

We believe that strong corporate governance is integral to our role as a responsible and ethical global leader. In 2024, we updated and enhanced our Code of Business Conduct, ensuring better alignment with the guidelines of Responsible Business Alliance ("RBA") and global best practices. Our ESG governance structure continues to evolve, enabling us to address emerging ESG risks and opportunities. In response to the HKEX's new climate requirements, we have enhanced our strategies and risk management processes, ensuring that we not only meet the new standards, but also increase the transparency and impact of the communication of our sustainability efforts.

Over the past years, I have witnessed and deeply appreciated the unwavering dedication of our employees, alongside the invaluable trust and collaboration of our suppliers, customers and stakeholders. Their support has been the driving force behind our achievements and success. Together, we are united by a shared vision and purpose to delivering meaningful change and forging a path towards a more sustainable future.

Orasa Livasiri  
Chairman

# 1.2

## About ASMPT

ASMPT is the leading global supplier of integrated hardware, software and service solutions for the intelligent factories of our global customers in the semiconductor and electronics manufacturing industry. From communication and IT, artificial intelligence (“AI”), to intelligent vehicles and e-mobility, medical technology, consumer and industrial electronics – indeed any device containing electronics has probably been developed or built using ASMPT’s solutions.

From the very beginning in 1975, we have had the clear vision of making ASMPT what it is today: a global Group that aims to create and shape a bright and sustainable future for customers, employees, investors, partners, and society.

### Our Vision is: Enabling the digital world

ASMPT is the only company in the world offering a comprehensive portfolio of integrated solutions for all major steps in electronics manufacturing – from carrier for chip interconnection to chip assembly and packaging to SMT. No other supplier offers a comparable range and depth of process expertise. 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.



*“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, Executive Director &  
Group Chief Executive Officer, ASMPT

## ASMPT Group Structure

ASMPT has two main solution “segments” Semiconductor (“SEMI”) and SMT Solutions.

- **SEMI Solutions:** The SEMI segment offers a diverse range of Advanced Packaging (“AP”) and Mainstream products and integrated solutions for the microelectronics, semiconductor, photonics, and optoelectronics industries. ASMPT’s ALSI, AMICRA, NEXX and AEI product lines are part of the SEMI segment.
- **SMT Solutions:** The SMT segment is just as wide-ranging, with its renowned DEK and SIPLACE solutions, and offers best-in-class solutions at equipment, line, factory and multi-factory levels. It focuses on providing integrated automation concepts for the intelligent electronics factory.

## Key Member of Hang Seng Indexes

Headquartered in Singapore, 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 TECH Index, 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.



As a constituent in the Hang Seng Corporate Sustainability Index Series, ASMPT's Hang Seng ESG rating has been upgraded from "A-" in 2023 to "A" in 2024. This upgrade in rating is a recognition of ASMPT's high environmental, social, and corporate governance standards. The Hang Seng Corporate Sustainability Index Series, reviewed annually, comprises companies that excel in corporate sustainability. The selection process involves a rigorous evaluation conducted by the Hong Kong Quality Assurance Agency (HKQAA), ensuring objectivity and reliability.

To learn more about ASMPT, please visit us at

[www.asmpt.com](http://www.asmpt.com)

## ASMPT Worldwide

**1975**  
Incorporated

**10,000+**  
Global Customers

**3 million**  
Installed Systems

Directly Present  
in more than  
**30** Countries

**52**  
Representations



**~11,000**  
Employees  
Worldwide  
(Excludes flex & outsourced staff)

**~15**  
Significant Manufacturing  
Operations Worldwide

**~15**  
R&D Centres  
across Asia,  
Europe, Americas

**> 2,000**  
Patents on Key Leading  
Edge Technologies

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# Sustainability Strategy

# 2

## Sustainability Strategy

Guided by our vision “**Enabling the digital world**” and our overarching Group strategy “**Shaping a bright and sustainable future for customers, employees, investors, partners and society**”, we are committed to creating lasting value for all stakeholders while responsibly addressing global challenges.

Our sustainability efforts are deeply rooted in the **POWER values** that define ASMPT: **Passion, Ownership, Win, Excellence, and Respect**. These POWER values are the foundation of ASMPT’s sustainability framework, which aims to address the most important aspects in our business and society.

ASMPT’s sustainability framework is built around four strategic pillars: **Minimising Environmental Impact, Creating Value through Innovation, Nurturing our Employees, and Supporting our Communities**.

To ensure the effectiveness of this framework, ASMPT actively engages with stakeholders and aligns its efforts with material ESG factors that reflect their expectations and priorities. By embedding these principles into every aspect of our business, ASMPT fulfils its ESG responsibilities while driving sustainable growth and innovation.

This holistic approach ensures that ASMPT not only leads the industry in technological advancement but also exemplifies what it means to be a responsible global corporate citizen. Together, through our sustainability strategy, we are creating a better, more sustainable future for all.

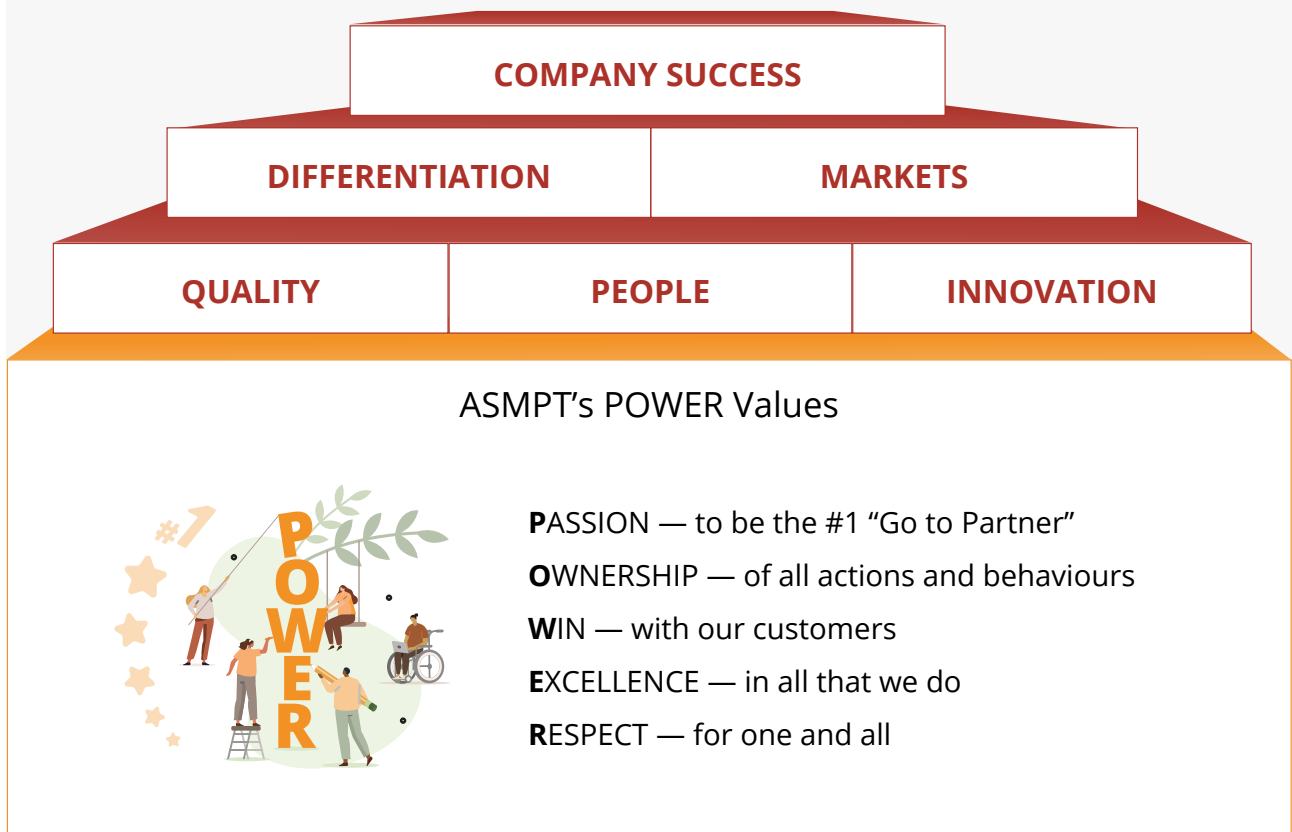


*“The integration of environmental, social, and governance factors into business practices is an imperative. We have achieved this by structuring our corporate strategy and defining our organisational success as shaping a bright and sustainable future for all our stakeholders.”*

Guenter Lauber, Executive Director, Executive Vice President, Group Chief Strategy and Digitalisation Officer & Chairman of the Group’s SMT Solutions Segment

ASMPT's Vision  
**Enabling the digital world**

ASMPT's Group Strategy  
**Shaping a bright and sustainable future for customers, employees, investors, partners, and society.**



ASMPT's Sustainability Framework



# 2.1

## The ASMPT Group Strategy

The ASMPT Group Strategy is focused on:

### Shaping a bright and sustainable future for customers, employees, investors, partners, and society.

By fostering a culture of innovation, striving for excellence and upholding social and environmental responsibility, ASMPT distinguishes itself as a key enabler of the digital world. By continuously expanding and strengthening its market leadership and influence, ASMPT not only fortifies its position, but also contributes to helping its customers achieve long-term success and resilience in a dynamic global environment.

### Key Pillars of ASMPT’s Global Market Leadership

- **Differentiation:** ASMPT differentiates itself from the competition by leveraging unique and distinctive capabilities that address specific market needs and challenges.
- **Markets:** ASMPT has achieved a leadership position in its markets by excelling in advanced technologies, delivering superior products and services, and fostering trusted partnerships that drive mutual growth and success.

### Core Drivers of ASMPT’s Success

- **Quality:** Quality is at the heart of everything ASMPT does. It is deeply ingrained in the Company’s ethos and guides the daily actions of its employees to deliver reliable and consistent results for its customers and stakeholders.
- **People:** ASMPT’s success is a direct reflection of the expertise, dedication and performance of its people. ASMPT’s culture actively promotes diversity, inclusion and equal opportunity, thereby creating an empowering and collaborative environment that attracts and retains top talent.
- **Innovation:** ASMPT’s forward-thinking mindset drives its ability to innovate and adapt to an ever-changing technological landscape. By continuously investing in cutting-edge technologies and exploring new frontiers, ASMPT not only maintains its competitive edge, but also creates value and opportunities for its stakeholders.

This Group Strategy makes ASMPT a market leader, a trusted partner, a pioneer of technological progress and a responsible global player determined to making a positive impact on the world.





From left:

*Guenter Lauber, Executive Director, Executive Vice President, Group Chief Strategy and Digitalisation Officer & Chairman of the Group's SMT Solutions Segment*

*Robin Ng, Executive Director & Group Chief Executive Officer*

*Katie Xu, Executive Vice President & Group Chief Financial Officer*

***“As the Executive Office, our mission is vital: driving innovation through diverse perspectives, integrating sustainability and strategic thinking to shape a responsible, forward-looking business. We are committed to maintaining our position as an Innovation & Technology Leader in the semiconductor and electronics industry, continuously pushing boundaries to deliver cutting-edge solutions. Our goal is to pursue sustainability initiatives that enhance our profitability, ensuring long-term value creation for our stakeholders while contributing positively to the global community.”***

# 2.2

## Foundation of ASMPT's Success – POWER Values

Our people are the driving force of our success. Together, we have developed strong values: **Passion, Ownership, Win, Excellence and Respect.**

These POWER values motivate us, drive our business goals and set out the rights and responsibilities for all of us. They reinforce commitment as well as ethical and moral behaviour in everything we do every day and at all levels of the organisation.



**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 attributes promote better decision-making and establish ASMPT as a company where employees find fulfilment at work.

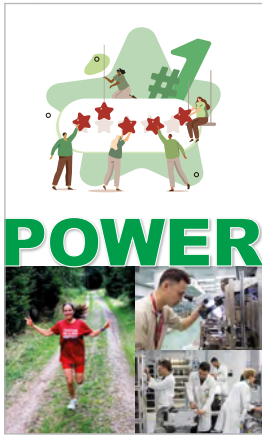
### We Appreciate our High Performance and POWER Culture

- 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 and competitive company.

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



**ASMPT** enabling the digital world

# 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.



**ASMPT** enabling the digital world

# 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.



**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.



**ASMPT** enabling the digital world

# 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.



**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.

# 2.3

## ASMPT's Sustainability Framework

In the journey towards decarbonisation and sustainability, the Group embraces a four-pronged approach focused on reducing environmental impact,

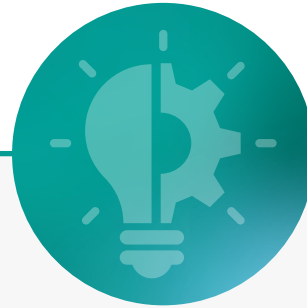
driving innovation to create value, prioritising employee well-being and development, and supporting the community.



### Minimising Environmental Impact

Environmental protection is one of the core principles of our sustainable strategies. As the leading semiconductor and electronics equipment manufacturing company, we believe it is our responsibility to conduct our activities responsibly with minimum impact to the environment.

- We comply with local and international laws and regulations to control greenhouse gas ("GHG") emissions, water and land discharges, and waste generation.
- We monitor and manage operational resources, including energy, water, and raw materials.
- We aim to achieve net-zero emissions for Scope 1 and 2 by 2035 through reducing energy consumption, GHG emissions, waste and water consumption.



### Creating Value through Innovation

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

- We embed sustainability in innovative and efficient products, streamline manufacturing processes and resource optimisation. This maintains a harmonious balance between innovation and environmental responsibility.



As a responsible corporate citizen in the service of the community, ASMPT engages with communities through partnerships and charities and actively encourages and enables its employees and their families to participate in community programmes such as volunteering.

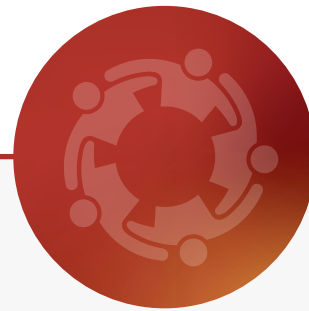
Open house activities, corporate sponsorship and donations strengthen dialogue with the community, while internship programmes provide career opportunities for young talent. In this way, ASMPT combines social responsibility with personal and professional development.



## Nurturing our Employees

At the heart of our success are our employees.

- We are committed to cultivating a future-ready workforce in an environment that embraces diversity, equity, and inclusion.
- We emphasise talent development through provision of numerous learning and development opportunities which enable employees to grow and reach their full potential.
- We ensure that our ESG principles are strategically cascaded top-down and implemented through specific actions within our ENGAGE programme.
- We are dedicated to minimising workplace risks and enhancing workplace safety through the implementation of robust safety and health management systems.
- We pursue internal equity and external competitiveness in staff remuneration and recognition.



## Supporting our Communities




Community engagement is integral to our corporate citizenship. We actively contribute to the well-being of the communities where we operate.

- We support charities, non-profit organisations and educational institutions by engaging in volunteer activities, partnerships and making monetary contributions.
- We encourage employees to actively participate and contribute to the community.

# 2.4 Stakeholder Engagement

The Group recognises that active engagement with stakeholders is crucial to the effective development and execution of our ESG strategy. Through regular, two-way communications channels, we build and maintain mutually beneficial relationships with our




stakeholders, gathering feedback that supports continuous improvement. The relevant channels for receiving stakeholder expectations and communicating our responses are as follows:

Key Stakeholders	Expectations of ASMP	Solutions	Engagement Channels
 <p>Shareholders</p>	Share accurate and timely updates on operations, financials, and ESG strategies.	<ul style="list-style-type: none"> <li>• Create long-term shareholder value by returning profits from business activities.</li> <li>• Enhance corporate value through leading ESG practices.</li> <li>• Provide transparent and timely disclosures on our sustainable performance.</li> </ul>	<ul style="list-style-type: none"> <li>• Annual General Meetings</li> <li>• Annual and Interim Reports</li> <li>• Announcements and Circulars</li> <li>• Quarterly updates on financial results</li> <li>• Investor conference calls</li> <li>• Investor meetings and roadshows</li> </ul>
 <p>Employees</p>	Foster a respectful and supportive work environment that promotes employee growth and work-life balance.	<ul style="list-style-type: none"> <li>• Provide a fair, safe, and comfortable working environment.</li> <li>• Conduct fair performance reviews and provide commensurate remuneration.</li> <li>• Encourage career growth and enable work-life balance.</li> <li>• Establish two-way feedback through open communication platforms.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular town hall meetings for all employees, and leaders with timely cascade of information</li> <li>• Employee engagement surveys</li> <li>• Staff publications and videos</li> <li>• Networking sessions</li> <li>• Regular management communications</li> <li>• Continuous, systematic target settings, and performance reviews</li> <li>• In-house recreational facilities and activities</li> </ul>
 <p>Customers</p>	<p>Deliver high-quality products and services promptly.</p> <p>Conduct business in an environmentally responsible and ethical manner.</p>	<ul style="list-style-type: none"> <li>• Deliver innovative and sustainable products and services to our customers.</li> <li>• Ensure high quality and timely delivery of products and services.</li> <li>• Provide high-value technical services which satisfy a diverse application need.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular communication and meetings</li> <li>• Customer training and support services</li> <li>• Facilities and Corporate Self-Assessment Questionnaire</li> <li>• Site visits</li> <li>• Trade shows</li> <li>• Customer satisfaction surveys</li> </ul>



*“ASMPT has joined with other major players in the electronics manufacturing industry to form the Semiconductor Climate Consortium (“SCC”), which focuses on reducing greenhouse gas emissions. In doing so, we are embracing our role as an industry leader and aim to support colleagues, partners and even competitors in their ESG-compliant behaviour.”*

Richard Ooi, Global Head of ESG, ASMPT

Key Stakeholders	Expectations of ASMPT	Solutions	Engagement Channels
 <p><b>Suppliers &amp; Partners</b></p>	<p>Establish long-term relationships grounded in ethical practices for mutual benefit.</p>	<ul style="list-style-type: none"> <li>• Treat all suppliers fairly and with respect.</li> <li>• Establish ethical and responsible business practices.</li> <li>• Promote transparency and mutual growth in long-term relationships.</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier Code of Conduct (“SCoC”)</li> <li>• Responsible Business Alliance (“RBA”) standards</li> <li>• Supplier management meetings and engagement</li> <li>• Communications platforms</li> <li>• Supplier assessment system</li> <li>• Supplier audits</li> </ul>
 <p><b>Communities</b></p>	<p>Act as a responsible corporate serving the community.</p>	<ul style="list-style-type: none"> <li>• Engage with communities through partnerships and charities.</li> <li>• Enable staff and families to participate in community programmes.</li> </ul>	<ul style="list-style-type: none"> <li>• Employee community involvement programmes</li> <li>• Social enterprises involvement programmes</li> <li>• Corporate sponsorships and donations</li> <li>• Open house activities</li> <li>• Internships</li> </ul>
 <p><b>Government Bodies, Regulators, Standards Bodies, and Ratings Agencies</b></p>	<p>Comply with local and international laws and regulations.</p> <p>Address any non-compliance issues effectively and transparently.</p>	<ul style="list-style-type: none"> <li>• Operate according to local and international laws.</li> <li>• Establish internal control policies and procedures to ensure compliance and promote sustainability.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular compliance reviews, policy development and performance reporting</li> <li>• Regular communication with stakeholders via meetings, calls and emails</li> </ul>

# 2.5

## Materiality Assessment

ASMPT understands that sustainable growth depends on meeting and exceeding the expectations and needs of its key stakeholders. The Group identifies material ESG factors as those with significant environmental, social, governance, and economic impacts, influencing both internal and external stakeholders' assessments and decisions.

The Group has conducted a comprehensive review and prioritisation of the material ESG factors, adopting a three-stage materiality assessment process:

### Stage 1 Identification

- ASMPT performed a comprehensive analysis which looked at the industry standards and regulations, peers, ESG ratings, and the previous engagement results to identify a potential list of material sustainability issues that are considered relevant and material to our business and stakeholders.
- 19 relevant and important sustainability issues were identified.

### Stage 2 Prioritisation

- The Group performed online surveys with both external and internal stakeholders to gather their feedback on the prioritisation of the 19 identified sustainability issues, which represent their most significant concerns.
- ASMPT used the survey findings to construct a materiality matrix, with the x-axis denoting the impact on ASMPT's business and operations, and the y-axis reflecting the significance to stakeholders. Issues positioned in the upper-right quadrant of the matrix are the most important to driving long-term sustainable value for ASMPT.

### Stage 3 Implementation

- We assigned three levels of materiality in order to better manage our resources:

<b>Very High</b>	Factors with the highest significance to stakeholders. They may have a great impact on the business's success, which requires attention, substantial resources, and strategic action to address effectively.
<b>High</b>	Factors of high importance that influence stakeholder trust and operational performance. These require proactive management and dedicated resources to mitigate risks or maximise benefits.
<b>Moderate</b>	Factors with moderate relevance to stakeholders and the business. They necessitate regular monitoring and appropriate management but may not demand extensive resources unless conditions change.

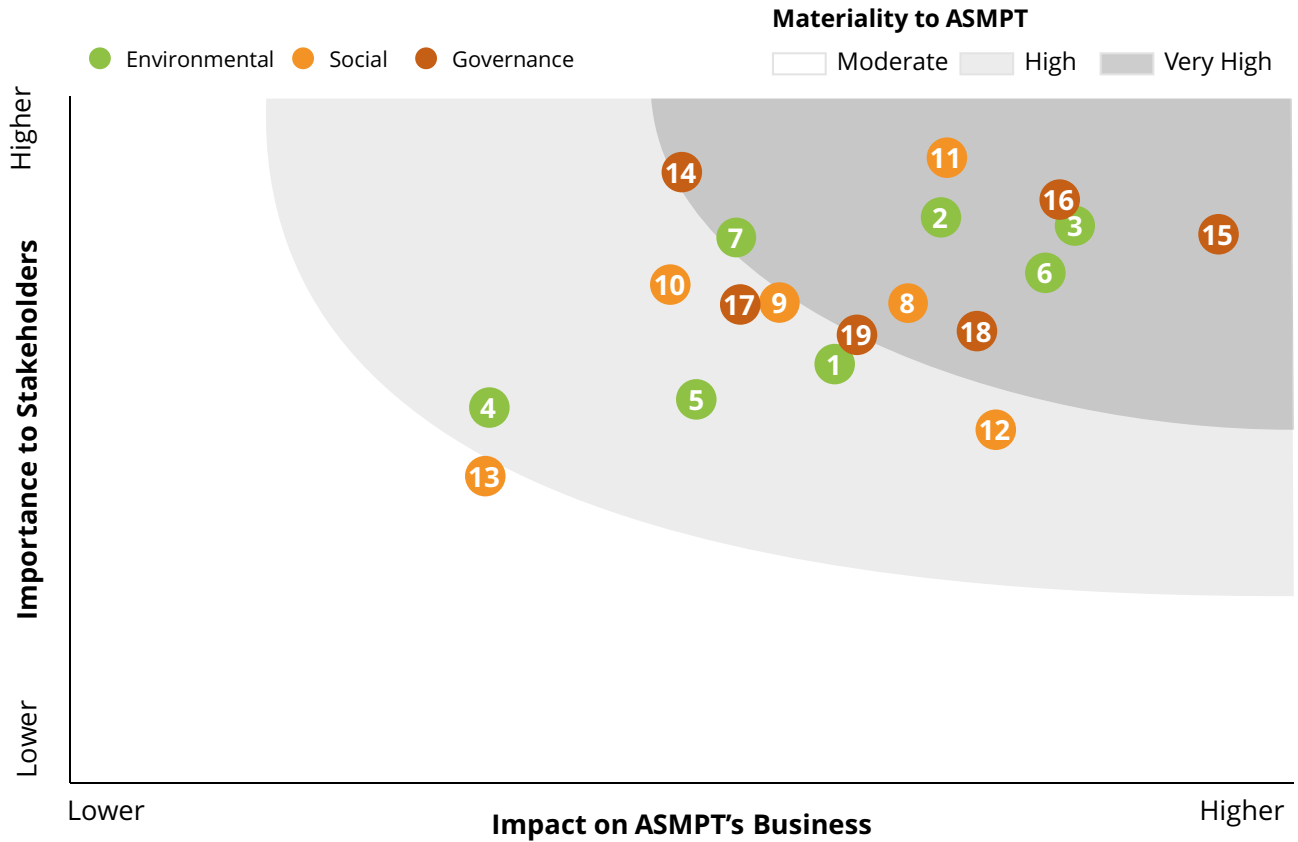
- The endorsed list of material ESG factors guides the development of corporate strategies and goals, ongoing stakeholder engagement, as well as disclosures in the Annual Report, ESG Report and other corporate communication channels.
- Periodic assessments are conducted to evaluate the materiality of ESG factors to prevailing business contexts and external conditions.

The assessment identified 10 "very high materiality" factors, 8 "high materiality" factors, and 1 "moderate materiality" factor 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 ESG Report.

Compared to the topics identified in 2023, the Group has made some adjustments to the names of the ESG Material Factors to enhance clarity, consistency and alignment with recognised standards and practices in the industry and ESG arena. These changes include "Opportunities in Clean Technology & Innovation" (formerly "Product Sustainability & Innovation"), "Energy Management in Manufacturing" (formerly "Energy Management and Product Energy Efficiency"), "Business Integrity & Corporate Governance" (formerly "Business Ethics & Corporate Governance"), and "Legal Requirement" (formerly "Regulatory Compliance"). The Group also relocated the topic of "Climate Risk Management" from the "Governance" to "Environmental" Category to align with the standard practices.

## ASMPT Materiality Assessment

Material Factors to ASMPT have been redefined based on materiality matrix



Category	No.	Material Factors	Materiality Level
Environmental	1	Environmental Compliance	High
	2	GHG and Air Emissions	Very High
	3	Energy Management in Manufacturing	Very High
	4	Water Resource Management	High
	5	Waste Management	High
	6	Opportunities in Clean Technology & Innovation	Very High
	7	Climate Risk Management	Very High
Social	8	Diversity, Equity & Inclusion	Very High
	9	Labour Practices	High
	10	Human Rights	High
	11	Workplace Health & Safety	Very High
	12	Human Capital Development & Talent Management	High
	13	Community Investment	Moderate
Governance	14	Legal Requirement	Very High
	15	Product Quality & Safety	Very High
	16	Business Integrity & Corporate Governance	Very High
	17	Cybersecurity and IP Protection	High
	18	Supply Chain Management	Very High
	19	Customer Relationship Management	High


# 2.6

## Alignment between SDGs and ASMPT’s Material Factors

As a fundamental aspect of ASMPT’s commitment to sustainability, we align our actions with the UN Sustainable Development Goals (“SDGs”), ensuring our contributions support global progress towards common objectives. In 2024, the Group mapped 15 out of its 19 ESG Material Factors to the relevant SDGs.

The remaining four ESG Material Factors — “Business Integrity & Corporate Governance”, “Customer Relationship Management”, “Environmental Compliance”, and “Legal Requirement” — are equally significant in guiding our operations to be responsible and transparent, even if they may not have a direct impact on the SDGs.

Pillars	Material Factors	Aligned UNSDG(s)	Addressed in this Report
 <b>Governance</b>	Cybersecurity and IP Protection		<ul style="list-style-type: none"> <li>• Product Responsibility</li> <li>• Cybersecurity</li> </ul>
	Product Quality & Safety		<ul style="list-style-type: none"> <li>• Cybersecurity</li> </ul>
	Supply Chain Management		<ul style="list-style-type: none"> <li>• Supply Chain Management</li> </ul>
	Legal Requirement		<ul style="list-style-type: none"> <li>• ESG Governance Structure</li> <li>• About This Report</li> </ul>
	Business Integrity & Corporate Governance		<ul style="list-style-type: none"> <li>• Business Ethics</li> </ul>
 <b>Minimising Environmental Impact</b>	GHG and Air Emissions		<ul style="list-style-type: none"> <li>• Decarbonisation Initiatives</li> <li>• Environmental Management</li> </ul>
	Climate Risk Management		<ul style="list-style-type: none"> <li>• Climate Strategy and Risk Management</li> </ul>
	Energy Management in Manufacturing	 	<ul style="list-style-type: none"> <li>• Decarbonisation Initiatives</li> </ul>
	Water Resource Management		<ul style="list-style-type: none"> <li>• Conserving the Environment</li> </ul>
	Waste Management	 	<ul style="list-style-type: none"> <li>• Conserving the Environment</li> </ul>
	Environmental Compliance		<ul style="list-style-type: none"> <li>• Environmental Management</li> </ul>

Pillars	Material Factors	Aligned UNSDG(s)	Addressed in this Report
 <p>Creating Value through Innovation</p>	Opportunities in Clean Technology & Innovation		<ul style="list-style-type: none"> <li>Quality as the Basis for Sustainability</li> </ul>
	Customer Relationship Management		<ul style="list-style-type: none"> <li>Product Responsibility</li> <li>Quality as the Basis for Sustainability</li> </ul>
 <p>Nurturing our Employees</p>	Diversity, Equity & Inclusion	 	<ul style="list-style-type: none"> <li>Diversity, Equity and Inclusion</li> </ul>
	Labour Practices		<ul style="list-style-type: none"> <li>Employee Engagement</li> </ul>
	Human Rights		<ul style="list-style-type: none"> <li>Employee Engagement</li> </ul>
	Workplace Health & Safety	 	<ul style="list-style-type: none"> <li>Ensure Employee's Health and Safety</li> </ul>
	Human Capital Development & Talent Management		<ul style="list-style-type: none"> <li>Human Capital Development</li> </ul>
	Community Investment		<ul style="list-style-type: none"> <li>Contributing to Local Communities</li> </ul>
 <p>Supporting our Communities</p>			

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**Appendix**





# Governance

# 3

## Governance

### 2024 Highlights

- **Revised and amended the Code of Business Conduct and Supplier Code of Conduct to align with latest Responsible Business Alliance Code of Conduct.**
- **Implemented and enhanced the Anti-Corruption training in the E-Learning system.**

ASMPT operates its business in a responsible and ethical manner. Effective governance plays an important role in helping us do that. Effective governance involves not only compliance with applicable laws and regulations, but also the development and enhancement of our global risk-based compliance system and governance and business practices. Such actions strengthen our governance structure and facilitates our continuous monitoring and improvement across key areas including business conduct, product quality, supply chain, cybersecurity and intellectual property (“IP”).

This approach demonstrates our dedication to establishing a strong foundation that ensures resilience and creating long-term value to our stakeholders.

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



# 3.1

## ESG Governance Structure

The Group has a comprehensive governance structure, integrated at all levels of the Group. Our Board of Directors contributes extensive experience and expertise across fields including finance, business, legal, technical, and industrial sectors, while multiple divisions of the Group also bring di-

verse views and knowledge. Our governance structure is organised with their corresponding responsibilities highlighted in greater detail below. For more information on ASMPT's corporate governance practices, please refer to the Group's Annual Report 2024.

### Sustainability and Climate-Related Risk Governance Structure

#### Board of Directors

**Composition:**

- Ten directors, including six independent non-executive directors, two non-executive directors, and two executive directors as at 31 December 2024. Among them, two are female, both are independent non-executive directors.

**Responsibilities:**

- Oversee the ESG strategy in alignment with the corporate goal of responsible growth for the benefit of stakeholders.
- Coordinate with the Executive Committee ("EXCO") on ESG-related matters.
- Review and endorse the Group's corporate governance policies and practices, including the Group's risk management framework.
- Oversee the establishment and maintenance of a suitable and effective risk management system.

**Communication frequency on sustainability issue:**

- At least annually

**Competencies assurance:**

- Attend training or briefing regarding regulatory development, directors' duties or other relevant topics.

#### Executive Office and Executive Committee

**Composition:**

- The EXCO is ASMPT's key executive body, comprising senior leaders from across the organisation. The EXCO comprises of the three Executive Office (EO) members – Group Chief Executive Officer, Group Chief Strategy & Digitalisation Officer, and Group Chief Financial Officer – as well as 13 other senior leaders in the Group.
- In 2024, five new members of various nationalities and genders were added to the EXCO, increasing functional representation across ASMPT. This added to the diversity of the leadership team and increased the quality and effectiveness of collective decision-making.

**Responsibilities:**

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

**Competencies assurance:**

- Regular consultation sessions with an internal, permanent, subject-expert working group on ESG related subjects.
- Engaging with external stakeholders and experts on environmental issues.
- Regularly updated on climate-related issues, industry best practice, and standards.

### Strategic Risk Review Committee (SRRC)

**Composition:**

- Senior executives from diverse key functions across the organisation

**Responsibilities:**

- Identify and analyse external and internal strategic risks faced by the Group, including climate-related risk.
- Incorporate International Sustainability Standards Board (“ISSB”) aligned ESG risk analysis into the enterprise risk management framework.

### ESG Team

**Composition:**

- Operates as a dedicated unit under the leadership of the Group Chief Strategy & Digitalisation Officer

**Responsibilities:**

- Develop, implement and monitor the Group’s ESG policies and practices.
- Provide guidance on ESG strategy and compliance, assess ESG-related risks and opportunities, and ensure ESG management performance.
- Communicate and educate employees on ESG-related issues.

### Climate-Related Risk Task Force

**Composition:**

- Representative staff from different regions and functional groups

**Responsibilities:**

- Perform ISSB-aligned reporting to the SRRC.
- Identify and update risks and opportunities, as well as possible mitigation pathways.

### ESG Coalition

**Composition:**

- Representative staff from different regions and functional groups

**Responsibilities:**

- Support the ESG Team in developing, implementing and monitoring the Group’s ESG policies, processes, and initiatives.
- Collect and report ESG-related performance and metrics to the ESG Team.
- Support and organise ESG-related initiatives and activities.

### All Employees

**Responsibilities:**

- Participate in areas such as behavioural change, ESG compliance reporting, communication and Diversity, Equity & Inclusion (“DEI”).
- Actively contribute to ASMP’s ESG goals, making a positive impact on the environment and society.

# 3.2

## Internal Control and Risk Management

As a global company, ASMPT prioritises managing risk to ensure business resilience and continuity. We have an effective risk framework and internal control system, whilst maintaining an appropriate risk management system. We have also integrated sustainability and climate-related risks into our enterprise risk management framework to enhance comprehensive oversight.

### How do we do this?

- **Risk management:** The Board of Directors is responsible for the Group’s risk management and reviews its effectiveness. It determines the acceptable risk levels for strategic objectives and ensures an appropriate system is in place. The Board also oversees management in designing, implementing, and monitoring this system, while management ensures its effectiveness.

The SRRC assesses and prioritises strategic risks that impact ASMPT’s objectives and long-term goals, categorising them into external and internal factors. These include climate-related risks, such as potential non-compliance with environmental regulations. Risks with high probability and significant organisational impact are classified as red zone risks.

- **Internal control:** ASMPT’s internal control system is designed to facilitate effective and efficient operations, ensure reliability of financial reporting and compliance with laws, risk management, and asset safeguarding. The independent Group Internal Audit Department provides objective assurance by evaluating and improving risk management, internal control, and governance processes, and the integrity of the operations.

Management is responsible for addressing audit-identified deficiencies promptly. An annual audit plan, based on risk assessment and external factors, is reviewed by the Audit Committee. Quarterly, the Global Head, Group Internal Audit reports findings and opinions.

Further discussion of risk management and internal control measures are set out in the Annual Report 2024, in the section of Corporate Governance Report headed “AUDIT, INTERNAL CONTROL AND RISK MANAGEMENT”.



*“At ASMPT, effective risk management and internal control are fundamental to our long-term success and sustainability. Our comprehensive approach integrates ESG considerations into our enterprise risk management framework, ensuring we’re well-positioned to navigate both current and emerging challenges while creating value for all our stakeholders.”*

Katie Xu, Executive Vice President & Group Chief Financial Officer, ASMPT

# 3.3

## Business Ethics

As a trusted and accountable business partner, we have to uphold the highest standards of integrity, nourish mutual trust and do our utmost to exceed stakeholders' expectations. In response to ever-increasing governmental standards and constantly evolving industry practices, we have developed and strengthened our framework to foster an ethical environment across our operations.

### How do we do this?

#### Code of Business Conduct

- **Legal requirements and industry practices:** Our Code of Business Conduct aligns with and complies with guidelines set by RBA, 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-Terror-

#### E-Learning Training for Anti-Corruption Policy

ASMPT held a comprehensive e-learning session for employees, designed to provide a thorough understanding of anti-bribery laws and best practices essential to implementing ethical standards.

After the extensive training, employees gained the necessary knowledge on anti-corruption and were equipped to:

- **Recognise** the legal and ethical implications of corruption.
- **Identify** the types of corrupt and legitimate payments under the Anti-Corruption Policy.
- **Understand** the approval process for commercial sponsorship and charitable donations.

One of ASMPT's governance projects

ist 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 of Business Conduct is regularly reviewed and updated.

#### Campaign for Reporting of Bribery and Corruption Incidents

To demonstrate ASMPT's dedication to foster an ethical business environment, the Group launched a "Stop, Check, Act" Campaign in October 2024, encouraging employees to stand against bribery and corruption.

- **Stop** any course of action that they are unsure of, which includes bribery and corruption cases.
- **Check** the policies, Code of Business Conduct and advice from peers, leaders and relevant functions.
- **Act** by reporting any violations through the whistleblowing channels.

One of ASMPT's governance projects

- **Standards and policies:** The Code of Business Conduct, endorsed by our Group Chief Executive Officer, was updated in June 2024 to set clear guidelines for employees and business partners to act honestly, diligently, and responsibly. This comprehensive code includes new and revised clauses on "conflict of interest" and "whistleblowing policy" to ensure alignment with the latest RBA Code of Conduct ("CoC") standards. It covers ethics, integrity, employee rights, and environmental regulations, encouraging business partners to adhere to these standards. These updates maintain a transparent and accountable work environment.

- **Internal control:** Through our robust corporate governance structure, the anti-corruption-related risks, along with other corporate risks, are identified and analysed by SRRC, managed by EXCO, and overseen by the Board of Directors via the risk management framework. Alleged incidents of bribery and corruption are mainly reported through ASMPT's whistleblowing channels. Subsequently, all ethics-related cases are reviewed by ASMPT's Board and Audit Committee, with Management assessing the impact to the business books and records as a result of the ethics-related cases, where applicable.
- **Internal communication:** The Group utilises various channels, including its intranet portal, notice boards, new hire orientation programme, internet webpage, and regular compliance communications to ensure that the Code of Business Conduct is effectively shared with the employees. Regular briefings and training sessions on anti-corruption, ethics and integrity are conducted for all employees and the Board to raise awareness of ASMPT's anti-corruption practices, as well as the need for all employees to comply with laws, regulations and standards of conduct applicable to the respective field of business. Employees with higher-risk responsibilities are additionally required to declare their compliance with Code of Business Conduct annually, along with declarations of any existing conflicts of interest.
- **External communication:** Vendors are required to acknowledge their awareness and acceptance of the Code of Business Conduct 's requirements through ASMPT's Supplier Code of Conduct ("SCoC"). This code is publicly available on our website to ensure transparency and foster trust among stakeholders. We also submit the Facilities Self-Assessment Questionnaire ("SAQ") and the Corporate SAQ on the RBA online platform, allowing customers direct access to review this information.

 [ASMPT Code of Business Conduct](#)

## Whistleblowing Policy

- **Legal requirements and industry practice:** This policy complies with latest international and national standards such as the Sarbanes-Oxley Act of 2002, RBA Code of Conduct, Hong Kong Stock Exchange Corporate Governance Guide for Boards and Directors, and data protection laws in applicable countries.
- **Reporting policies and mechanism:** As part of the Group's compliance framework, this policy and its reporting mechanism provide a secure and confidential channel for employees and external business partners to report any actual or potential fraudulent acts or financial irregularities through email and mailbox. With the launch of an online whistleblowing report form in June 2024, the process has become more accessible and efficient, ensuring all reports are managed properly.
- **Maintenance of confidentiality and impartiality:** The Whistleblowing Policy and its channel are managed by ASMPT's Compliance Office, which operates under the Group's Legal Department. The Compliance Office reports investigations and findings to the Audit Committee and also provides the Board with quarterly updates on any ongoing investigations arising from whistleblowing reports. The Audit Committee further supports the Board by providing oversight and ensuring the adequacy and effectiveness of the fraud risk management framework, policies, and processes. This structure is designed to operate with complete independence, confidentiality and impartiality.
- **Encourage a 'Speak Up!' environment:** Awareness posters about the updated Whistleblowing Policy, highlighting protection for employees, have been distributed to all staff.

## Measurable Success

- During the Reporting Period, no legal cases related to corrupt practices were brought.

Following our strong commitment to integrity and accountability, our robust anti-corruption policies and mechanisms are not only intended to eliminate malpractices and prevent corruptions and fraudulent activities but also set ethical benchmarks for the industry.

# 3.4

## Product Responsibility

ASMPT is committed to delivering products that meet the highest standards of quality, safety and environmental responsibility. In response to the rigorous demands and requirements of customers, regulators and industry standards, we strive for excellence at every stage of our production.

### How do we do this?

- **Goal:** ASMPT strives to exceed the Overall Equipment Efficiency benchmark through close partnerships with our customers, relentless innovation and continual improvements.
- **Design phase:** Through our Design for Excellence (“DFE”) programme, we embed stringent quality and environmental standards into each stage of product design.
- **Product safety:** Product safety is non-negotiable – ASMPT’s products fulfil the highest standards of safety requirements. Supported by the DFE programme, our Quality and Reliability Departments conduct extensive testing and obtain necessary certifications for every product prior to delivery to customers.
- **Issue management:** Our Field Service Team promptly addresses potential safety concerns raised internally or by customers, reinforcing our strong commitment to both product safety and customer satisfaction. All relevant product issues are documented by our field service team in a global database. All of these issues are then prioritised and assigned a clear issue owner. This process helps us to define measures for continuous improvement.
- **Commitment:** We obtained ISO 9001 Quality Management System certifications for our key business locations in China, Germany, the UK, the USA, Singapore, and Malaysia.
- **IP compliance and legal protection:** We adhere to all relevant IP laws and regulations in the jurisdictions where we operate, particularly those governing patents, trademarks, copyrights, and trade se-

crets. The Group regularly reviews and updates its IP portfolio to ensure that all registrations, renewals, and protections remain current and effective. We also conduct IP due diligence when entering into partnerships, acquisitions, or licensing agreements to mitigate the risk of infringement.

- **Employee awareness and advice:** The Group regularly trains and advises employees on IP rights, including the proper use of proprietary information and the importance of respecting third-party IP. We have implemented internal policies to govern the use and protection of confidential business information, inventions, trade secrets, and copyrighted materials. We also require employees, contractors, and business partners to sign non-disclosure agreements (NDAs) where necessary to ensure the confidentiality of sensitive information.
- **Technology and cybersecurity measures:** To safeguard our proprietary information, the Group deploys secure IT systems and data protection measures to prevent unauthorised access, copying, or misuse. We also utilise digital rights management tools to monitor and control access to sensitive content. Regular audits and risk assessments are conducted to identify and address potential vulnerabilities in IP protection.
- **Enforcement and risk management:** The Group established clear procedures for reporting and addressing IP infringements, including pursuing legal action when required. We actively monitor the market for any unauthorised use of our IP and take prompt enforcement measures against violations. Additionally, we collaborate with industry partners and authorities to strengthen IP protection efforts.

### Measurable Success

- During the Reporting Period, there was no recall of sold or shipped products due to safety or health reasons.
- ASMPT won the Texas Instruments Supplier Excellence Award for the second year running.



# 3.5

## Supply Chain Management

As suppliers are our vital business partners, effective supply chain management is essential to our business operations. A robust supply chain supports our operational efficiency, drives innovation and enables us to meet market demands. Through collaboration with our suppliers, we actively promote a mutual commitment to ethical, environmental, and safety standards.

### How do we do this?

#### Supplier Management

- **Objective:** With over 2,515 suppliers and external manufacturing vendors & partners (“EM vendors”) based in multiple locations such as China, the USA, Singapore, Malaysia, and various European countries, we select our suppliers and EM vendors in a transparent and equitable process based on five core factors: quality, costing, delivery, service, and technology.
- **Supplier classification:** Suppliers and EM vendors are systematically classified into three groups based on their roles and capabilities.

<b>Certified Strategic Suppliers (“CSS”)</b>
CSS are recognised by their swift adaptability to the Group’s varying demands for additional capacity and urgent supplies within tight timeframes. They provide essential components, and maintain robust capabilities in areas like technological capabilities, vendor managed inventory (“VMI”), on-time delivery (“OTD”) and other critical support metrics.
<b>Certified Preferred Suppliers (“CPS”)</b>
As the second tier of suppliers, CPS have demonstrated the ability to promptly meet the Group’s market demands with historical lead-times usually ranging from one to three months. They maintain strong performance in VMI, OTD, and quality metrics.
<b>Approved Firefighter Suppliers (“AFS”)</b>
AFS provide specific items at a short notice, though typically at a higher cost. They are particularly valuable during periods of rapid market growth when the demand may outpace the capacity of other suppliers.

- **Continuous improvement:** We conduct quarterly reviews for critical suppliers and EM vendors against performance expectations. The ASMPT Procurement – Suppliers portal is used to review performance, receive feedback and be updated on market forecasts. This enables optimised operations, delivery schedules and inventory control to successfully maintain an effective supply chain.

#### Supplier Code of Conduct

- **Standards and policies:** The Group has a SCoC. New suppliers are required to endorse the SCoC during onboarding, while existing suppliers reaffirm annually, promoting responsible practices and continuous improvement across the supply chain. The SCoC is updated and aligned with our Business Code of Conduct to ensure our standards and requirements apply equally to both our Group and stakeholders. The Code of Conduct is reviewed annually, or whenever a major change occurs in the principles and guidelines that the Code of Conduct refers to. Updates to the Code of Conduct will be published on ASMPT’s corporate website if amendments are required following the review.
- **Industry practice:** Our SCoC requires adherence to international standards like the RBA Code of Conduct, focusing on social, environmental, and ethical practices. Suppliers must respect employee rights, ensure health and safety, protect the environment, and strictly prevent corruption, bribery, and money laundering. SMT Solutions suppliers are also fully compliant with the German Supply Chain Act.

Our purchasing team manages the communication of the SCoC to suppliers, ensuring it is shared during key processes such as the creation of new vendors or changes in vendor details, and ensures that suppliers sign the SCoC to signify their knowledge and acceptance of it.

■ **Labour rights and safety:** ASMPT has adopted many social and ethical aspects from the RBA Code of Conduct into ASMPT's Code of Business Conduct, including:

- Respect for Employees
- Working Hours, Wages and Benefits, Discrimination and Harassment, Freedom of Association
- Health and Safety of Employees
- Anti-money Laundering
- Requiring ASMPT's major suppliers to follow RBA's Code of Conduct by agreeing to ASMPT's Supplier Code of Conduct.

■ **Environmental protection:** The SCoC requires the suppliers to comply with statutory and international standards for environmental protection, such as ISO 14001. This commitment covers a wide range of environmental issues, 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 continuously improve their environmental protection measures.

■ **Sourcing of conflict materials:** The SCoC requires suppliers to conduct comprehensive due diligence to ensure that the minerals used 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 the "RBA's Minerals Initiative", extends across the supply chain.

## Measurable Success

■ Purchasing and ESG teams collaborate closely to conduct due diligence on suppliers' compliance with the SCoC annually. In 2024, the top 60% of suppliers by purchase volume completed a self-assessment questionnaire. High-risk suppliers receive detailed assessments, and non-compliant suppliers must take corrective actions. Comprehensive records are maintained to ensure transparency and accountability.

By aligning our supply chain management policies and systems with global standards, along with diligent monitoring as well as continuous improvement, we maintain a responsible and effective supply chain that supports our ongoing growth and development.

## 3.6 | Cybersecurity

In an era of rapid innovation, cybersecurity remains critical to our operations. Cyber resilience protects our systems from various cybersecurity risks, including cyberattacks and data breaches.

### How do we do this?

#### Information Security Management Systems

■ **Standards and certifications:** Our systems comply with internationally recognised standards such as ISO 27001, ISO 27018, General Data Protection Regulation (GDPR) and Trusted Information Security Assessment Exchange (TISAX).

■ **Policies:** Our IT security policy is regularly reviewed and updated to address the evolving technological landscape.

■ **Evaluation and improvement:** Our cybersecurity is regularly assessed and enhanced through various initiatives including:

- Performing annual security assessment to provide a structured evaluation of our cybersecurity posture, enabling us to implement improvements proactively.
- Deploying key cybersecurity tools across our network, endpoints, and applications to create a fortified barrier against potential cyber threats.
- Proactively monitoring and implementing rapid response protocols for critical security incidents to ensure prompt and effective detection and mitigation of risks.
- Conducting an annual security penetration test to simulate cyber-attack scenarios, assessing the resilience of our cybersecurity measures and ensuring they can withstand real-time threats.
- Conducting regular security audits, including internal security scans and yearly audits carried out by an external partner.

## HR Cybersecurity and Data Protection

■ **Standards and certifications:** Our Global People System (“GPS”) complies with data security standards, certified by ISO 27001, and aligned with ISO 27017, ISO 27018, and ISO 27701.

■ **Policies:** ASMPT implements detailed policies to safeguard personal data, ensuring secure and compliant collection, storage, processing, transmission and sharing. Contractual agreements within the Group and between ASMPT and external partners are also in place to safeguard access to personal information.



*“At ASMPT, robust cybersecurity is fundamental to our business. We implement multi-layered protection for our IT systems and HR data, including physical security, data encryption, and network safeguards. This comprehensive approach secures our operations and reinforces stakeholder trust in our digital resilience.”*

■ **General processes:** The GPS safeguards the HR data through four key measures.

- **Physical security:** Our HR data is monitored strictly by security personnel and protected by multiple layers of authentication that must be navigated to gain access.
- **Data integrity:** 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.
- **Data encryption:** All data within GPS is encrypted both at rest and in transit, to ensure that all information stored in the database, or transmitted over the internet, is shielded from potential breaches.
- **Network security:** 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.

■ **Data breach response plan:** The business units of ASMPT are responsible for maintaining a data breach response plan and ASMPT as a Group also has general incident response plans in place to ensure a swift, aligned, documented and proven response to security incidents.

## Measurable Success

■ During the Reporting Period, the Group did not receive any complaints regarding breaches of customer privacy or the loss of customer or employee data.

Dr. Henning Bork, Senior Vice President & Chief Information Officer of the Group, ASMPT

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**Supporting our Communities**

**4.4 Conserving the Environment**

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**Appendix**



# Minimising Environmental Impact

# 4

## Minimising Environmental Impact

### 2024 Highlights

- **During the Reporting Period, our CDP score improved significantly from D- to B, highlighting our dedicated efforts to enhance environmental performance.**
- **The Group achieved a reduction of 36% in Scope 1 carbon emissions compared to 2023.**
- **We are performing a comprehensive evaluation to identify the Group's Scope 3 emissions profile by mapping value chain activities and identifying emission hotspots.**

With the world facing unprecedented environmental and climate-related challenges, ASMPT is dedicated not only to strict compliance with environmental regulations, but also to leveraging innovative technology and sustainable practices to achieve our sustainability goals.

Our strategy prioritises climate action, energy efficiency, renewable energy adoption and resource conservation. By investing in cutting-edge technology and infrastructure to reduce waste and optimise energy usage, we continuously seek to explore measures to decrease our environmental impact.

These actions enable ASMPT to lower its carbon emissions, preserve natural resources and foster a culture of environmental stewardship, positioning us as a leader in navigating this critical journey.

Our actions and strategies on minimising environmental impact are aligned with the following SDGs:

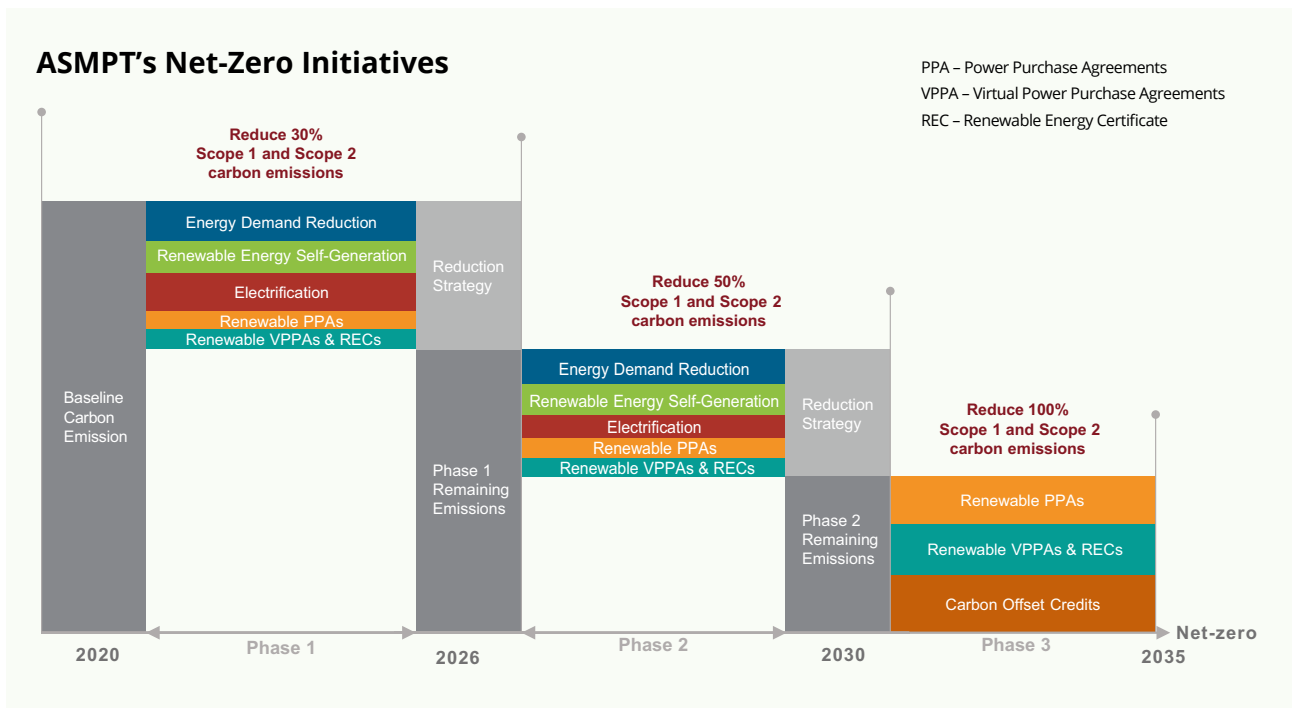


# 4.1 Decarbonisation Initiatives

To underscore ASMPT's strong commitment to achieving net-zero emissions, the Group embeds these targets into its strategic planning, corporate governance, and business models. This dedication not only tackles pressing environmental challenges but also signals sustainability leadership within the electronics and semiconductor manufacturing industry.

## How do we do this?

### Scope 1 and 2 Emissions



■ **Net-zero goals:** ASMPT has committed to achieve net-zero emissions for both Scope 1 and Scope 2 by 2035. To reach this goal, the Group has outlined three distinct decarbonisation milestones.

Using 2020 as the baseline year, we seek to reduce our carbon emissions by 30% during Phase 1 (2020-2026), by 50% during Phase 2 (2026-2030), and to reach 100% by Phase 3 (2030-2035).

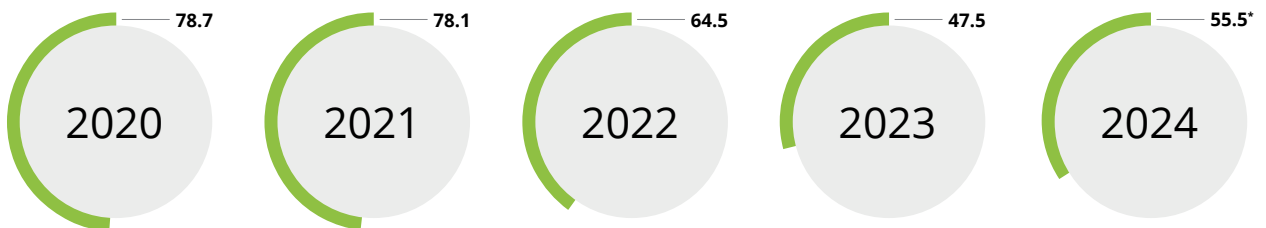
■ **Decarbonisation strategy:** ASMPT has established a thorough and well-defined roadmap. Our strategy centres on six key emissions reduction levers. These levers are prioritised according to their effectiveness, alignment with best practices, stake-

holder expectations, and anticipated financial investment. Each major operating site has carried out extensive evaluations of these six levers and developed tailored action plans and measures.

<b>Lever 1: Energy Demand Reduction</b>	<ul style="list-style-type: none"> <li>• ASMPT prioritises upgrading its equipment to more efficient, low-emission alternatives.</li> <li>• The Group is continuously enhancing production energy efficiency and optimising facility energy management systems across its operations.</li> </ul>
<b>Lever 2: Renewable Energy Self-Generation</b>	<ul style="list-style-type: none"> <li>• ASMPT is actively installing on-site renewable energy generation, such as photovoltaic systems, increasing energy independence and reducing reliance on conventional energy sources.</li> </ul>
<b>Lever 3: Electrification</b>	<ul style="list-style-type: none"> <li>• The Group aims to replace all fossil fuel-powered equipment with electrified alternatives whenever possible.</li> <li>• ASMPT is transitioning its in-plant gas combustion heating systems to electric solutions and replacing the fleet with electric vehicles.</li> </ul>
<b>Lever 4: Renewable PPAs</b>	<ul style="list-style-type: none"> <li>• ASMPT is engaging in Power Purchase Agreements (“PPAs”) with 100% renewable energy sources, securing environmentally responsible energy alternatives and supporting the growth of clean energy.</li> </ul>
<b>Lever 5: Renewable VPPAs &amp; RECs</b>	<ul style="list-style-type: none"> <li>• For locations where PPAs are not available, ASMPT uses Virtual Power Purchase Agreements (“VPPAs”) and Renewable Energy Certificates (“RECs”) to achieve its renewable energy objectives.</li> </ul>
<b>Lever 6: Carbon Offset Credits</b>	<ul style="list-style-type: none"> <li>• To address unavoidable emissions, ASMPT may purchase carbon offset credits from reputable carbon offset projects, retailers, and exchanges, as part of its overall environmental strategy and contribution to achieve the net-zero objectives.</li> </ul>

## Total Greenhouse Gas Emissions

ASMPT Limited, 2020 – 2024 in ktCO<sub>2</sub>e



\*The Group added 4 subsidiaries to its reporting.



■ Our net-zero journey

Key Reduction Strategies		Scope 1 & 2 Emissions (% reduction compared to baseline)
2020	<ul style="list-style-type: none"> <li>• Baseline year adopted for Scope 1 &amp; 2 emissions net-zero goal</li> </ul>	78.7 ktCO <sub>2</sub> e <sup>1</sup>
2021	<ul style="list-style-type: none"> <li>• Installation of smart control system for building equipment in Singapore and China plants</li> <li>• Check and fix any compressed air leakage in Singapore and China plants</li> </ul>	78.1 ktCO <sub>2</sub> e (-1%)
2022	<ul style="list-style-type: none"> <li>• Installation of solar panels and upgrading to energy-efficient equipment in Singapore plant</li> <li>• High energy consumption split unit replaced by air handling unit in China plant</li> </ul>	64.5 ktCO <sub>2</sub> e (-18%)
2023	<ul style="list-style-type: none"> <li>• In Singapore, the majority of Scope 2 emissions from purchased electricity were addressed via the use of renewable energy certificates</li> <li>• In Munich, renewable electricity accounted for the bulk of energy consumption</li> <li>• Installation of heat recovery system in machinery for China plant</li> <li>• Installation of solar panels in China plant</li> <li>• Installation of Facilities Management Control System in Singapore plant</li> </ul>	47.5 ktCO <sub>2</sub> e (-40%)
2024	<ul style="list-style-type: none"> <li>• Use of 100% renewable electricity and gas in UK site</li> <li>• Use of approximately 90% renewable energy in China plant</li> <li>• Installation of heat recovery system for machinery in China plant</li> </ul>	55.5 ktCO <sub>2</sub> e (-29%)

<sup>1</sup> The Scope 1 and Scope 2 emissions for our baseline year differ from those reported in the 2020 ESG report due to the removal of a business segment in 2021.



*The energy efficiency measures at the ASMPPT site in China reduced ca. 63kwh of electricity daily and ca. 21 tons of CO<sub>2</sub> annually.*

### **Energy Efficiency Enhancement in Machines' Burn-In Cycle**

In our China plant, we launched an initiative aimed to improve the energy efficiency of machines during the burn-in cycle. By updating the burn-in programme, we have established a designated stop time that allows the machines to automatically cease operation once the burn-in cycle is complete.

Additionally, we integrated an electromagnetic valve system to ensure the automatic shutdown of machines and the disconnection of all compressed air supplies upon completion of the burn-in programme.

This initiative is expected to have a significant impact in reducing almost 15 hours of gas consumption per day, thereby reducing approximately 63kwh of electricity consumption daily and about 21 tons of CO<sub>2</sub> emissions annually.

*One of ASMPPT's environmental projects*



*Green Gas Certification Scheme*

### **Renewable Biogas Consumption**

At our UK site, we have partnered with British Gas to source renewable biomethane through Renewable Gas Guarantees of Origin (“RGGOs”). RGGOs are official documents that are issued by the Green Gas Certification Scheme, which ensures the production and sale of Renewable Gas are checked and recorded comprehensively.

For 100% of our gas consumption, British Gas ensures an equivalent amount of renewable gas is

fed into the national gas grid. This renewable gas is produced through anaerobic digestion, a process that uses an anaerobic fermenter to convert feedstocks – such as arable crops, food waste, animal manure, plant waste, and sewage – into biogas and residues.

Such initiative supports our commitment to sustainability by reducing reliance on fossil fuels and promoting the use of renewable energy sources in our operations.

*One of ASMPT's environmental projects*

## Scope 3 Emissions

Addressing Scope 3 emissions is vital to ASMPT's net-zero pathway. For example, with SMT production facilities in Malaysia and Hungary, we are close to our customers and avoid excessive transport of materials.

Furthermore, we are reviewing operational flows, assessing value chain processes, and evaluating emissions data quality from 2020 to the Reporting Period. To support this effort, resources across various offices and departments have been allocated to assist in the Scope 3 reduction assessment exercise.

Progress of Scope 3 reduction assessment in 2024	
<b>Map the value chain</b>	Review existing data and systems, as well as identify all relevant activities and processes in the upstream and downstream parts of our value chain.
<b>Screen Scope 3 categories</b>	Use an evaluation tool to perform an initial assessment of emissions across the 15 Scope 3 categories. Emissions data for upstream suppliers were calculated with spend data and most recent industry databases, while downstream emissions were calculated based on factors such as product power rating, operating conditions, lifetime expectancy, and specific in-market grid emission factors of customers' facilities.
<b>Prioritise hotspots</b>	We have determined the emissions hotspots as Category 1 (Purchased Goods and Services) and 11 (Use of Sold Products), which contribute the most to total Scope 3 emissions for the Group.

Ongoing actions for Scope 3 assessment	
<b>Calculate Scope 3 emissions</b>	Continue gathering data and calculating emissions for the prioritised Scope 3 categories. Further break down emissions by category to understand their relative contributions.
<b>Set Scope 3 near-term target</b>	We intend to establish a near-term target to align with the Science Based Targets initiative. Baseline year and data is currently under consideration and consolidation.
<b>Develop decarbonisation strategies</b>	We intend to coordinate the relevant units and teams within ASMPT to align with Scope 3 Category 1 and 11 guidance and industry best practices, and create roadmaps to tackle associated challenges and opportunities. Engagement targets with suppliers and customers are also being considered to drive collaborative efforts in reducing Scope 3 emissions and achieving industry sustainability goals.

## Semiconductor Climate Consortium ("SCC")

As a SCC Leadership Level founding member ASMPT took a lead role in launching the SCC at COP27 in 2022. In addition, ASMPT is co-leader of the SCC Scope 2 Emission Working Group that is dedicated to reducing its members' Scope 2 emissions and contributing to the transition towards a low-carbon energy future for the entire semiconductor value chain. These efforts are a key pillar of ASMPT's Scope 3 reduction efforts, by helping stakeholders upstream and downstream our value chain access low-carbon energy.

The Working Group also focuses on addressing the challenges of climate change by driving collaborations to reduce greenhouse gas emissions within member operations and sharing energy efficiency best practices.

By leveraging accumulated knowledge and innovative technology, the SCC aims to accelerate collective efforts on resolving pressing issues that cannot be tackled by individual companies. These initiatives drive the industry and its value chain's progress towards the 1.5°C pathway in alignment with the Paris Agreement and related accords.

## Measurable Success

- 36% of Scope 1 emissions reduced compared to 2023
- 874 tCO<sub>2</sub>e reduced by the adoption of renewable gas
- 21% of electricity were purchased from green sources

# 4.2

## Climate Strategy and Risk Management

For ASMPT, addressing climate change is a driving priority. As a leading provider of semiconductor and electronics solutions, we recognise that our operations and products have direct and indirect impact on a wide range of areas, from consumer electronics to renewable energy systems. Taking action on climate change is, therefore, both a corporate responsibility and a strategic business focus.

### How do we do this?

Procedure for Climate-Related Risk and Opportunity Incorporation	
<b>1. Identify Risks and Opportunities</b>	Identify potential climate-related risks and opportunities by analysing international trends and industry characteristics. Engage relevant departments and parties to determine key risks and opportunities that could impact the Group's operations and finances.
<b>2. Identify Scenario Pathway for Analysis</b>	Select an appropriate scenario pathway to define the range of impacts from climate-related risks and opportunities. The consideration of pathways is based on the scope of risks and operations, the company's business nature, geographic location, and data availability.
<b>3. Conduct Scenario Analysis to Define Climate Resilience</b>	Use climate change scenario analysis methodologies to simulate future changes across geographic locations, business segments, and timelines. Assess the probability and severity of operational and financial impacts to determine the company's climate resilience.
<b>4. Assess Financial Impact</b>	Evaluate the qualitative financial impact and administrative costs for each climate risk and opportunity. Identify key factors influencing the potential impacts.
<b>5. Strengthen the Mitigation Measures and Transition Strategies</b>	For risks with significant strategic and financial impacts, top management evaluates these risks. Develop appropriate response plans and strategies to mitigate risks, leverage opportunities and facilitate a smooth transition.

## Climate Risk and Opportunity Identification

ASMPT is continuously enhancing disclosure of information regarding the Group's approach to climate-related risks, opportunities, and impacts. Referencing the International Financial Reporting Standard S2 Climate-related Disclosures standard, we have established and outlined our climate resilience strategy.

We have identified key climate risks with potential impact to the Group in short-term (up to 5 years), medium-term (5-10 years), and long-term (over 10 years), both from physical environmental changes and from the transition to a low-carbon economy.

Key Climate Risks				
Risk Types	Physical Risk		Transition Risk	
	Acute Physical Risk	Chronic Physical Risk	Policy and Legal Risk	
	Extreme weather incidents	Long-term climate change	Mandatory emissions disclosures and decarbonisation targets Implementation of carbon pricing & taxes	Slow progress in decarbonisation of local electricity grids in countries where ASMPT operates
<b>Time Period</b>	Short-term	Long-term	Short to medium-term	Medium to long-term
<b>Impacted Business Units and Value Chain</b>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> </ul>
<b>Negative Financial Impact Description</b>	<p>Increased frequency and severity of extreme weather events (e.g., storms, floods) could disrupt ASMPT's operations and supply chain, particularly for sites near coastal areas. This may lead to increased operating costs due to damaged facilities, production downtime, and disrupted logistics.</p> <p>Increased insurance premiums may arise to cover higher risks, while supply chain interruptions could result in decreased revenue due to delayed product delivery or inability to meet customer demand.</p>	<p>Long-term impacts from climate change, such as heat stress, rising sea levels, and flooding, could affect ASMPT's infrastructure and operational efficiency. Rising sea levels may necessitate capital expenditures to relocate or safeguard vulnerable facilities, while heat stress could result in increased cooling and energy costs. Prolonged disruptions may also lead to reduced asset value in high-risk areas and higher compliance costs for adaptive measures.</p>	<p>New mandates for disclosures, emissions targets, and carbon taxes from regulators, stock exchanges, or customers could result in increased compliance costs due to enhanced reporting requirements, emissions auditing, and alignment with stricter legal frameworks.</p> <p>Carbon taxes or penalties for non-compliance could lead to direct financial penalties and increased operating costs, while failure to meet requirements may result in reputational damage, impacting revenue and market competitiveness.</p>	<p>If local electricity grids fail to decarbonise, ASMPT's ability to meet its emissions reduction targets could be compromised. This would result in increased compliance costs from sourcing alternative renewable energy or purchasing carbon offsets credits.</p>

<p><b>Mitigation Measures</b></p>	<p>Engage third-party expertise to assess the risks and insure risky assets.</p>	<p>Monitor trends and incorporate them into infrastructure developments and decision-making.</p>	<p>Pre-empt such requirements by committing and disclosing clear decarbonisation targets and pathways that align with global standards.</p> <p>Review and assess historical data, analyse developments in disclosure requirements, and develop strategy to facilitate future sustainability disclosures.</p>	<p>Explore renewable energy and other alternatives to reduce the reliance on local electricity grids.</p> <p>Proactively lead initiatives such as the SCC Scope 2 Working Group to increase low-carbon energy access and availability in locations where we operate.</p>
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Risk Types	Transition Risk				
	Technology Risk		Market Risk		Reputation Risk
	Uncertainty of green technology advancement	Cost increases and supply shortages for magnets and rare earth elements	<ul style="list-style-type: none"> <li>• Customers are requesting more energy-efficient products</li> <li>• Need for complex product portfolio</li> </ul>	Green supply chain	<ul style="list-style-type: none"> <li>• Perceived lack of investment and leadership in climate action</li> <li>• Stigmatisation of semiconductor industry</li> </ul>
<b>Time Period</b>	Medium-term	Short to medium-term	Short to medium-term	Short to medium-term	Short-term
<b>Impacted Business Units and Value Chain</b>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Downstream</li> </ul>	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>
<b>Negative Financial Impact Description</b>	The uncertainty surrounding the development of green technologies, including investment risks, time to market, and their ability to meet current and future market demands, could lead to increased R&D costs and delayed revenue generation if products fail to meet customer expectations. Investments in unproven technologies may result in stranded costs, while slower adoption could reduce ASMPT's competitive edge in the market, potentially leading to decreased revenue and loss of market share.	Rising global demand for magnets and rare earth elements could lead to increased material costs and supply chain disruptions, thereby significantly affecting the cost competitiveness of ASMPT's linear motor assemblies. Prolonged supply shortages may require sourcing from alternative suppliers at higher prices, leading to increased operating costs. Additionally, higher product prices could impact affordability for customers, potentially resulting in decreased revenue and loss of market share to competitors with more efficient supply chains.	Failure to meet customer demands for energy-efficient products, such as moulding machines, could result in decreased sales, as energy-intensive equipment may no longer align with sustainability goals or regulatory requirements of key customers. This could also lead to reduced customer retention and a decline in market competitiveness, impacting ASMPT's overall revenue. In the long term, the inability to innovate in energy efficiency could damage the company's reputation and attract fewer business opportunities.	Transitioning to a green supply chain could result in higher production costs due to the need to source environmentally friendly components, which may have higher procurement prices. These requirements could also necessitate changes to the manufacturing process, leading to increased capital expenditures or retooling costs. Additionally, supply chain disruptions caused by limited availability of green materials could lead to delays in production and revenue losses.	A decline in corporate reputation due to failure to meet climate-related expectations from shareholders, customers, and stakeholders could result in lost business opportunities and reduced market standing. Poor performance on sustainability metrics may lead to reduced investor confidence, affecting stock prices and access to capital. Additionally, reputational damage could cause decreased customer loyalty, further impacting revenue and ASMPT's competitive position in the market.
<b>Mitigation Measures</b>	Invest in R&D to ensure ASMPT leads green innovation. This involves training our R&D team, integrating sustainability into our technology plans, and building partnerships with universities and customers to advance our R&D projects.	Diversify rare elements' supply chain and include climate-related clauses to protect against future supply disruptions and price volatility.	Manage various R&D and innovation centres to pioneer green and energy-efficient product designs that fulfil customers' needs.  Frequently obtain feedback from customers to understand their sustainability targets and respective progress.	Explore low carbon footprint product designs, and integrate emissions considerations into supply chain planning and decision making.	Set clear net-zero goals and implementation pathway and communicate the strategy and plans to stakeholders regularly.



Opportunity Type	Opportunities	Time Period	Impacted Business Units and Value Chain	Positive Financial Impact Description
<b>Market Opportunity</b>	Business growth and access to new markets with low-carbon technologies	Short to medium-term	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	Increasing demand for low-carbon technologies, including electric vehicles, charging infrastructure, renewable energy systems, and LEDs create a need for advanced packaging and display technologies. ASMPT's product offerings, being key components of the value chain, are set to benefit from strong growth in these green sectors. Our advancements in energy-efficient semiconductor packaging could also further increase the Group's market share. For example, our technology supports the development of the automobile industry, ranging from enhancing production of advanced sensors for autonomous driving to enabling integration of various components for automotive connectivity and E-mobility, thereby strengthening ASMPT's leadership position within the industry.
<b>Resource Efficiency</b>	Use of more efficient systems	Short to medium-term	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> </ul>	Transitioning to energy-efficient systems, such as chillers, heating, ventilation, and air conditioning can lower energy consumption and operational costs. By leveraging AI technology, we can develop more sustainable product designs with optimised material flow, which will reduce material usage and streamline supply chains and manufacturing processes.
<b>Product Opportunity</b>	Production of low-carbon footprint products	Short to medium-term	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> <li>• Downstream</li> </ul>	<p>Producing more energy-efficient products with lower carbon emissions strengthens product competitiveness, meets customers' needs, and enhances ASMPT's overall branding and reputation among shareholders, employees and customers.</p> <p>For example, providing intelligent manufacturing solutions, including the development of software to enable customers to optimise their utilisation of materials and production processes through automation and digitalisation.</p>
<b>Resilience</b>	Improved operational and financial resilience	Short to medium-term	<ul style="list-style-type: none"> <li>• SEMI</li> <li>• SMT</li> <li>• Upstream</li> </ul>	Responsible and green sourcing bolsters supply chain resilience, attracts customers and investors, and increases the likelihood of obtaining support from key shareholders. Assessing climate risks enables ASMPT to anticipate potential threats and implement measures to ensure operational resilience.

## Climate Scenario Analysis

- ASMPT takes a proactive approach to integrating climate-related impacts into our strategy and operations. By leveraging climate risk assessments we identify potential risks and opportunities that could affect our business. To have a deeper insight

into the climate-related risks' effects, ASMPT performed a scenario analysis to assess the likelihood of occurrence and potential financial impact under two divergent Shared Socioeconomic Pathways ("SSP") in the Sixth Assessment Report on climate change by the Intergovernmental Panel on Climate Change.

Climate Scenario Analysis	
<b>Low GHG Emissions Scenario (SSP1-2.6 pathway)</b>	<ul style="list-style-type: none"> <li>• Rapid reduction in greenhouse gas emissions and achieve net-zero around 2075</li> <li>• Fewer extreme weather events</li> <li>• Projected global average temperatures may increase by 1.8°C by 2080-2100</li> <li>• High level of global collaboration on climate action and sustainability</li> <li>• Sustainable economic growth with low-carbon technologies and energy efficiency</li> </ul>
<b>High GHG Emissions Scenario (SSP3-7.0 pathway)</b>	<ul style="list-style-type: none"> <li>• Minimal reduction in greenhouse gas emissions, global CO<sub>2</sub> emissions would double by 2100</li> <li>• More severe and frequent extreme weather events</li> <li>• Projected global average temperatures may increase by 3.6°C by 2080-2100</li> <li>• Weak global cooperation with fragmented policies and regional conflicts</li> <li>• Continued reliance on fossil fuels with limited renewable energy adoption</li> </ul>

■ **Assessment results:** Under the two selected scenarios, ASMPT conducted a comprehensive analysis and identified a diverse range of climate risks that could affect the Group. These risks were then assessed and prioritised by engaging with various

business units and stakeholders, taking into account the likelihood of occurrence and the positive or negative impacts across short, medium, and long-term timeframes.

Assessment Results		
	Scale	Definition
<b>Impact</b>	Critical	<ul style="list-style-type: none"> <li>• Sustained loss of market potential / position / reputation</li> <li>• Significant impact in long-term competitive edge</li> </ul>
	Moderate	<ul style="list-style-type: none"> <li>• Some impact on market potential / position / reputation</li> <li>• Some impact on long-term competitive edge</li> </ul>
	Minor	<ul style="list-style-type: none"> <li>• No or minimal impact on market potential / position / reputation</li> <li>• No or minimal impact on long-term competitive edge</li> </ul>
<b>Likelihood</b>	High	<ul style="list-style-type: none"> <li>• High chance of occurrence</li> </ul>
	Medium	<ul style="list-style-type: none"> <li>• Medium chance of occurrence</li> </ul>
	Low	<ul style="list-style-type: none"> <li>• Low chance of occurrence</li> </ul>

SSP 1-2.6 Low GHG Emissions Scenario		Likelihood		
		Low	Medium	High
<b>Impact</b>	<b>Critical</b>	<ul style="list-style-type: none"> <li>• Lack of government-led initiatives</li> <li>• Uncertainty about technological advancements</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of action affects ASMPT's reputation</li> </ul>	<ul style="list-style-type: none"> <li>• Mandatory emissions disclosure</li> <li>• Customers require more efficient products</li> <li>• Need for greener supply chain</li> </ul>
	<b>Moderate</b>	<ul style="list-style-type: none"> <li>• Long-term climate change</li> </ul>	<ul style="list-style-type: none"> <li>• Need for complex product portfolio</li> <li>• Stigmatisation of semiconductor industry</li> <li>• Extreme weather incidents</li> </ul>	<ul style="list-style-type: none"> <li>• Government imposed decarbonisation targets</li> <li>• Magnet and rare earth cost increases</li> </ul>
	<b>Minor</b>			<ul style="list-style-type: none"> <li>• Carbon pricing &amp; taxes</li> </ul>

SSP 3-7.0 High GHG Emissions Scenario		Likelihood		
		Low	Medium	High
Impact	Critical	<ul style="list-style-type: none"> <li>Lack of action affects ASMPT's reputation</li> <li>Need for greener supply chain</li> </ul>	<ul style="list-style-type: none"> <li>Mandatory emissions disclosure</li> <li>Customers require more efficient products</li> </ul>	<ul style="list-style-type: none"> <li>Extreme weather incidents</li> <li>Lack of government-led initiatives</li> <li>Uncertainty about technological advancements</li> </ul>
	Moderate	<ul style="list-style-type: none"> <li>Need for complex product portfolio</li> <li>Stigmatisation of semiconductor industry</li> </ul>	<ul style="list-style-type: none"> <li>Long-term climate change</li> <li>Government-imposed decarbonisation targets</li> <li>Magnets and rare earth cost increase</li> </ul>	<ul style="list-style-type: none"> <li>Government imposed decarbonisation targets</li> <li>Magnet and rare earth cost increases</li> </ul>
	Minor		<ul style="list-style-type: none"> <li>Carbon pricing</li> </ul>	

## 4.3 Environmental Management

As a market leader, ASMPT has implemented a robust environmental management system across its key business locations, including China, Germany, the UK, the USA, Singapore, and Malaysia.

### How do we do this?

- Standards and certifications:** Our operations comply with relevant local and international standards such as ISO 14001 Environmental Management (ISO 14001) and ISO 50001 Energy Management (ISO 50001).
- Maintenance and improvement:** We have established measures to ensure our systems are regularly maintained and assessed for effectiveness and compliance. These include performing regular audits to identify, report, and mitigate any issues, as well as providing internal auditor training to keep employees informed about the latest requirements of ISO 14001 and ISO 50001. These ensure ASMPT

upholds high standards in environmental and energy management across our operations.

- Site committees:** At ASMPT, the implementation of ESG strategies is greatly enhanced by the establishment of site committees around the world. These committees serve as important local bodies that adapt and implement the overarching ESG framework set by the company and ensure that regional and local circumstances are taken into account in implementation.

The site committees play a crucial role in focussing employees' enthusiasm for ESG initiatives. They comprise key colleagues from various departments, encourage employee participation in energy-saving initiatives and integrate carbon reduction into daily routines. By fostering a collaborative environment, these committees enable employees to actively participate in sustainability efforts and align their actions with ASMPT's strategic goals. This synergy between employee engage-

ment and management oversight is critical to achieving shared environmental and social responsibility goals. Committee members undergo annual training and seminars to enhance their expertise and foster a culture of sustainability at work and beyond.

In addition, the site committees facilitate networking between the different sites and promote knowledge sharing and collaboration on ESG issues. This networking enables the sharing of best practices and innovative ideas and drives progress on sustainability initiatives across the organisation. By utilising local knowledge and expertise, ASMPT can address specific challenges and opportunities for each location while maintaining a coherent global strategy.

- **Fostering a green culture:** We actively encourage employees to adopt a sustainable mindset and take initiative to protect the environment. For example,

at our UK office, staff continue to engage with the Aware Programme, an external platform designed to inspire environmental action. Employees earn points by participating in sustainable activities, with top performers receiving vouchers monthly. Our employees actively participated in various environmental activities during the Reporting Period, such as the litter-picking event and volunteering work on a farm. Members of the environmental committee also attended a Green Hub Workshop, gaining valuable insights about ESG initiatives.

## Measurable Success

- Our sites in China and Germany successfully received third-party ISO 50001 accreditation in 2024.
- All employees in our China plants have conducted the online training course on ISO 50001.

## Examples of projects in 2024



Activities held during the Environmental Protection Month Carnival in China plants.

### Environmental Protection Month Carnival

In July 2024, our China plants co-organised the Environmental Protection Month Carnival, featuring a series of engaging mini-games designed to promote sustainability and energy-saving concepts.

These interactive activities not only sparked enthusiasm among colleagues but also provided valuable energy-saving tips in a fun and memorable way. The event successfully combined learning with enjoyment, fostering a deeper understanding of environmental responsibility.

One of ASMPT's environmental projects

# 4.4

## Conserving the Environment

ASMPT is dedicated to the conservation of environmental resources and effective management of waste. We reduce the consumption of scarce resources and manage waste throughout every stage of our operations, from design and production, to assembly, delivery and marketing, ensuring that each area of our business is optimised for environmental sustainability.

### How do we do this?

#### Water Management

■ **Water management practice:** The Group's operations have a low dependency on water sourcing. We utilise only a reasonable amount for cooling, heat transfer, and specific industrial processes. Our major manufacturing and R&D facilities are not located in regions with very high water risk, as defined by the World Resources Institute. We remain committed to sustainable water use by sourcing water from municipal supplies whenever feasible and integrating innovative technologies to optimise water efficiency across our operations. Advanced water recycling and reclamation systems have been implemented in our production lines, significantly reducing overall water consumption. We utilise water-saving appliances and actively promote awareness, such as by placing water-saving slogans in our facilities. New employee training emphasises the importance of conserving water and other resources. Additionally, real-time monitoring of floor-level water usage is achieved by connecting data to the energy management system, which automatically flags abnormalities.

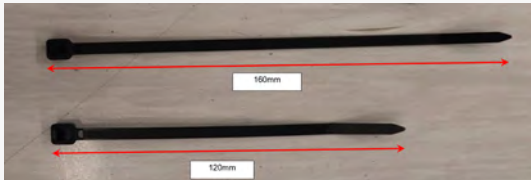
■ **Water saving action in 2024:** This year, we implemented several innovative water-saving projects, including treatment and recycling systems for condensate water from air compressors and the reuse of condensate water from the air energy heat pump.

In our China plants, we have reduced the use of fresh water for diluting cutting fluid by installing low-temperature evaporation equipment. This equipment extracts fresh water from waste cutting fluid, allowing us to reuse it within the system. This approach not only promotes sustainable water management but also minimises our environmental impact.

To encourage water-saving behaviour, our China plants marked World Water Day by promoting the "Citizens' Water Conservation Behaviour Code" through posters. At our Hungary plant, new water dispensers were introduced, allowing us to accurately track water consumption.

#### Waste Management

■ **Waste reduction practice:** Our facilities uphold strict waste management procedures to minimise environmental impact. All plants in China follow the established solid waste management protocols, and other locations also adhere to ISO14001 standards for waste disposal and hazardous material management. General solid waste is sorted and entrusted to certified third-party recycling companies for sustainable treatment. Hazardous waste is carefully handled, collected in designated containers at production sites, and transported to certified local waste management partners. To ensure compliance, we conduct regular hazardous waste training and random departmental inspections. Moreover, advanced treatment equipment is utilised to treat condensate wastewater from air compressors. This process lowers suspended solids, chemical oxygen demand and biochemical oxygen demand ensuring the treated wastewater meets national discharge standards.



ASMPT UK's approach to minimising cable tie waste delivers environmental and cost savings.

### Cable Tie Waste Reduction Strategy

In 2024, our UK plant implemented an effective strategy to reduce cable tie waste. Previously, the facility used 15 types of cable ties, often cutting 200mm push-in ties to size, leading to unnecessary plastic waste and higher costs. Cable ties, made from non-biodegradable plastic, are difficult to recycle and contribute to microplastic pollution. After reviewing their usage, the team switched to shorter cable ties better suited to their needs and separated ties from bases to improve flexibility. This change has successfully reduced plastic waste and lowered purchasing costs, demonstrating how small, practical actions can deliver significant environmental and operational benefits.

One of ASMPT's environmental projects



Reduce, Reuse, Recycle: ASMPT Singapore's path to a sustainable Workplace

### Raising Awareness and Engagement on Waste Management

Singapore's ESG team has been actively promoting the "Reduce, Reuse, Recycle" initiative to strengthen waste management awareness and engagement this year. In collaboration with the facilities management team, discussions were held with over 60% of employees to explore ways to make the workplace more environmentally friendly. A key outcome was the transition from an individual waste disposal system to a centralised system, enabling better waste segregation with clearly labelled bins, improved monitoring, and more mindful disposal habits. Combined with annual refresher courses on environmental practices, this system has significantly enhanced employee awareness as well as sustainable waste management habits both in the office and beyond.

One of ASMPT's environmental projects

## Packaging Materials Consumption

■ **Packaging materials saving practice:** ASMPT incorporates recycling and reusing initiatives into every stage of its operations to promote sustainability. From the design stage, material types and the reduction of packaging are carefully considered. The Group minimises raw material consumption by using reusable and recyclable materials,

including FSC or PEFC-certified wood and paper packaging, which have already been adopted in Singapore, China, and Germany. Recyclable crates are also used for large industrial equipment whenever possible. To further encourage material reuse, ASMPT organises regular “Materials Recycling Days,” during which materials are collected for internal reuse, while non-reusable items are sent to external recycling partners.



*Traditional wooden crates*



*Sturdy cardboard boxes alternatives*

## Transition to Eco-Friendly Packaging

In response to the company's commitment to environmental sustainability, sturdy cardboard boxes have been introduced to replace traditional wooden crates for some of our products in our China plant. This initiative not only minimises environmental impact but also promotes the use of recyclable materials, as the packaging is made from recycled content that can be repurposed after processing.

Moreover, the new cardboard boxes simplify assembly and disassembly, requiring just four fasteners compared to the 50 screws needed for wooden crates, which enhances convenience and efficiency. This transition has resulted in a significant reduction in packaging material consumption, with approximately 45.6% reduction in carbon footprint.

*One of ASMPT's environmental projects*



## Measurable Success

- In 2024, the Group achieved an 80% recycling rate for non-hazardous waste.
- In 2024, the Group's hazardous waste discharge was reduced by 11% compared to 2023
- In 2024, the Group's packaging material consumption was reduced by 3% compared to 2023



*Our ESG Site Committee's members from SMT Solutions in the UK*

### Best practice environmental initiatives from the UK ESG Site Committee

The UK ASMPPT site has demonstrated its strong commitment to environmental sustainability through a number of impactful initiatives led by the ESG Site Committee.

Some of the environmental initiatives that still applied during the Reporting Period were:

1. ISO 14001 certification, demonstrating compliance with international environmental management standards.
2. Introduction of a comprehensive recycling programme for materials such as cardboard, plastic and metal.
3. Installation of charging stations for electric vehicles at the site to encourage employees to adopt sustainable mobility.

4. Switching to energy-efficient LED lighting throughout the facility, which has significantly reduced electricity consumption.
5. Introducing a workplace cycling programme to encourage environmentally friendly commuting.

These initiatives have led to a significant reduction in the site's carbon footprint and energy consumption. By leading by example, ASMPPT UK is not only contributing to ASMPPT's global sustainability goals but also positioning itself as a forerunner for responsible business practices in the electronics industry.

The success of these programmes demonstrates how effectively the local ESG committees are driving meaningful change and aligning with ASMPPT's broader commitment to environmental protection.

*One of ASMPPT's environmental projects*

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**5.1 Responsibilities of a Technology Pioneer**

**5.2 Quality as the Basis for Sustainability**

**5.3 ASMP T SEMI Solutions: Advanced Solutions for the Future of Semiconductors and AI**

**5.4 ASMP T SMT Solutions: Intelligent Electronics Manufacturing**



# Creating Value through Innovation

# 5

## Creating Value through Innovation

### Advancing Towards a Sustainable Future

As our society, our industry and our future are constantly being driven by innovations at a rapid pace, it is critically important that we use this momentum and exercise foresight not only for the profitability of ASMPT and its customers through innovative thinking and action, but to also protect our world in a sustainable manner. More than ever, breakthroughs such as the digital transformation, Industry 4.0, machine learning, natural language processing and AI must be aligned with environmental considerations and integrated into our ESG efforts.

For ASMPT, innovation therefore means being open to new ideas and concepts. Global, intercultural, diverse and interdisciplinary teams develop concepts and solutions that help all of us to take big steps in the right direction and protect our environment for the long term.

Based on our vision of “Enabling the digital world”, we want to be an innovation leader that makes a contribution with its hardware and software solutions. Our actions and strategies are aligned with the following SDG:



## How do we do this?

- We develop products that are important **system prerequisites for sustainable economic activity** and play a crucial role in **achieving global environmental goals**.
- We have a **strict quality management system**. Our high-quality products help our customers to reduce their carbon emissions and improve their environmental footprint by saving energy and materials and avoiding waste.
- We identify opportunities to **reduce Scope 3 emissions** upstream and downstream of our value chain.
- We adhere to **global standards and ratings** to ensure our products and processes meet the highest benchmarks for quality, sustainability, and efficiency, helping us track and improve our ESG performance.
- We strive to reduce our **customers' energy consumption** through intelligent automation and the development of electromechanical and digital solutions that make our machines more efficient.
- With the **concept of intelligent manufacturing**, we use resources more effectively by maximising automation, which leads to energy savings and makes work easier for employees.
- We **extend the life of our products** by refurbishing used machines, retrofitting existing systems, and offering technical solutions for bringing machines up to date with regard to their digital capabilities.
- We **continuously invest in research and development** and maintain a large pool of R&D talent to build up extensive process and development capabilities as well as know-how within the company.
- In **15 research and development centres in Asia, Europe and North and South America**, our dedicated engineers work towards a product portfolio that sets new standards in terms of technology, profitability and environmental sustainability.
- Successful green innovation requires **stable global partnerships**, we collaborate with partners worldwide to achieve shared goals and develop sustainable solutions across the value chain.



*"At ASMPT, innovation goes hand in hand with sustainability. Our Design for Excellence programme embeds quality and environmental considerations into every stage of product development. By focusing on energy efficiency and product longevity, we're not only advancing semiconductor manufacturing but also contributing to a more sustainable future for our industry."*

Dr. Gary Widdowson, Chief Technical Officer,  
ASMPT SEMI Solutions

# 5.1

## Responsibilities of a Technology Pioneer

As a technology pioneer and market leader in semiconductor and electronics manufacturing, we are aware of our environmental responsibilities.

### Innovative Solutions for a Low-Carbon Future

Mobile devices, cameras, computers, internet infrastructure components, conventional and electric vehicles, smart home systems, health and industrial electronics – every electronic device has probably been designed or manufactured in one way or another with ASMPT's innovative hardware and software solutions. Our uniquely broad portfolio in the market does not just set us apart from other machine manufacturers – it also has a positive effect on reducing the carbon emissions of our partners and customers.

Some of our products – particularly in the areas of e-mobility, digitalisation and automotive – are crucial prerequisites for a sustainable economy. Even if they do not directly contribute to reducing emissions, they play a critical role in achieving global environmental goals by equipping systems for a lower-carbon economy. For example, innovative ASMPT products make it possible to create intelligent solutions for the use of renewable energies, charging infrastructures for electric vehicles, and digital simulation environments.

### Technology as an Enabler of Sustainable Development

ASMPT's passion for innovative technologies is the force that drives us to create value for our customers. To mitigate the uncertainty of green technology, we pursue innovations that not only benefit our customers but also seamlessly integrate sustainability into their design. Environmental aspects play a crucial role in this. Since sustainability is an important prerequisite for creating a future that is worth living in, we focus on areas where we can make the greatest contribution to environmental protection for our customers – for example, by reducing their consumption of energy and compressed air, enabling them to operate with more resource efficiency, and supplying them with machines that last longer and are easier to modify.

ASMPT has two main solution segments: SEMI and SMT Solutions. The SEMI segment offers a diverse range of Advanced Packaging and Mainstream products and integrated solutions for the microelectronics, semiconductor, photonics, and optoelectronics industries. The SMT segment is just as wide-ranging, with its renowned DEK and SIPLACE solutions, and offers best-in-class solutions at equipment, line, factory and multi-factory levels. It focuses on providing integrated automation concepts for the intelligent electronics factory.

# 5.2

## Quality as the Basis for Sustainability

Quality is the basis for operating sustainably at ASMPT. By setting the highest standards for the quality of our products and processes, we actively help our customers to reduce their carbon emissions and strengthen their environmental performance. Our machines are designed for maximum floorspace performance and energy efficiency with a special focus on optimising their use of materials. This may also

help reduce our Scope 3 emissions from the use of sold products. For example, our precise manufacturing technology ensures minimal scrap rates, conserves valuable resources, and reduces waste. The durability and retrofitability of our machines prevent frequent replacements with new equipment and improve the product life span.

## Optimised Production Processes through Automation and Digitalisation

In addition, our advanced software makes it possible to optimise the entire production process of our customers. Through the use of big data, artificial intelligence and machine learning, users can make their production processes and material flows more efficient, perform maintenance in accordance with actual needs, and further reduce their use of energy. Automation and the digital transformation thus contribute to a resource-saving production process that meets the industry's rising requirements for sustainability.

## Always Keeping an Eye on our Customers' Sustainability Goals

Our excellent customer service is another central aspect of sustainable product development at ASMPT. Working closely with our customers enables us to recognise their specific needs and challenges in the area of sustainability at an early stage and to incorporate them into our product development activities. Our regional offices and direct interactions with our customers enable us to offer bespoke solutions for reducing emissions and the consumption of resources.

Through systematic customer feedback based in part on our regular customer satisfaction surveys, we ensure that our products and services are continuously aligned with the market's requirements. This allows us to achieve technical excellence while actively supporting our customers' sustainability goals.

# 5.3

## ASMPT SEMI Solutions: Advanced Solutions for the Future of Semiconductors and AI

The semiconductor industry is under constant pressure to develop more diverse products, meet the demands of the digital transformation, accommodate the trend toward miniaturisation, and shorten the time-to-market. ASMPT helps its customers to master these challenges and to develop innovative, future-oriented technologies that make people's lives smarter and greener. ASMPT's comprehensive product portfolio covers almost the entire production process, from semiconductor production to SMT assembly and soldering, offering solutions for nearly every customer application. This unique position allows ASMPT to provide integrated solutions that bring together speed, reliability, accuracy, and efficiency and sustainability, making it a leader in the AP field.

## Comprehensive Solutions for a Smart World

ASMPT's SEMI Solutions segment offers a diverse portfolio ranging from deposition joints on organic and glass substrates to first-level die connections on wafers and panels. In addition, SEMI offers specialised solutions for LED displays, silicon photonics and CMOS image sensors used in various end-user markets – technologies that are critical for the digital transformation in areas that require increasingly powerful semiconductor solutions, such as artificial intelligence and data centres.

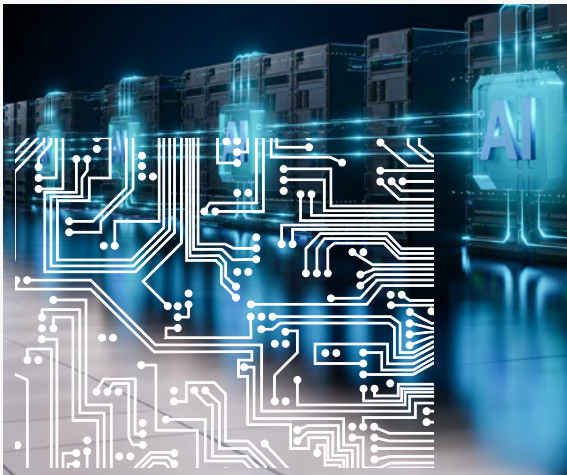
## Cutting-Edge Technology for AI and Data Centres

Cutting-edge chip shrinking makes AP and hybrid designs key innovation drivers. Especially in the era of artificial intelligence, in which data centres must process huge amounts of data efficiently in terms of speed and energy, such technologies are increasingly becoming the focus of development activities. AP encompasses all processes that extend and improve traditional chip packaging, enhancing the performance, energy efficiency, reliability, and packing density of semiconductor components. As it grows with its customers in this high-end segment, SEMI offers one of the most comprehensive portfolios of AP solutions that are in demand across a wide range of industries worldwide. ASMPT's AP solutions include cutting-edge technologies such as Flip Chip, System in Package, 3D Stacking,

Fan-Out Packaging, Embedded Die, and Co-Packaged Optics. These technologies are crucial for enabling and supporting generative AI technologies in this era of rapid innovation.

## Unique Next-Generation Innovations

Mini-LED technologies are crucial for the next generation of energy-saving displays. SEMI delivers complete solutions that feature maximum brightness, resolution and quality, thus meeting the growing needs of modern data centres. In the field of silicon photonics, SEMI develops precise and compact solutions with an impressive XY positioning, which is particularly important for high-performance AI applications.



*The AMICRA NANO high-precision die and flip-chip bonder was specifically designed for the production of co-packaged optics and features a placement accuracy of  $\pm 0.2 \mu\text{m}$  @  $3 \sigma$ .*

### AMICRA NANO: Hybrid Bonding for Data Highways

The high-precision AMICRA NANO die and flip-chip bonder was specially designed for the production of co-packaged optics that integrate optical and electronic components in a shared housing. With the highest precision and exceptional process stability, it is ideal for the requirements of modern data transmission technologies. Co-packaging optics makes it possible to produce compact yet pow-

erful components for data centres, which require energy-efficient and speedy data communication with minimal latencies.

The innovative bonding technology in the AMICRA NANO does not require soldering or gluing but employs atomic diffusion to ensure stable mechanical and electrical connections. While this technology enables strong miniaturisation, it requires maximum precision as the components no longer centre themselves during heat treatment. With a placement accuracy of  $\pm 0.2 \mu\text{m}$  and bonding forces ranging from 0.1 to 20 N, the machine achieves a throughput rating of 200 to 400 components per hour, which is ideal for high-mix/low-volume applications such as chiplets, prototypes and new process studies.

In the future, hybrid bonding will be crucial for maximum performance in the smallest of spaces, as required by high-performance computers, quantum computers, and AI systems. With its co-packaged optics production technology, ASMPT is making a contribution to the energy efficiency of modern data centres, which are among the world's greatest users of energy. Integrating optical and electronic components in the smallest of spaces helps to reduce energy consumption by shortening electrical signal paths. This in turn reduces the environmental impact and contributes to the development of sustainable technologies.

One of ASMPT's innovations



As the market leader in CMOS image sensor solutions, SEMI offers cutting-edge technologies for the assembly of active camera modules as well as powerful bonding and cleaning technologies.

To meet the growing demands of data centres and intelligent systems, SEMI is extending these competencies to future-oriented applications such as autonomous vehicle systems and data-intensive AI processes.



*The fully automatic LITHOBOLT G2 combines precision and environmental awareness in an innovative C2W machine.*

## **LITHOBOLT™ G2: Precision Meets Sustainability**

The LITHOBOLT G2 is a fully automated high-precision chip-to-wafer machine specifically designed for handling 12-inch wafers in ultraclean environments (Class 1, ISO 3). Thanks to its versatility, it can handle a wide range of die sizes and wafer substrates in both face-up and face-down applications and can be seamlessly integrated into a production line to ensure high bonding quality.

The LITHOBOLT G2 also sets standards in terms of environmental compatibility with its hybrid bonding process that uses neither solder nor flux, making it particularly environmentally friendly. Direct copper-copper connections reduce electrical resistance and energy consumption. This makes it possible to build advanced 3D device stacks with greater I/O and memory densities and contributes to more energy-efficient semiconductor devices.

Despite its compact design, the LITHOBOLT G2 processes a high number of units per hour. Its smaller footprint combined with increased productivity reduces its operating costs and improves the energy and resource efficiency of the production equipment.

The fully automatic line integration of the LITHOBOLT G2 minimises material waste, ensures consistent quality, and reduces the error rate caused by human intervention. This increases the production stability while ensuring a safer working environment and reducing the risk of accidents.

The LITHOBOLT G2 combines technological innovation with sustainable principles – a major step towards environmentally friendly and efficient semiconductor production.

One of ASMPT's innovations

## Closer Cooperation with IBM to Further Advance the Development of Chiplet Packaging Technologies for AI

ASMPT and IBM have further expanded their partnership in the development of advanced chiplet packaging technologies in 2024. The project focuses on advancing thermo-compression and hybrid bonding methods for chip packages with ASMPT's state-of-the-art FIREBIRD TCB and LITHOBOLT hybrid bonding machines.



*The FIREBIRD TCB is designed to meet the demanding requirements of high performance computing and AI applications.*

Chiplet technology allows system-on-chips to be broken down into smaller, specialised chips that work together as an integrated system. This architecture offers potential benefits such as improved energy efficiency, short development cycles, and lower manufacturing costs. The goal is to develop advanced bonding processes in order to efficiently transfer chiplet packaging technologies from research to mass production, especially in view of the rapid development of the computing power of artificial intelligence.

The new agreement builds on an existing collaboration that has already led to the introduction of an improved hybrid bonding approach. ASMPT and IBM will now work jointly on developing the next generation of chip bonding technologies to better meet the demands of the AI era. The partnership intends to make the even faster and more efficient production of more powerful and compact chips possible.

One of ASMPT's innovations

## MEGA Pioneers Sustainable Semiconductor Manufacturing

The MEGA system revolutionises semiconductor manufacturing with a visionary approach that redefines efficiency and resource conservation. At its centre is the groundbreaking strategy of replacing a complete production line with a single machine. This innovation optimises space requirements and reduces energy consumption dramatically, which creates huge benefits especially for products with high variability and medium unit volumes, such as HF devices, photonics and wearable SiPs. By streamlining processes, the MEGA system sets new standards in energy conservation and advances environmentally friendly manufacturing practices.

Another key to the MEGA's efficiency is its consistent use of standard components, making it possible to meet different market requirements in the field of die-attach packaging with maximum resource optimisation and minimum waste. Its modular design ensures high component reusability, promotes production flexibility, and supports sustainable production.



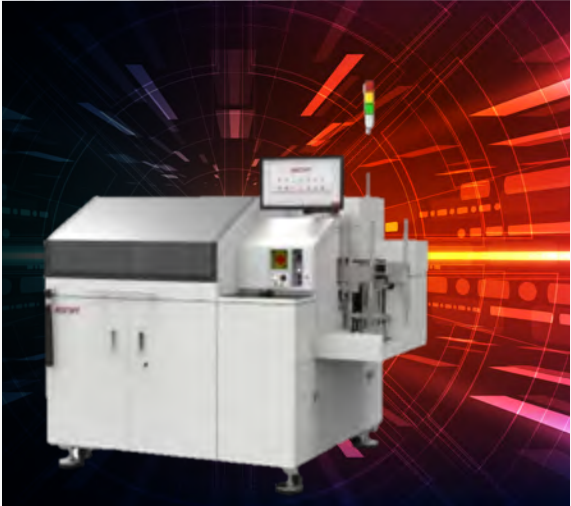
*With its groundbreaking technology, MEGA can replace an entire production line.*

The combination of innovative technology and sustainability makes the MEGA system a trailblazer in the industry. Its use of state-of-the-art production processes leads to a significant increase in efficiency and contributes to a reduction in its environmental impact. By smartly combining high-tech development and resource conservation, the MEGA system sets new standards and shows how innovation can serve as a catalyst for a more sustainable future.

One of ASMPT's innovations

**Focus on Efficiency and Sustainability:  
AD8312MAX Sets New ESG Standards**

The AD8312MAX is a state-of-the-art die bonder that sets new standards by combining top performance with benefits on both environmental and social aspects. For example, it consumes roughly 23% less energy than conventional models, which not only reduces its operating costs but makes a significant contribution to cutting carbon emissions.



*The compact and environmentally friendly AD8312MAX Die Bonder: The perfect combination of maximum productivity and minimum environmental impact.*

Another highlight is the machine’s optimised use of clean dry air, which could be reduced by roughly 34%. This reduces its use of energy even further. The compact design of the AD8312MAX (2430 × 1540 × 1620 mm) saves valuable space and increases resource efficiency in production and transportation, supporting sustainable practices.

A 62% increase in processed units per hour increases efficiency and helps customers reach their targets more easily, thus reducing workplace stress. In addition, the machine’s optimised energy and CDA usage reduces the equipment wear, which reduces maintenance costs and improves occupational safety. As a result, the staff benefit from a safer and more reliable working environment.

The AD8312MAX also complies with strict industry standards in terms of performance and sustainability. With its CE label and its adherence to the S2S8 standard, it complies with high safety, health and environmental standards. Such certifications help ASMPT to comply with regulations, minimise legal risks, and strengthen the company’s image. The AD8312MAX thus stands not only for superior technological performance, but also for sustainable and responsible business practices.

One of ASMPT’s innovations

# 5.4

## ASMPT SMT Solutions: Intelligent Electronics Manufacturing

### Efficient Use of Resources

Intelligent manufacturing combines people, machines, processes and materials into a highly efficient entity that uses the comprehensive collection of data and the strategic networking and use of this information as its foundation. Accelerating the digital transformation enables more efficient processes and reduces waste production through the targeted use of resources.

To realise the vision of intelligent manufacturing, ASMPT offers a comprehensive portfolio of innovative hardware and software solutions that maximise the potential of the factory's production equipment while making it more efficient and conserving resources. With the Industry 4.0 concept, ASMPT creates flexible and optimised manufacturing processes in which machines communicate seamlessly with each other and provide relevant data in real time to ensure full transparency along the value chain. Intelligent software identifies potential savings and uses intelligent algorithms to optimise the use of heat, electricity and compressed air. Thanks to open industry standards, machine learning and artificial intelligence, electronics manufacturing is becoming even more productive and energy-efficient.

The industrial age of intelligent manufacturing opens up new opportunities for factories that are productive, resilient and environmentally friendly, with the key being the comprehensive use and needs-based processing of data, which eventually can increase our competitive advantage.

### Holistic, Data-driven, Connected

Intelligent manufacturing unleashes the full potential of connected and automated SMT production by making full use of the 'data lake'. With the help of a digital backbone, processes get analysed, integrated and optimised on all levels ranging from the individual machine to the entire enterprise. The result is a strong impulse for the digital transformation that improves profitability, makes the use of human resources more efficient, and optimises the flow of materials throughout the entire factory.

### Portfolio Expansion with Manufacturing Execution Systems ("MES")

Process integration, efficient staff deployment and sustainability are indispensable requirements for staying competitive. In practice, this is the Industry 4.0 concept, where MES play a key role in ensuring comprehensive control and transparency across the entire factory. A powerful MES provides the foundation for a production that is intelligent, automated, efficient, connected, flexible, sustainable and reliable by ensuring perfectly synchronised and optimised workflows. Critical Manufacturing, an ASMPT company, offers solutions that deliver all of this.



*"Innovation is at the heart of everything we do at ASMPT, and having SEMI and SMT under one roof significantly amplifies our ability to deliver cutting-edge and customer-focused solutions."*

Thomas Bliem, Head of R&D, ASMPT SMT Solutions

## Automated Programme Changeovers Increase Efficiency and Conserve Energy

ASMPT uses an automated solution for product-controlled programme changeovers on each machine to optimise the productivity and energy efficiency of SMT lines. Via the IPC-HERMES-9852 industry standard, PCB data is forwarded from machine to machine so that the production programmes can be downloaded automatically and correctly to DEK paste printers, Process Lens SPI systems and SIPLACE placement machines. This eliminates human error during programme selection, which ensures optimal machine usage and prevents waste as a result of faulty settings. Thanks to the standardised interface, automatic programme changes can also be supported by third-party systems, making it possible to implement them along the entire SMT line in the Intelligent Factory.



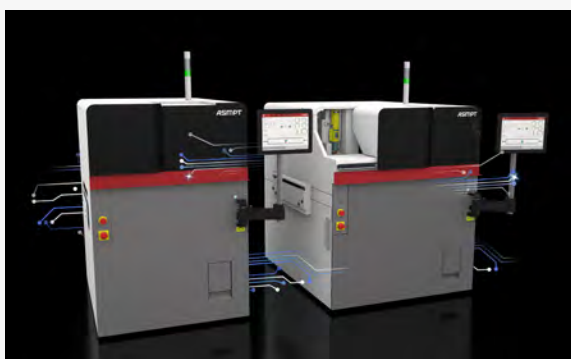
*Via the IPC-HERMES-9852 interface, PCB data can be passed from machine to machine along the entire SMT line.*

This level of automation prevents excess wait times, which improves the line's utilisation significantly and lowers its energy consumption since the machines can operate non-stop.

One of ASMPT's innovations

## Automated Paste Transfer for More Efficient Solder Paste Utilisation

The Paste Transfer Unit for the DEK TQ platform optimises the changeover process in solder paste printing by automatically transferring residual paste to the new stencil, thus cutting down on paste waste. The automated system ensures precise and clean paste transfers, replacing the of-



*ASMPT automates and accelerates the solder paste transfer process during stencil changeovers.*

ten inaccurate and lossy manual step of moving paste with a spatula. It also minimises contamination and ensures even distribution, which reduces the risk of short circuits and malfunctions.

Automating this operation allows electronics manufacturers to significantly reduce the amount of discarded paste, which is considered hazardous waste. Compared to the manual method, which leaves up to 10% of the paste on the stencil, the automated transfer reduces this loss to a mere 5%. This saves on costs and reduces the material consumption, which in turn reduces the manufacturing costs per board. It also eliminates the need for manual assists, which minimises process variations and raises the production yield. The consistent and automated execution of this step leads to more stable and efficient processes. The new system can be easily retrofitted, allowing electronics manufacturers to significantly improve their sustainability and cost-effectiveness.

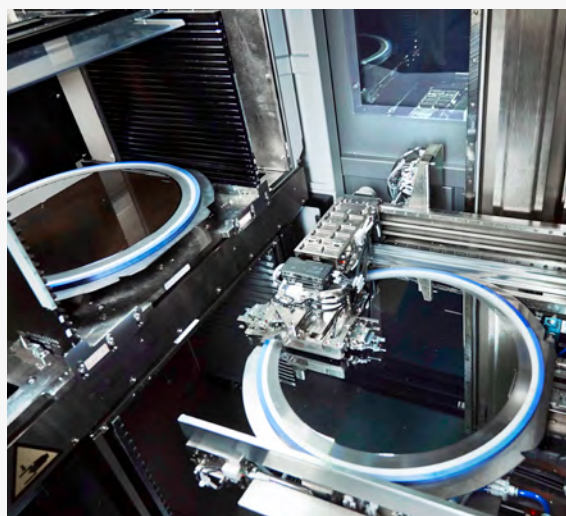
One of ASMPT's innovations

## SIPLACE CA: Reducing Waste through High-Tech Innovations

With the SIPLACE CA2 hybrid placement solution, ASMPT is setting new standards in resource consumption and waste reduction. By combining high-speed die attach directly from the singulated wafer and SMT placement in a single unit, the machine makes it possible to seamlessly integrate the production of SiPs into the SMT line. The SIPLACE CA2 is capable of processing up to 50,000 dies or 76,000 SMT component per hour with a precision of up to 10  $\mu\text{m}$  @ 3  $\sigma$ .

One of the greatest advantages of this technology is the drastic reduction of tape waste because it completely eliminates the die taping step, which means that a 24/7 production can save up to 800 kilometres of tape per year – a significant improvement that does not just reduce costs but also reduces the burden on the environment. Eliminating the taping material reduces the material consumption as well as disposal and storage costs. In a high-volume production, for example of smartphones or tablets, this creates savings in the millions and lowers the environmental footprint considerably.

In addition to avoiding waste, the SIPLACE CA2 scores with intelligent process optimisation and lower power consumption through less scrap. A buffer system delivers more performance by uncoupling the die pickup from the wafer from its placement on the substrate. And thanks to its



*The SIPLACE CA2 boosts productivity in advanced packaging by combining classic surface-mount technology with die-attach and flip-chip assembly.*

flexible wafer change technology, the machine conserves space on the shop floor that can be used otherwise, for example for automated storage and transport systems.

Open standards such as SECS/GEM and IPC-2591 CFX enable seamless data communication that supports ASMPT's Intelligent Factory concept. This makes the SIPLACE CA2 more than a guarantor of maximum flexibility and efficiency – it is also an important step towards more sustainable electronics production that avoids waste and conserves valuable resources.

One of ASMPT's innovations

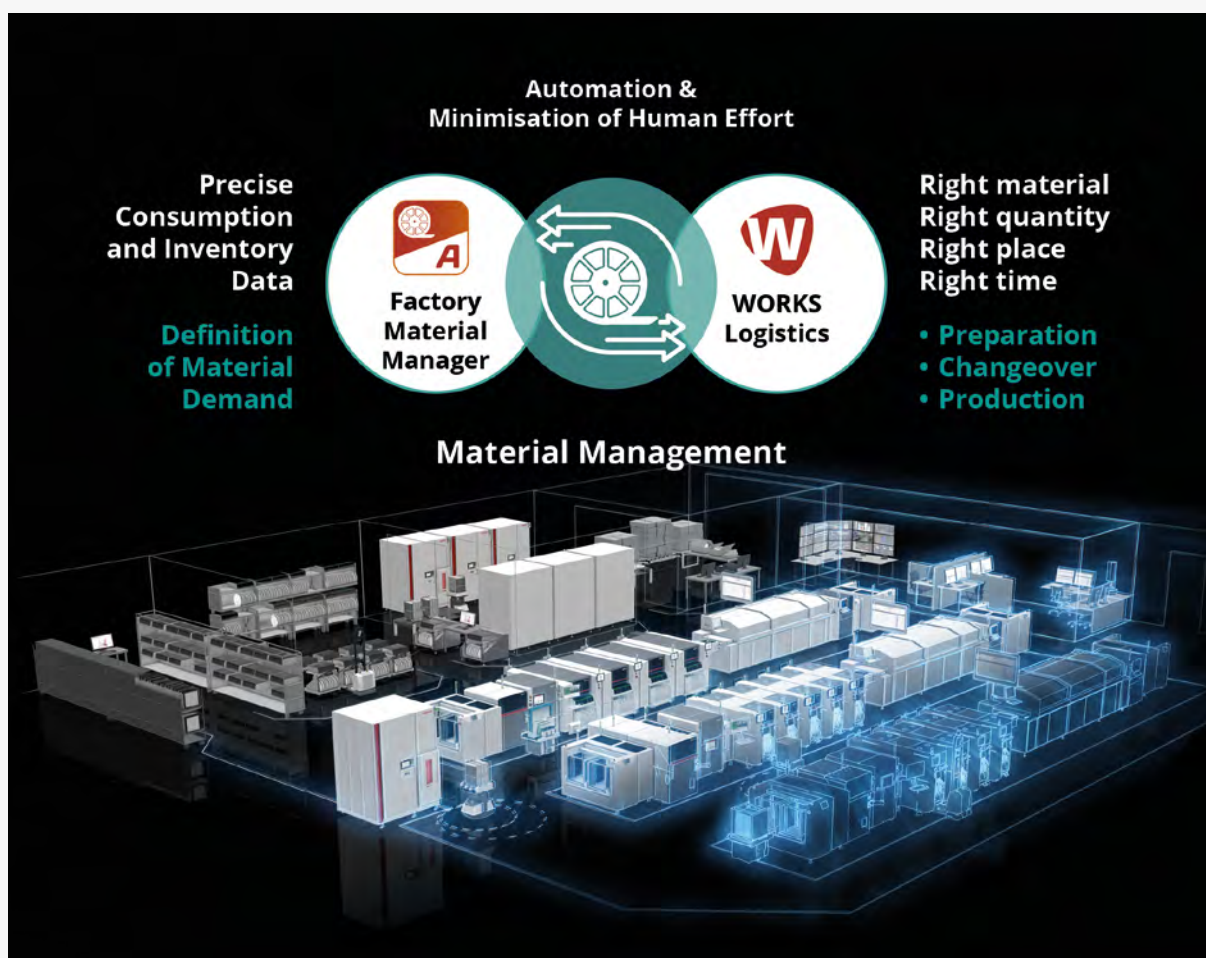
## Automated Material Flow Optimisation: Resource Conservation for Sustainable Manufacturing

In the Intelligent Factory, optimising the flow of materials is not only a key to productivity but an essential contributor to resource conservation. ASMPT relies on digital and automated solutions to efficiently manage materials and minimise line downtimes and waste. The Factory Material Manager and WORKS Logistics applications control and streamline material flows from the warehouse to the SMT line.

Upon receipt, each package receives a unique ID under which the system stores all relevant information such as the quantity, material number, shelf life, and moisture sensitivity. This data forms the basis for a digital twin of the material flow that reflects the physical process in real time, making it possible to plan material transports in a route-optimised manner and avoid unnecessary material movements.

Factory Material Manager ensures a resource-conserving material distribution by enforcing the first-in/first-out principle and avoiding waste by monitoring use-by dates and exposure times. WORKS Logistics supports this further through precise demand forecasts that are based on actual consumption data in order to avoid emergency stocks along the line as well as bottlenecks. In this way, material is provided efficiently and in line with demand according to the 4R principle: always the right material in the right quantity in the right place at the right time.

The interaction of the two software solutions enables a sustainable production and the on-time delivery of the end products to the customer. It eliminates unnecessary material movements, excess stocks and manual inventories, which saves energy and materials. The optimised machine utilisation also reduces energy consumption and relieves valuable specialists of time-consuming routine activities.



*A strong pair: Factory Material Manager and WORKS Logistics ensure a seamlessly automated flow of materials in the entire factory.*

One of ASMPT's innovations

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**6.1 Employee Engagement**

**6.2 Diversity, Equity & Inclusion**

**6.3 Ensure Employee's Health and Safety**

**6.4 Human Capital Development**





# Nurturing our Employees

# 6

## Nurturing our Employees

### 2024 Highlights

- **Embraced diversity across our Board and senior leadership, with varied genders, nationalities, and expertise, fostering global perspectives and inclusive decision-making.**
- **Provision of facilities for parenting and religious activities, to cater for the needs of a diverse profile of employees.**

In a rapidly evolving industry, our success is built on the foundation of our exceptional people. Respect, represented by the “R” in our POWER values, guides us in promoting an inclusive work environment that celebrates the strengths of our diverse global talents and cultures. By embedding these values into our corporate ethos, ASMPT has created a motivational workplace with clear rights and obligations, empowering employees to thrive and work toward shared goals. We also actively foster an environment where employees find fulfilment through competitive remuneration and continuous learning and development opportunities.

Our actions and strategies on nurturing our employees are aligned with the following SDGs:



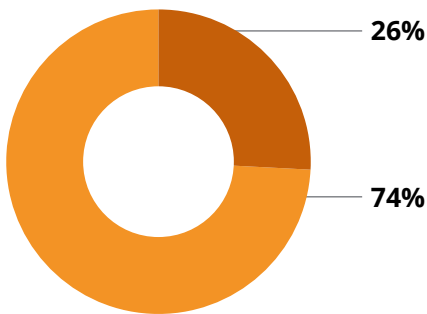
# 6.1 Employee Engagement

ASMPT recognises the importance of creating a workplace where employees feel valued and are nurtured to progress both professionally and personally.

## Employee Profile for 2024:

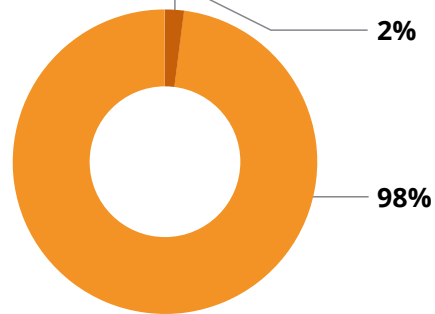
**Gender Distribution**

Male | Female



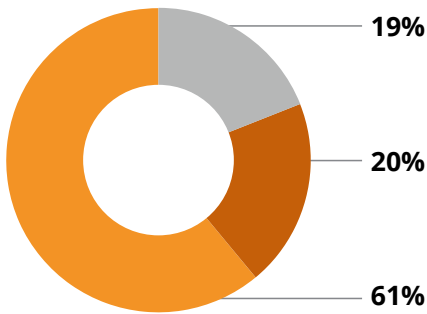
**Employment Type Distribution**

Full time | Part time



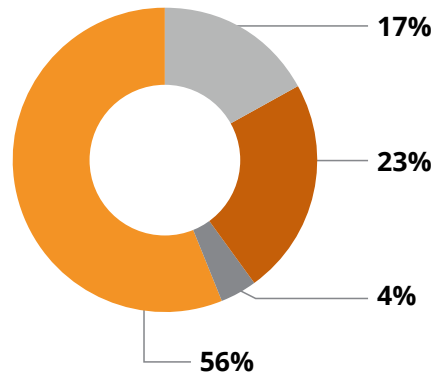
**Age Group Distribution**

Below 30 | 30-50 | Above 50



**Geographical Region Distribution**

Greater China | Europe, Middle East and Africa | Rest of Asia | North and South America



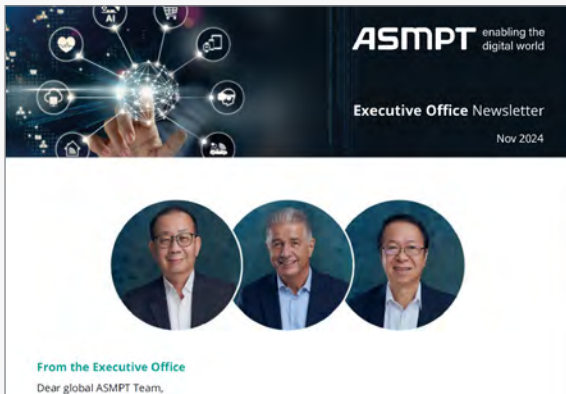
**Overall Employee Turnover Rate**



## How do we do this?

- Employee communication:** Regular communication channels are being utilised to engage our employees across the globe and business segments. These channels are also repeated at the segment levels and even regional levels to cascade segment- and region-specific company updates to the relevant employees. These serve as vital channels

for top-down communication to promote transparency as well as help unify our global company as employees appreciate how they can contribute to the growth of ASMPT. Through these channels, we also invite employees to submit questions to leaders to be addressed, fostering bottom-up communication. This approach encourages employees to share their opinions and comments, ensuring their voices are heard and valued.



*Global Leaders Townhall, Global Employees All Hands, EO Newsletter, Segment Newsletters*



## Regular Communication

Various engagement channels such as Earnings Q&A sessions for the senior management, quarterly Global Leaders Townhalls, biannual Global Employees All Hands, as well as quarterly Newsletters from the Executive Office supplemented by internal memos whenever necessary at the Group level, segment level and even at the regional level gave opportunities for employees to be updated on the health, strategy and developments that impact them. Employees can also submit questions to management via these channels.

*One of ASMPT's people projects*

## ■ ASMPT ENGAGE



Promotion on ENGAGE pulse survey

**1. ENGAGE: Empowering the employee voice for organisational excellence:** In the rapidly evolving semiconductor industry, it is critical to ensure high levels of employee engagement and alignment with organisational strategy. That's why

ASMPT has introduced the ENGAGE programme, a comprehensive, global initiative aimed at capturing employee feedback, driving positive change and aligning the workforce with ASMPT's strategic vision. The driving force behind this is



ENGAGE follow-up workshops in Korea and Germany, at ASMPT SMT Solutions

### Our Continuous Process for ENGAGE 2024 Survey

The ENGAGE 2024 survey revealed an important finding: employees want a deeper understanding of the corporate strategy. In response, Josef Ernst, CEO of SMT Solutions, initiated a series of strategy workshops, starting with eight workshops in Germany and expanding to other locations worldwide. These workshops proved to be very valuable as they encouraged an open dialogue and gave employees a clear insight into ASMPT's strategic direction. Josef

Ernst personally led the ENGAGE follow-up workshops worldwide, demonstrating ASMPT's commitment to open communication and strategic direction. These sessions provided a platform for direct discussions on corporate strategy with employees at all levels. "Employee engagement makes all the difference", emphasises Ernst. An engaged workforce is committed to the company's goals and values. Committed employees work with passion, take personal responsibility, are ready for win-win situations, achieve top performance and work in teams with the utmost respect.

One of ASMPT's people projects

the idea that the spirit and commitment of the team is fundamental to ASMPT’s success. This proactive approach to leadership, combined with team-level discussions and action planning, demonstrates ASMPT’s desire to not only listen to the voices of employees, but to actively respond and align the entire organisation around shared goals and values.

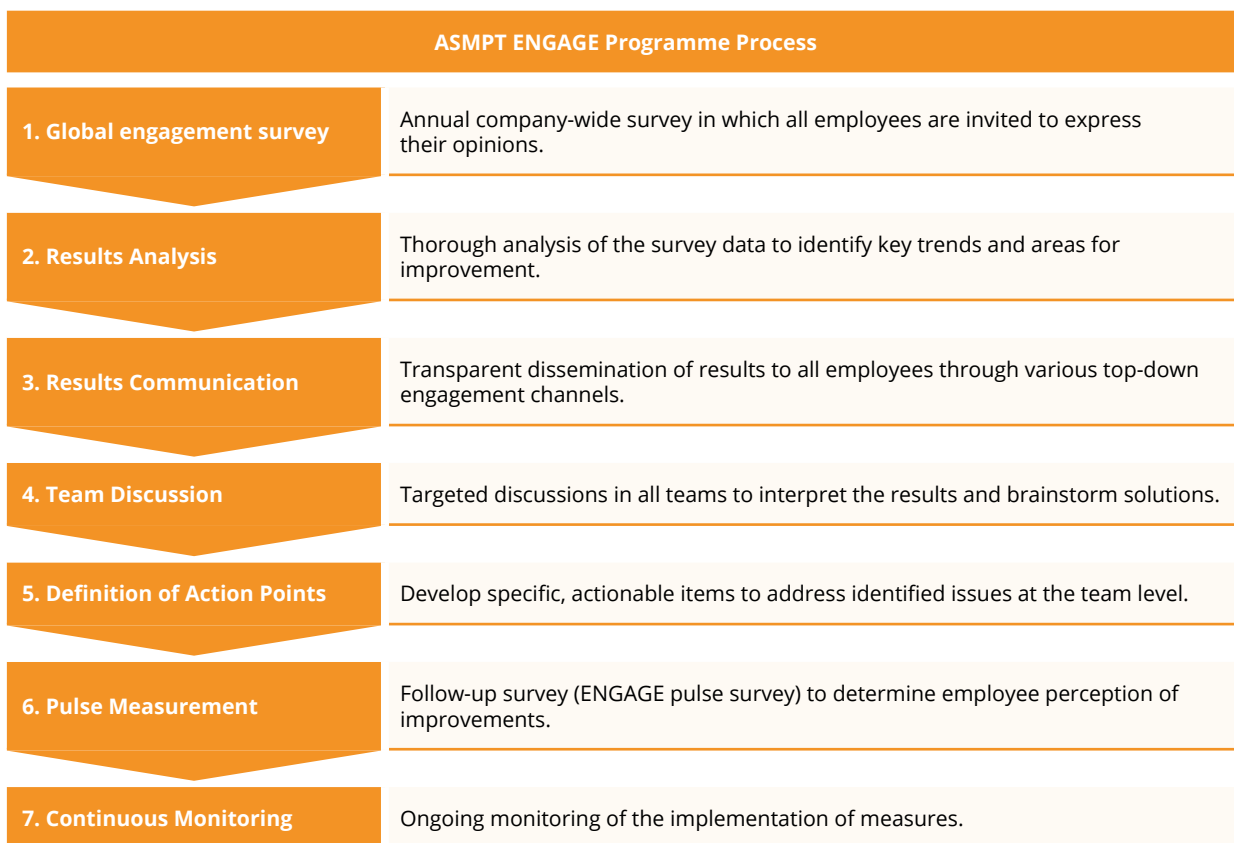
**2. ASMPT ENGAGE survey:** A global employee engagement survey, called the ASMPT ENGAGE survey, was conducted during the Reporting Period to capture employee feedback worldwide and measure the company’s “Sustainable Engagement Rate” using the “3Es” framework. The survey identified two key focus areas for improvement. The first is strengthening senior leadership confidence, with actions such as building trust and visibility through leadership communication, global town halls, office visits, and aligning management goals with strategic objectives. The second focus area is enabling growth and development, with initiatives centred on job evaluation, skill frameworks, and talent development programmes to cultivate a skilled and capable workforce aligned with ASMPT’s POWER values.

**3. The ENGAGE programme has led to significant improvements:**

- Increased focus on effective communication of corporate strategy.
- Facilitate discussions on current challenges.
- Improved transparency of core POWER values.
- Intensive strategy workshops with direct employee involvement.

**4. “3Es” framework**

“3Es” framework	
Being <b>Engaged</b>	Demonstrating commitment to achieve goals.
Being <b>Enabled</b>	Building a work environment that supports productivity.
Being <b>Energised</b>	Maintaining employee’s personal well-being.



- **Freedom of association:** ASMPT fully recognises and respects the right of employees to freedom of association in accordance with local laws. In Germany, Netherlands, the UK, China and Korea, our employees have established labour unions or work councils, enabling open communication with management to discuss working conditions and management practices. The union actively engages with the company on economic matters such as operational processes, personnel procedures, and working hours. Regular meetings address topics like fair pay scale classifications, and workshops are organised to draft and negotiate collective bargaining agreements, fostering collaboration and mutual understanding.
- **Legal requirements and industry practices:** ASMPT's Code of Conduct complies with all applicable labour laws including, for instance, the Modern Slavery Act 2015 (UK). Our Code of Business Con-

duct aligns with the RBA Code of Conduct, which adheres to international labour laws. The Group also builds close relationships with leading industry bodies to collaborate on best labour practices.

## Measurable Success

- During the Reporting Period, the Group was not aware of any material non-compliance with laws and regulations relating to preventing child and forced labour.
- 8% increase in female full-time employees compared to 2023
- Invited over 7,600 employees from globally to participate in the Global Employee Engagement Survey, with an overall participation rate of 89%.

### Zero-tolerance on Forced and Child Labour

**We ensure our business practices protect and uphold human rights and dignity.**

- We adhere to the International Labour Organisation Fundamental Conventions, 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 is discovered within our operations, we pledge to follow procedures and guidelines as per applicable local and international laws and regulations to eliminate such practices.
- During the hiring process, every worker must receive a written employment agreement in their native language or a language they understand, detailing the terms and conditions of employment.
- Workers have the freedom to leave their job or terminate their employment at any time, either by serving the required notice period or providing payment in lieu of notice, as outlined in their employment contract.

### Strong Connection with Local Industry Bodies

**We facilitate regular dialogue and the exchange of best practices.**

- We have established strong connections with local government and associations to exchange and adopt the best practices on labour standards. For instance, our Singapore team has built robust connections with the Singapore National Employer Federation and the Singapore Semiconductor Industry Association to communicate and receive the latest practices on labour standards.
- We align our human resource policies with globally recognised benchmarks for fair and progressive employment practices.

### Wage and Working Hour

**In compliance with local laws, we ensure that minimum wages are paid and maximum working hours are respected.**

- Overtime is paid based on local legislated guidelines.
- Employees are entitled to a minimum of one day off per week.
- We uphold the principle of equal pay for equal work and qualifications.
- The company will annually review wage standards based on local legislation, union or industry guidelines, and conduct merit exercises to ensure salary increments remain competitive with market and industry benchmarks.

## Young Professional Network – Nurturing Future Leaders at ASMPT

ASMPT nurtures its young talent, fosters a culture of innovation and prepares the next generation of leaders to tackle future challenges in the semiconductor and electronics manufacturing industry. The ASMPT Young Professional Network (YPN) has been initiated as part of this commitment. This vibrant community of employees up to 25 years old has been designed to foster connections, exchange ideas, and build bridges across departments. This initiative aims to discover and nurture young talent, promoting both professional growth and personal development through monthly workshops and activities.

The YPN provides a platform for young professionals to engage in both work-related and leisure activities. These range from professional development workshops on topics such as personality types and time management to recreational outings such as laser tag, climbing, and bowling. This balanced programme of events is designed to offer a range of activities to suit different interests and schedules. This year's highlights included a Change Management training session led by Helena van de Ven, ASMPT's Director Transformational Change. This session provided participants with essential skills to navigate and drive change effectively. The training focused on key elements of change management, including awareness, desire, knowledge, ability, and reinforcement, equipping young professionals with practical strategies and tools for implementing impactful change.

Another significant event was a meeting between the Young Professionals and Josef Ernst, CEO of SMT Solutions. This session provided a unique opportunity for next-generation innovators to gain insights directly from top leadership. Josef Ernst shared his personal career journey, emphasising



*The YPN Network during workshops with ASMPT's Director Transformational Change, Helene van de Ven and SMT Solutions CEO Josef Ernst.*

the importance of excellence and seizing opportunities. The young professionals participated actively in discussions about sustainability initiatives, enhancing ASMPT's external visibility, personal development opportunities, and innovative communication strategies to engage youth.

One of ASMPT's people projects



## 6.2

## Diversity, Equity & Inclusion

ASMPT, a global company with a presence in more than 30 countries and a workforce of approx. 11,000 employees from diverse backgrounds and cultures, places DEI at the core of its operations. We provide our employees with essential tools and an environment that supports their professional development, building on values of honesty, kindness, flexibility, and deep respect for personal dignity and privacy. This inclusive culture and environment attracts and retains top talents, bringing invaluable perspectives and experiences from across the world.

### How do we do this?

- **Boardroom diversity:** Our Board has achieved strong diversity in gender, culture, education, and professional experience, enhancing the Group's direction. Members bring expertise from business, finance, law, technology, and industry. The Board also includes nationals from Singapore, Hong Kong, Thailand, Germany, the Netherlands, Australia, the USA, and Tunisia, providing valuable market insights and a broad range of perspectives. We aim to achieve 25% female representation on our Board by the end of 2025, highlighting our commitment to gender diversity and balanced leadership.
- **Executive Leadership:** Our commitment to diversity extends to our executive leadership as well. The recent promotion of Katie Xu to Executive Vice President and Group Chief Financial Officer has increased female representation at the highest levels of the company, where one third of the Executive Office members are now female.
- **EXCO equity and diversity:** The ASMPT EXCO is the main executive body of ASMPT and is made up of senior executives from across the organisation. In December 2024, it was expanded to include five new members, strengthening its global and diverse representation. This strategic move underscores our commitment to a broad range of perspectives and experiences that are critical to informed decision-making and innovative problem-solving. By fostering a leadership team that reflects the diversity of our global operations, we improve organisational performance by ensuring that our strategies are not only effective but also resonate in different cultural contexts, strengthening our position as a forward-looking, inclusive organisation.
- **Preventive policy and measures:** ASMPT is firmly committed to maintaining a workplace free from discrimination and harassment, as outlined in our Code of Business Conduct. Employees are strictly prohibited from engaging in any harsh or inhumane treatment, including violence, gender-based violence, sexual harassment, abuse, corporal punishment, mental or physical coercion, bullying, public shaming, or verbal abuse. This Code is communicated during onboarding and reinforced through regular training sessions. All employees complete mandatory training that covers respectful communication, anti-harassment, and bystander intervention, helping to identify and prevent even subtle forms of mistreatment. To ensure accountability, we provide multiple confidential reporting channels, including an anonymous hotline and an online tool, empowering employees to report any incidents safely and without fear of retaliation.
- **DEI Ring Team:** ASMPT's DEI Ring Team, supported by regional diversity groups, underpins our commitment to foster an inclusive environment. The DEI Ring Team's core mission is to develop and implement a strategic framework that actively eliminates bias and promotes fairness in critical areas: age, ethnic origin and nationality, gender and gender identity, physical and mental abilities, religion and belief, sexual orientation, and social origin. Our DEI Ring Team also organised a range of activities aimed at raising awareness of the distinctive strengths and needs of our people.
- **Facilities to foster inclusion:** We have implemented a range of facilities to support the diverse needs of employees worldwide. Many of our offices are equipped with disability-friendly features such as braille signage, hearing loops, wheelchair-accessible ramps, and designated accessible restrooms. These amenities ensure equitable access for employees with disabilities, fostering a sense of belonging and independence. Depending on the region, we also offer gender-neutral facilities for our employees. Additionally, prayer rooms are provided in some offices for religious observance, accommodating diverse spiritual practices, and allowing employees to honour their faith without compromising their professional responsibilities.

## Measurable Success

- As of 31 December 2024, 20% of Board members (2 of 10) are female, along with 19% (3 of 16) in the EXCO and 33% (1 of 3) in the EO.
- The DEI Ring Team accomplished the following initiatives in 2024
  1. Extended the Women's Chapters programme in all key regions.

2. Developed support facilities and policies for working parents.
3. Organised a broad range of activities, such as lectures and sharing sessions promoting work-life harmony and discussing gender equity, and health awareness sharing sessions emphasising employee wellbeing.



*Sharing personal career experiences with Maria Vesterlund, Senior Director Procurement SMT Solutions*

### EmpowHer's Coffee Roulette

EmpowHer, a renowned network dedicated to women's social and economic development, introduced a

quarterly Coffee Roulette to connect our female colleagues across Germany. The session is designed to unite our female staff from every level of seniority across all areas of business. This offers an excellent platform for diverse collaborations including:

- Sharing business insights.
- Exchanging knowledge about roles.
- Discussing ideas, views, and experience.
- Exploring solutions to both personal and business-wide challenges.
- Strengthening connections across the company.

One of ASMP's people projects

### Mechatronics Workshops in Germany

Traditionally, mechatronics has been stereotyped as a male-only subject. In order to promote a modern view to our next generation, we organised hands-on mechatronics workshops for Year 10 students at a school near our offices in Germany. During the collaboration, we ignited the girls and boys' passion for STEM, breaking down traditional barriers and enhancing equal access to technical education. The students showed high interest and were actively considering their future studies and career opportunities in STEM. We are pleased to see the emergence of our future engineers, scientists and innovators, irrespective of gender.



*STEM workshops for Year 10 students in Munich, Germany*

One of ASMP's people projects



Group CEO Robin Ng with female team members in Singapore

## Women's Day 2024

Being an global event, at our many locations worldwide women celebrated International Women's Day with local activities, like for example with the special "Show HER Charm" event in China.

In Singapore, 62 female employees came together. It was kicked off by sharing of pre-recorded inter-



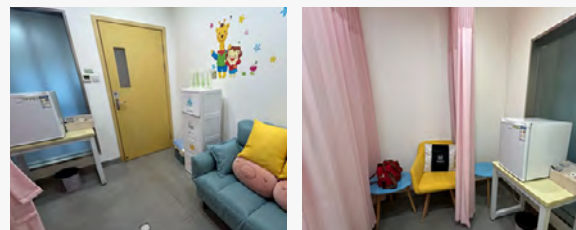
views featuring female Board members, conveying ASMPPT's continuous advocacy for the Group's core DEI values, expressing respect to women, and recognising the achievements of female employees. The interviews with female senior management personnel demonstrated not only their career success, but also ASMPPT as a place where women have the equal opportunity to be nurtured and thrive.

One of ASMPPT's people projects

## Support Facilities and Policies for Working Parents

ASMPPT is dedicated to supporting working parents in every aspect, providing a friendly environment for employees from different family backgrounds and in different stages of their personal life. We introduced dedicated spaces including a mother and infant room together with a children's homework room for several offices in China in 2024.

These facilities are thoughtfully designed with comfortable furnishings and child-friendly decorations, providing a safe and engaging place for children to study and relax while their parents focus



Infant room in ASMPPT Chengdu facility

on work. ASMPPT in Chengdu also provided additional parental benefits, including a maternity leave support programme offering increased maternity leave entitlement, and salary and childbirth allowance provisions. This demonstrates ASMPPT's unwavering support for working parents.

One of ASMPPT's people projects

## 6.3

## Ensure Employee's Health and Safety

At ASMPT, the health and safety of our employees is our top priority, especially as we are in the semiconductor industry where risks such as chemical exposure, accidents involving sophisticated equipment, and ergonomic challenges are present in certain areas of the workplace. A lack of safety measures may not only result in accidents but could also increase operating costs and cause reputational damage. To prevent this, we have comprehensive health and safety protocols in place that minimise risk and ensure the safety of our employees in all areas of our business.

### How do we do this?

- **Management framework:** We ensure strict compliance with all relevant health and safety regulations and standards, such as the RBA Code of Conduct, in the countries in which we operate. Our sites in China, Hong Kong, Singapore, Weymouth and Germany are ISO 45001 certified. We have established the Environmental, Health and Safety ("EHS") committee to review the achievement of set health and safety goals, and implementation of measures taken to achieve these goals, as well as provide suggestions for improvements to future measures.
- **Industrial hygiene:** In our commitment to industrial hygiene, we ensure safe working conditions to prevent work-related injuries, illnesses, and the spread of contagious diseases. Physical examinations are conducted regularly for employees identified with high occupational hazard risk. To enhance comfort and safety, we have a labour protection product improvement team to gather employee feedback and procure standard-compliant, comfortable protective gear. Additionally, we run protective occupational health campaigns to promote both the physical and mental well-being of our workforce.
- **Emergency preparedness:** We identify and minimise risks through preventive measures. We have identified potential hazards across all areas of our sites, including the chemical transfer warehouse, hazardous waste warehouse, tank area, factory warehouse, and production office. For each identified risk, we have developed comprehensive emergency plans, assessing risk levels in accordance with relevant laws and regulations. Our strategy includes implementing control measures to mitigate these risks effectively and establishing robust emergency response plans, such as a chemical leak emergency plan and fire evacuation drill, to manage incidents swiftly. We also have an Emergency Response Team to ensure a team of regularly trained personnel are prepared for emergency actions.
- **Machine safeguarding:** Before new equipment enters the factory, we assess its risks and implement necessary control measures. Production departments will regularly check for new hazards, including equipment, and ensure previous controls are in place. We will also conduct a comprehensive safety assessment of all equipment annually and post safety qualification labels to prevent accidents. Health and safety management software is also used for monitoring inspections, checklists and observations.
- **Occupation injury management:** We have established Incident Management Control procedures to ensure effective responses to occupational injuries. When an accident occurs, the department head must report the case to the EHS department within two hours. The EHS department will then issue an accident briefing and inform the company's EHS committee and management. An accident investigation meeting will be organised by the EHS department later with an investigation report published after the meeting. The responsible department must complete the rectifications process within the designated period and submit the accident improvement evaluation form. The EHS department will evaluate these results, report to the EHS committee, and share findings with relevant employees and stakeholders.
- **Safety training and awareness:** During the Reporting Period, we organised diverse health and safety seminars and training sessions, covering topics like conventional special equipment operation and various operational techniques. We also regularly send notices to our employees on Health and Safety issues, such as the Occupational Disease Prevention, the Work Safety Law, as well as heatstroke prevention tips. To further enhance awareness, we have organised activities including Occupational Safety and Health Month, emergency personnel development, and hidden danger identification initiatives.

■ **Health and safety communication:** To enhance health and safety communication, we have installed display screens continuously broadcast safety information. Key safety details, including fire evacuation instructions and four-colour safety risk maps, are prominently posted at entrances. Additionally, every conference room includes a

session explaining fire evacuation procedures, ensuring all employees are well-informed about emergency protocols. Heavy inventories are labelled to ensure proper tools and techniques are used when lifting the items and the labelling requirement is effectively communicated between relevant teams.



*Employee Wellbeing is one of ASMPT Hong Kong's workplace priorities*

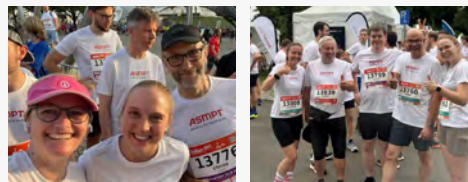
## Employee Wellness Month

Our Hong Kong office launched its first Employee Wellness Month Programme in 2024. The campaign aims to enhance individual health and work-life balance by exploring various wellness topics. Employees are welcome to participate in different activities, which are designed to promote a holistic approach to wellness, encouraging a healthier and more balanced lifestyle. We provide activities which build physical strength, such as Zumba fitness and stick mobility, and activities which foster mental well-being, such as health consultations, and Forrest Bath.

One of ASMPT's people projects

## B2Run Munich 2024

At B2Run Munich 2024, ASMPT demonstrated our team spirit by doubling our participation to 92 registrations this year. The event brought together over 30,000 runners from 1,500 companies, completing a 5km course through Olympiapark with a finish at the iconic Munich Olympic Stadium. This initiative provided an excellent platform to promote teamwork, resilience, and inclusivity, welcoming participants of all fitness levels. We commend our team members for their dedication and perseverance throughout the event, which exemplified the values of collaboration and determination in ASMPT.



*The ASMPT team at B2Run in the Munich Olympic Stadium, Germany*

One of ASMPT's people projects



*The SMT Solutions team enjoyed a nutritious start at the on-site muesli bar, part of our comprehensive wellness initiative to promote healthier eating habits and boost workplace well-being.*

## **Promoting Employee Well-being: A Holistic Approach to Health at ASMPT**

By investing in our employee's well-being, we are building a more resilient and engaged workforce, better equipped to face future challenges in our industries. Our approach to employee wellness aligns with our broader commitment to ESG principles, ensuring ASMPT remains a responsible and forward-thinking leader in our sector. We have implemented a comprehensive health initiative that addresses both physical and mental wellness, demonstrating our commitment to creating a healthier, happier workplace.

The Munich team partnered with SBK, a German health insurance company, to organise the following key initiatives in 2024:

- **Bioelectrical Impedance Analyses:** We offered detailed body composition assessments, empowering employees with insights to make informed health decisions.
- **On-site Nutrition:** We provided a muesli bar in our office, ensuring employees have access to nutritious snacks throughout the workday.

These initiatives have not only improved employee health awareness but also boosted morale and productivity.

One of ASMPT's people projects

## Measurable Success

- In 2024, the average Total Recordable Incident Rate for our production sites in China, Malaysia and Singapore was 0.096, which is well below the industry average of 0.24 and our own target of 0.12.
- In 2024, there were 61 reported injury cases, which is a 9% reduction compared to 2023.

- There have been no work-related fatalities for past three years.
- ASMPT Technology (Huizhou) Co., Ltd was recognised as a Huicheng District Healthy Enterprise in October 2024, one of the two enterprises in Huicheng District that achieved this.

## 6.4 Human Capital Development

We are committed to recruiting, retaining and developing top talent through competitive pay, diverse opportunities and experiences, and a culture that promotes professional and personal growth. In an era marked by global talent shortage, our focused investment in people enhances our competitive advantage and drives future success.

### How do we do this?

#### Talent Acquisition

- **Core principles:** ASMPT proactively recruits talented individuals through a diverse and tailored approach, customised according to job types and levels.

- **Engagement channels:** ASMPT employs a comprehensive talent acquisition strategy to attract individuals across all career stages, from graduates to seasoned professionals, ensuring alignment with the company's culture and goals. Leveraging social media platforms like LinkedIn, ASMPT highlights team achievements, awards, and recognitions to strengthen its employer brand and appeal. Strategic partnerships with recruitment firms and industry bodies, such as the Singapore Semiconductor Industry Association and Women's Engineering Society, broaden outreach and enhance ASMPT's Employee Value Proposition. Collaborations with universities and schools build talent pipelines through internships, collaborative projects, and outreach initiatives, introducing students to ASMPT's innovative work. These efforts collectively position ASMPT as an employer of choice within the industry, fostering a strong and diverse talent pool.

## University and School Fairs

We believe that proactively engaging with prospective candidates is critical for us to secure future talents. In doing so, we are committed to establishing direct connections and communications with high-potential individuals by actively participating in university and school fairs. We have achieved significant success in:

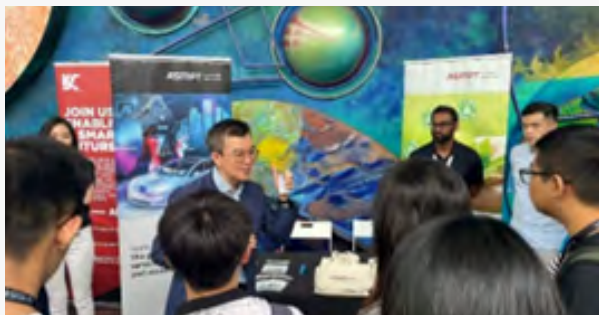
- Showcasing ASMPT's culture and career opportunities
- Attracting a diverse range of talents
- Gaining insights into market trends and student expectations
- Enhancing inclusion and growth within our organisation

*Interns and students are highly welcome to work and get practice in ASMPT, at all sites.*



*HR representatives and engineering experts at IKOM in Munich, Germany*

One of ASMPT's people projects



*The ASMPT team showcased career opportunities and products at Nanyang Technological University's Semiconductor Awareness Day in Singapore.*

## Semiconductor Awareness Day

Our Singapore team participated in the Semiconductor Awareness Day at Nanyang Technological University in August 2024, which aimed to raise awareness about the semiconductor industry among engineering students. ASMPT's HR representatives and engineering experts highlighted career opportunities, promoted internships, and strengthened industry-academic ties. The event fea-



tured an interactive booth showcasing ASMPT's products and services, engaging students with career path information. A dedicated presentation also covered the industry's role in innovation and emerging trends. The event successfully enhanced student engagement, increased their interest in internships, and strengthened industry-academic ties, reinforcing ASMPT's presence as a key player in Singapore's semiconductor sector.

One of ASMPT's people projects



## Talent Retention: Attractive Benefits

- Core principles:** ASMPT is committed to a fair, competitive compensation system that rewards employees' achievements and supports both individual and the company's goals. In doing so, we have a global remuneration strategy in place, ensuring that our policy offers competitive pay by aligning with job-specific criteria and market benchmarks. Our remuneration approach is built on four main principles:

Core Principles	
<b>Fair and Appropriate</b>	Ensuring equitable and competitive pay across the Group.
<b>Shareholder and Business Alignment</b>	Structuring costs to support value creation and talent retention.
<b>Driving the Right Behaviours</b>	Encouraging teamwork with rewards linked to performance.
<b>Effective Implementation</b>	Complying strictly with regulations and governance.

ASMPT continuously reviews and improves its compensation systems by carrying out regular job evaluations, ensuring fairness and equity among all employees.

- Senior management compensation:** Our transparent and market-aligned approach includes clear KPIs for senior management, ensuring motivation and alignment with the Group's strategic goals, as monitored by the Remuneration Committee.
- Fringe benefits:** We offer a comprehensive range of employee benefits, including variable incentives, retirement support, insurance benefits, flexible spending accounts, flexible work arrangements, long service award and wellness programmes, all designed to meet the needs and requirements of different regions and roles.
- Global People System ("GPS"):** ASMPT has made a substantial investment in our GPS, designed to enhance the digital experience for employees by streamlining transactions and promoting engagement. The implementation of this system enables the Group to achieve a balanced and optimised repair, reinforcement, and reinvention strategies.

- Clear and transparent career pathway:** ASMPT promotes career growth and development through structured initiatives that empower employees to grow and succeed. With well-defined career progression frameworks, employees can advance by developing technical expertise, leadership skills, and behaviours aligned with their career interests. Promotions are guided by clear criteria, emphasising role responsibilities, performance, influence, and alignment with ASMPT's POWER values. The ASMPT Academy's specialised training programmes support continuous learning, while cross-functional projects and job rotations broaden exposure to diverse business areas. To ensure fairness, a structured and transparent review process governs promotions, with results shared through GPS and local sites.

## Training and Development

- Core principles:** ASMPT offers competitive and tailored career development programmes to meet the diverse talent needs, ensuring professional growth. With our aim to motivate our employees, we provide them with a positive experience and enhance their level of commitment through continuous development and promotion. Strategically, our trainings are designed for target groups and regions, and also with specific initiatives, such as lean management, negotiation for buyers, cost calculation, project management, etc.
- Learning Management System:** The ASMPT Academy, our Learning Management System serves as a structured technical infrastructure as follows:

Learning Management System	
<b>Purpose</b>	<ul style="list-style-type: none"> <li>Administering and coordinating different types of trainings for diverse groups of employees.</li> <li>Providing employees with efficient access to training content.</li> </ul>
<b>Types of training</b>	<ul style="list-style-type: none"> <li>New hires' orientation programmes</li> <li>Mandatory company trainings</li> <li>Technical and soft skills trainings</li> <li>Trainings specifically enhancing engineering expertise and leadership and aligning with our vision of "Enabling the digital world"</li> </ul>

■ **Training for managerial leaders:** ASMPT has introduced a series of training programmes focused on developing key competencies for management personnel at all levels, supporting the company's continued growth and resilience. These programmes target critical areas such as security, quality, finance, people management, change management, and supply chain mindset, which are essential for our success. Each course is carefully designed to provide actionable insights, practical tools, and effective frameworks that enhance both individual capabilities and overall organisational performance.

■ **Training plan and programme:** Our training programmes during the Reporting Period are designed to align with ASMPT's strategic priorities, equipping employees with the skills and knowledge needed for sustainable growth and resilience. Centred around six key themes, these initiatives address critical business needs. To ensure effectiveness, a comprehensive feedback system is in place to continuously collect feedbacks from participants and key stakeholders, thereby enabling ongoing refinement and improvement of our training programmes.

Key Training Focus in 2024	
<b>Business Ethics &amp; Compliance Training</b>	To refresh all ASMPT leaders and employees on the commitment to upholding ethical standards and behaviours.
<b>Digital Competency and IT Security</b>	We focus on digital transformation by equipping employees with essential knowledge in cybersecurity, data privacy, and IT security to foster a security-aware, digitally literate organisational culture.
<b>Quality and Compliance Mindset</b>	Quality and compliance training, including "Tier 1 Automotive Quality Mindset" and "Say It Now" workshops, promotes proactive adherence to regulatory standards and operational excellence.
<b>Financial Acumen for Non-Finance</b>	"Finance for Non-Finance" course enhances financial literacy, enabling R&D Managers and HR to manage budgets, interpret data, and make sound decisions aligned with organisational goals.
<b>Leadership and High-Performance Culture Development</b>	Leadership workshops, like the "High Performance Behavioural Model", develop skills to foster high-performance cultures, enhance engagement, and drive continuous team improvement for competitive advantage.
<b>Effective Change Management</b>	The "Prosci Change Management" course equips employees with tools to manage change effectively, reduce disruption, and ensure successful adaptation across all organisational levels.

## Measurable Success

- 100% participation on Goal Setting training for Directors at SEMI
- Successful rollout of the inaugural ASMPT Leader Development Programme



*Rising talent team explores innovation at Siemens THE IMPULSE and gain insights into sustainable production and AI-driven analytics*

## ASMPT's 'Rising' Talent Programme

ASMPT's innovative 'Rising' talent programme is designed to foster an entrepreneurial mindset through a blend of formal learning, hands-on experiences, networking, and specialised training. In 2024, participants engaged in transformative opportunities like the Design Thinking Workshop at Munich University of Applied Sciences, where they tackled real-world challenges in a cutting-edge laboratory, gaining fresh perspectives to apply at ASMPT. The programme also included a visit to Siemens THE IMPULSE and Electronic Works in Amberg, where the participants explored sustainability in production, AI-driven quality analytics, and saw ASMPT machines in action. This visit not only deepened their understanding of innovation, but also broadened their knowledge of the synergy between technology, people and sustainability, enriching their professional development beyond technical expertise.

One of ASMPT's people projects



*The ASMPT apprentices during their visit to HEIDENHAIN, where they gained insights into advanced manufacturing processes and expanded their network to further their professional development.*

## Educational Partnerships with HEIDENHAIN

At ASMPT, quality education is a cornerstone of our mission, supported by diverse educational programmes across our sites. A recent highlight was the visit by our apprentices in Mechatronics, IT Systems Integration, and Industrial Clerkship to HEIDENHAIN, Germany where they gained valuable insights into the advanced manufacturing processes for measurement systems. This long-standing

partnership underscores the importance of collaboration during the training phase, enabling apprentices to explore practical applications of their training, exchange knowledge, and strengthen professional networks. The visit also opened avenues for future collaborative training activities. Beyond technical learning, this partnership fosters personal and professional growth, enhancing the development of our people and preparing them for future challenges in their careers.

One of ASMPT's people projects

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**7.1 Contributing to Local Communities**

8



**Appendix**



# Supporting our Communities

# 7

## Supporting our Communities

### 2024 Highlights

- **ASMPT fosters societal welfare through NGO partnerships, volunteering, and community outreach, strengthening teamwork, social responsibility, and employee engagement.**
- **ASMPT showcased strong social responsibility in 2024, contributing over USD 227,000 and more than 17,000 volunteer hours.**

As a responsible global citizen, we are committed to making a positive impact on our local communities where we operate. We encourage active participation in community work by the ASMPT team and also provide local communities with substantial financial support.

Our actions and strategies on supporting our communities are aligned with the following SDGs:



# 7.1 Contributing to Local Communities

In alignment with our vision of “Enabling the digital world” and our mission to build a bright and sustainable future, our dedication to supporting local communities is unwavering. We are committed not only to enhancing technological progress but also empowering our communities for sustainable growth and collective prosperity.

## How do we do this?

- **Core principles:** We focus our efforts on key areas such as community well-being, youth empowerment through education, and eco-conscious initiatives.
- **Community work:** We foster long-term partnerships with non-Governmental Organisations (“NGOs”), universities, and government bodies to

promote societal welfare collaboratively. Our employees also actively participate in volunteering activities.

- **Financial support:** ASMPT provides extensive support to charities and NGOs through generous donations. We also engage in various community initiatives, sponsorships, and donations that align with ASMPT’s overarching mission.

## Measurable Success

- In 2024, ASMPT demonstrated its commitment to social responsibility through a series of charitable initiatives, cumulatively investing contributing over USD 227,000 and contributing more than 17,000 man-hours in a wide range of activities and fund-raising event.



*Strengthening community ties and embodying ASMPT’s commitment to social responsibility: the ASMPT team taking part at Willing Hearts in July 2024 to support meal preparation and delivery for those in need.*

## Visit to Willing Hearts

ASMPT organised a community outreach event in July 2024 at Willing Hearts, a charity providing meals to those in need. About 50 employees participated in the event, demonstrating ASMPT’s commitment to social responsibility. The event aimed to strengthen employee relationships, provide insights into local challenges, and emphasise charitable work. Volun-

teers were required to manage the whole meal production process from meal preparation, packaging, to delivery. This not only fostered a stronger sense of teamwork spirit but also allowed employees to gain a deeper understanding of community issues, enhancing their sense of purpose and commitment to ASMPT’s values.

One of ASMPT’s community projects



*Our Munich branch has a long-standing partnership with a refugee home and fulfils children's Christmas wishes every year.*

## ASMPT Munich Christmas Initiatives

At our Munich location, Christmas initiatives by the ASMPT team are a longstanding tradition, as social responsibility and the promotion of community welfare are particularly important to ASMPT.

One of our oldest traditions is our long-term partnership with a local refugee centre. Each year, children from the centre create colourful wish lists, and our employees select wishes to fulfil. This initiative not only provides gifts for the children but also strengthens the sense of community and connection among our employees. Even in the eighth year of the initiative, the dedication of team members in selecting and wrapping the gifts remains unwavering. In addition to fulfilling individual wishes, we also provide surprise packages for many more children.

The initiative is always a highlight for employees who value a cooperative workplace culture, as it actively fosters a sense of community – both within the team and with society at large.

One of ASMPT's community projects

## Tackling marine pollution

ASMPT UK has joined forces with the Weymouth & Portland Marine Litter Project, a community interest company based in Weymouth. This project aims to reduce marine pollution through community projects.

**The Marine Litter Project has several key objectives.**

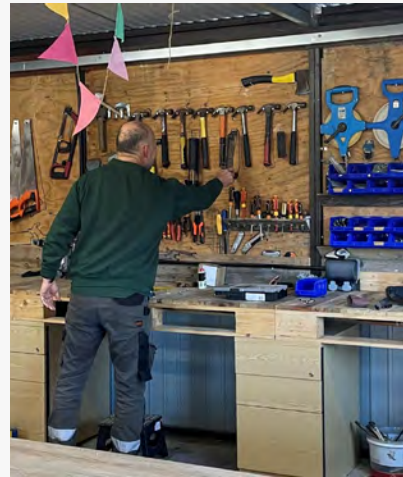
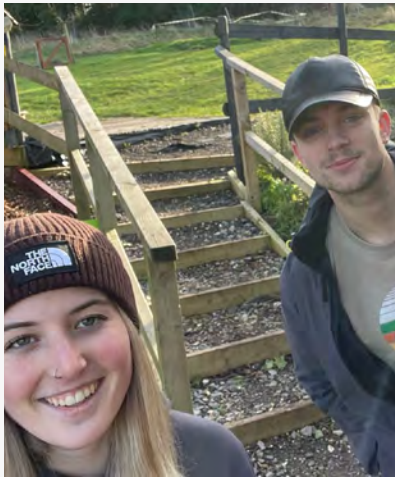
- Turning waste into raw materials for reuse.
- Cleaning up beaches to tackle coastal pollution.

- Reducing single-use plastic waste.
- Teaching people about marine conservation.

ASMPT UK backs this award-winning environmental project to help preserve local ecosystems and educate communities on sustainability. The company helps make the project more effective at reducing marine pollution and raising environmental awareness in Weymouth.

One of ASMPT's community projects





ASMP T Weymouth contributed to Tumbledown Farm project with donations and dedicated volunteers.

## Tumbledown Farm Project

ASMP T UK has partnered with a unique community initiative in Weymouth – the Tumbledown Farm project for several years. This former 27-hectare farm, owned by Weymouth Borough Council, has been recognised as a community asset and serves as a hub for local volunteering and learning opportunities.

### The aims of the project are:

- To promote wellbeing by involving all people

- To protect and preserve the environment for future generations
- To create a sustainable income while fostering biodiversity

ASMP T UK's involvement with Tumbledown Farm aligns with our commitment to sustainable community development and environmental protection.

By collaborating with this project, we are helping to create meaningful experiences for the ASMP T team while promoting sustainable land management practices.

One of ASMP T's community projects

- 
- 1  **About This Report**
  - 2  **Sustainability Strategy**
  - 3  **Governance**
  - 4  **Minimising Environmental Impact**
  - 5  **Creating Value through Innovation**
  - 6  **Nurturing our Employees**
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- 
- 8.1 **Environmental KPI Performance Table**
  - 8.2 **Social KPI Performance Table**
  - 8.3 **GRI and HKEX Content Index**
  - 8.4 **HKEX Appendix C2 ESG Code Part D Content Index**



# Appendix

# 8.1

## Environmental KPI Performance Table

Environmental KPIs	Unit	2022	2023	2024
<b>Greenhouse Gas (GHG) Emission <sup>1,2</sup></b>				
<b>Total GHG Emissions</b>	ktCO <sub>2</sub> e	64.5	47.5	55.5 <sup>3</sup>
- Scope 1: GHG Emissions from Gaseous Fuel Consumption	ktCO <sub>2</sub> e	1.5	1.0	0.3
- Scope 1: GHG Emissions from Vehicles Usage	ktCO <sub>2</sub> e	0.8	0.8	0.8
- Scope 2: GHG Emissions from Electricity Consumption	ktCO <sub>2</sub> e	62.1	45.8	54.4
Total GHG Emission Intensity	tCO <sub>2</sub> e/ \$'000 HKD revenue	0.0033	0.0032	0.0041
<b>Air Emission</b>				
<b>Total Air Emissions from Gaseous Fuel Consumption</b>	tonnes	1.02	0.58	0.85
- Sulphur Oxides	tonnes	0.01	0.004	0.005
- Nitrogen Oxides	tonnes	1.01	0.57	0.85
- Particulate Matter	tonnes	0.00008	0.00005	0.00008
Total Air Emissions Intensity	kg/ \$'000 HKD revenue	0.0004	0.00004	0.00006
<b>Energy Consumption</b>				
<b>Total Energy Consumption <sup>4</sup></b>	GWh	117.0	93.2	104.4
Consumed Electricity <sup>5</sup>	GWh	106.6	85.3	99.7
LPG	kg	4,965	4,800	4,800
Natural Gas	m <sup>3</sup>	63,914	94,885	109,442
Town Gas	Units	550,166	305,138	42,769
Renewable Town Gas	Units	Nil	Nil	342,467
Diesel oil	L	241,692	223,329	220,426
Unleaded petrol	L	68,967	72,025	72,881
Total Energy Intensity	kWh/ \$'000 HKD revenue	5.9	6.1	7.9

Environmental KPIs	Unit	2022	2023	2024
<b>Water Consumption</b>				
<b>Total Water Consumption</b>	million m <sup>3</sup>	0.51	0.45	0.49
Water Consumption Intensity	m <sup>3</sup> / '000 HKD revenue	0.03	0.03	0.04
<b>Packaging Material Consumption</b>				
<b>Total Packaging Material Consumption</b>	tonnes	4,194	2,798	2,606
Packaging Material Intensity	kg/ \$'000 HKD revenue	0.22	0.19	0.21
<b>Waste Generation</b>				
<b>Total Hazardous Waste Generated</b>	tonnes	557	304	271
Hazardous Waste Intensity	kg/ \$'000 HKD revenue	0.03	0.02	0.02
Recycled Hazardous Waste	%	1	4	1
<b>Total Non-Hazardous Waste Generated</b>	tonnes	3,075	2,036	2,399
Non-Hazardous Waste Intensity	kg/ \$'000 HKD revenue	0.16	0.14	0.18
Recycled Non-Hazardous Waste	%	73	71	80

<sup>1</sup> 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.

<sup>2</sup> Indirect emissions (Scope 2) adopt the relevant emission factors in Appendix 2: Reporting Guidance on Environmental KPIs in How to prepare an ESG Report published by the Hong Kong Stock Exchange and other national standards.

<sup>3</sup> The total GHG emission increased due to production and four subsidiaries added to reporting scope during the Reporting Period.

<sup>4</sup> The total energy consumption and total energy intensity value for 2022 and 2023 have been updated to include the energy consumption from the gaseous fuels of LPG, natural gas, town gas, diesel oil and unleaded petrol.

<sup>5</sup> The consumed electricity includes the purchased grid electricity, purchased green electricity and renewable electricity generated from solar panel.

# 8.2

## Social KPI Performance Table

Social KPIs		2022	2023	2024
<b>Number of Employees</b>				
<b>Total Employees' number</b>		12,509	11,338	11,637
By Employee Type (Employees)	Full time	12,269	11,099	11,388
	Part time	240	239	249
By Gender (Employees)	Female	2,995	2,751	2,975
	Male	9,514	8,587	8,662
By Age Group (Employees)	Below 30	3,009	2,178	2,233
	30-50	7,365	6,959	7,124
	Above 50	2,135	2,201	2,280
By Region (Employees)	Greater China <sup>6</sup>	6,660	6,012	6,517
	Rest of Asia	2,760	2,194	2,024
	North and South America	419	426	476
	Europe, Middle East & Africa	2,670	2,706	2,620
<b>Turnover Rate for Full-Time Employees <sup>7</sup></b>				
<b>Overall</b>		21.9%	18.2%	21.2%
By Gender	Female	20.9%	17.3%	21.5%
	Male	24.9%	18.5%	21.2%
By Age Group	Below 30	49.1%	41.5%	57.9%
	30-50	13.2%	12.4%	13.7%
	Above 50	9.8%	12.3%	12.1%
By Region	Greater China	11.3%	14.1%	23.0%
	Rest of Asia	51.3%	30.2%	24.0%
	North and South America	15.6%	16.2%	23.9%
	Europe, Middle East & Africa	40.6%	24.1%	14.4%

Social KPIs		2022	2023	2024
<b>Work-Related Injury and Fatalities</b>				
Number of Work-Related Injuries (Employees)		45	67	61
Number of Lost Days Due to Work Injury (Days)		806	699	707
Number of Work-Related Fatalities (Employees)		0	0	0
<b>Percentage of Employees who Received Training <sup>8</sup></b>				
<b>Overall</b>		70.8%	78.8%	79.7%
By Gender	Female	73.7%	84.1%	83.3%
	Male	69.7%	77.1%	78.4%
By Employee Category	Management	67.1%	68.6%	74.8%
	Engineers	60.9%	75.0%	77.6%
	Corporate Staff	74.3%	80.0%	80.5%
	Production Staff	76.0%	85.9%	82.4%
By Region	Greater China	82.2%	85.0%	84.1%
	Rest of Asia	48.3%	74.0%	72.8%
	North and South America	23.6%	22.8%	71.4%
	Europe, Middle East & Africa	74.3%	79.1%	75.2%

<sup>6</sup> Greater China region includes operation locations in Mainland China, Hong Kong, and Taiwan.

<sup>7</sup> Turnover rate refers to employees of the in-scope entities. It is calculated as "total number of employees leaving employment during the reporting year divided by average number of employees as of 31 Dec of the reporting year and then multiplied by 100%"

<sup>8</sup> Percentage of employees who received training is calculated by the following methodology:  
(Employees who received training in the specific category) / (Beginning headcount on 2024 + New hire for FY 2024 in the specific category)

Social KPIs		2022	2023	2024
<b>Average Hours of Training per Employee <sup>9</sup></b>				
<b>Overall (Hours)</b>		14.2	20.1	20.8
By Gender (Hours)	Female	14.4	27.9	22.2
	Male	14.1	17.6	20.4
By Employee Category (Hours)	Management	11.3	12.2	14.4
	Engineers	14.9	22.2	24.3
	Corporate Staff	15.4	17.0	19.6
	Production Staff	14.0	22.3	20.4
By Region (Hours)	Greater China	14.6	18.4	19.8
	Rest of Asia	11.6	22.1	25.7
	North and South America	0.7	9.0	3.0
	Europe, Middle East & Africa	19.0	23.7	23.1
<b>Number of Suppliers <sup>10</sup></b>				
<b>Total</b>		2,139	2,040	2,515

<sup>9</sup> Average hours of training per employee are calculated by the following methodology:  
(Total Number of training hours for employees in the specific category) / (Headcount as of 1st January 2024 + New hires in FY 2024 within the specific category)

<sup>10</sup> Due to confidentiality, the number of suppliers by geographical region will not be disclosed.



# 8.3

## GRI and HKEX Content Index

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 2: General Disclosures 2021</b>					
2-1	Organisational details			1.2 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.	1.1 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	1.2 About ASMPT 8.2 Social KPI Performance Table	P.6 P.102
2-7	Employees	KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	8.2 Social KPI Performance Table	P.102
2-9	Governance structure and composition			3.1 ESG Governance Structure	P.27
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.	3.1 ESG Governance Structure	P.27

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 2: General Disclosures 2021</b>					
2-15	Conflicts of interest			Corporate Governance Report in the Annual Report	
2-16	Communication of critical concerns			3.1 ESG Governance Structure	P.27
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			Corporate Governance Report in the Annual Report	
2-20	Process to determine remuneration			Corporate Governance Report in the Annual Report	
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);	3.1 ESG Governance Structure 2.3 ASMP's Sustainability Framework	P.27 P.16
2-23	Policy commitments			3. Governance 4. Minimising Environmental Impact 6. Nurturing our Employees	P.24-35 P.36-57 P.72-91
2-24	Embedding policy commitments			3. Governance 4. Minimising Environmental Impact 6. Nurturing our Employees	P.24-35 P.36-57 P.72-91
2-25	Processes to remediate negative impacts			2. Sustainability Strategy	P.8

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 2: General Disclosures 2021</b>					
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.	3.3 Business Ethics	P.30
2-27	Compliance with laws and regulations			3.3 Business Ethics 3.5 Supply Chain Management	P.30 P.33
2-28	Membership associations			Corporate member of Singapore Semiconductor Industry Association, SCS, and SEMI	
2-29	Approach to stakeholder engagement			2.4 Stakeholder Engagement	P.18
2-30	Collective bargaining agreements			Approximately 29% of total employees are covered by collective bargaining agreements	
<b>GRI 3: Material Topics 2021</b>					
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.	2.5 Materiality Assessment	P.20
3-2	List of material topics				
<b>HKEX Mandatory Disclosure Requirements</b>					
		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.	1.2 About This Report	P.3
		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.	1.2 About This Report	P.3

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>Topic-Specific Standards</b>					
<b>Governance Disclosures</b>					
<b>GRI 201: Economic Performance</b>					
3-3	Management of material topics	GD A4	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	4.2 Climate Strategy and Risk Management	P.45
201-1	Direct economic value generated and distributed	KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	7.1 Contributing to Local Communities	P.95
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.	4.2 Climate Strategy and Risk Management	P.45
<b>GRI 205: Anti-Corruption</b>					
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.	3.3 Business Ethics	P.30
205-1	Operations assessed for risks related to corruption			3.3 Business Ethics	P.30
205-2	Communication and training about anti-corruption policies and procedures	KPI B7.3	Description of anti-corruption training provided to directors and staff.	3.3 Business Ethics	P.30
205-3	Confirmed incidents of corruption and actions taken	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the Reporting Period and the outcomes of the cases.	3.3 Business Ethics	P.30
		KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	3.3 Business Ethics	P.30

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 308: Supplier Environmental Assessment</b>					
3-3	Management of material topics	GD B5	Policies on managing environmental and social risks of the supply chain.	3.5 Supply Chain Management	P.33
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.	3.5 Supply Chain Management	P.33
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.	3.5 Supply Chain Management	P.33
		KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	3.5 Supply Chain Management	P.33
<b>GRI 414: Supplier Social Assessment</b>					
3-3	Management of material topics	GD B5	Policies on managing environmental and social risks of the supply chain.	3.5 Supply Chain Management	P.33
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.	3.5 Supply Chain Management	P.33
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.	3.5 Supply Chain Management	P.33
		KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	3.5 Supply Chain Management	P.33

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>Environmental Disclosures</b>					
<b>GRI 301: Materials</b>					
3-3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	4.3 Environmental Management	P.52
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	4.3 Environmental Management	P.52
		KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	8.1 Environmental KPI Performance Table	P.100
<b>GRI 302: Energy</b>					
3-3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	4.3 Environmental Management	P.52
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	4.3 Environmental Management	P.52
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).	4.3 Environmental Management	P.52
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.	4.1 Decarbonisation Initiatives	P.39
302-5	Reduction in energy requirements of products and services			5.2 Quality as the Basis for Sustainability	P.62
<b>GRI 303: Water and Effluents</b>					
3-3	Management of material topics	GD A2	Policies on the efficient use of resources, including energy, water and other raw materials.	4.4 Conserving the Environment	P.54
		GD A3	Policies on minimising the issuer's significant impacts on the environment and natural resources.	4.4 Conserving the Environment	P.54

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 303: Water and Effluents</b>					
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. For detail explanation, please refer to 4.4 Conserving the Environment	
		KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	4.4 Conserving the Environment	P.54
303-5	Water consumption	KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	8.1 Environmental KPI Performance Table	P.100
<b>GRI 305: Emissions</b>					
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.	4.1 Decarbonisation Initiatives 4.3 Environmental Management	P.39 P.52
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).	8.1 Environmental KPI Performance Table	P.100
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.	4.1 Decarbonisation Initiatives	P.39
305-7	Nitrogen oxides(NOx), Sulphur oxides (SOx), and other significant air emissions	KP1 A1.1	The types of emissions and respective emissions data.	8.1 Environmental KPI Performance Table	P.100

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 306: Effluents and Waste</b>					
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.	4.4 Conserving the Environment	P.54
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.	4.4 Conserving the Environment	P.54
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).	8.1 Environmental KPI Performance Table	P.100
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).	8.1 Environmental KPI Performance Table	P.100
306-5	Waste directed to disposal				
<b>Social Disclosures</b>					
<b>GRI 401: Employment</b>					
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	6.1 Employee Engagement	P.75
401-1	New employee hires and employee turnover	KPI B1.2	Employee turnover rate by gender, age group and geographical region.	8.2 Social KPI Performance Table	P.102



GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 401: Employment</b>					
401-2	Benefits provided to the full-time employees that are not provided to temporary or part-time employees			6.1 Employee Engagement	P.75
<b>GRI 403: Occupational Health and Safety</b>					
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	6.3 Ensure Employee's Health and Safety	P.84
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.	6.3 Ensure Employee's Health and Safety	P.84
403-2	Hazard identification, risk assessment, and incident investigation			6.3 Ensure Employee's Health and Safety	P.84
403-3	Occupational health services			6.3 Ensure Employee's Health and Safety	P.84
403-4	Worker participation, consultation, and communication on occupational health and safety			6.3 Ensure Employee's Health and Safety	P.84
403-5	Worker training on occupational health and safety			6.3 Ensure Employee's Health and Safety	P.84
403-6	Promotion of worker health			6.3 Ensure Employee's Health and Safety	P.84
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships			6.3 Ensure Employee's Health and Safety	P.84

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 403: Occupational Health and Safety</b>					
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.	8.2 Social KPI Performance Table	P.102
		KPI B2.2	Lost days due to work injury.	8.2 Social KPI Performance Table	P.102
<b>GRI 404: Training and Education</b>					
3-3	Management of material topics	GD B3	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	6.4 Human Capital Development	P.87
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).	8.2 Social KPI Performance Table	P.102
		KPI B3.2	The average training hours completed per employee by gender and employee category.	8.2 Social KPI Performance Table	P.102
404-2	Programmes for upgrading employee skills and transition assistance programmes			6.4 Human Capital Development	P.87
<b>GRI 405: Diversity and Equal Opportunity</b>					
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	6.2 Diversity, Equity & Inclusion	P.81
405-1	Diversity of governance bodies and employees			8.2 Social KPI Performance Table	P.102

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 406: Non-Discrimination</b>					
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	6.2 Diversity, Equity & Inclusion	P.81
406-1	Incidents of discrimination and corrective actions taken			6.2 Diversity, Equity & Inclusion	P.81
<b>GRI 408: Child Labour</b>					
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	6.1 Employee Engagement	P.75
		KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	6.1 Employee Engagement	P.75
		KPI B4.2	Description of steps taken to eliminate such practices when discovered.	6.1 Employee Engagement	P.75
408-1	Operations and suppliers at significant risk for incidents of child labour			3.5 Supply Chain Management 6.1 Employee Engagement	P.33 P.75

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 413: Local Communities</b>					
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	7.1 Contributing to Local Communities	P.95
		KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	7.1 Contributing to Local Communities	P.95
<b>GRI 413: Local Communities</b>					
413-1	Operations with local community engagement, impact assessments, and development programmes			7.1 Contributing to Local Communities	P.95
<b>GRI 416: Customer Health and Safety</b>					
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.	3.4 Product Responsibility	P.32
		KPI B6.2	Number of products and service related complaints received and how they are dealt with.	3.4 Product Responsibility	P.32
416-1	Assessment of the health and safety impacts of product and service categories			3.4 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.	3.4 Product Responsibility	P.32

GRI Ref.	GRI Standards Description	HKEX ESG Guide Ref.	HKEX Description	Report Section/ Remark	Page
<b>GRI 418: Customer Privacy</b>					
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.	3.6 Cybersecurity	P.34
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.	3.6 Cybersecurity	P.34
<b>Product Responsibility</b>					
N/A	N/A	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights	3.4 Product Responsibility	P.32
N/A	N/A	KPI B6.4	Description of quality assurance process and recall procedures.	3.4 Product Responsibility	P.32

# 8.4

## HKEX Appendix C2 ESG Code Part D Content Index

Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(I) Governance</b>		
<p>19 (a). An issuer shall disclose the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. Specifically, the issuer shall identify that body(s) or individual(s) and disclose information about:</p> <p>(i) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to climate-related risks and opportunities;</p> <p>(ii) how and how often the body(s) or individual(s) is informed about climate-related risks and opportunities;</p> <p>(iii) how the body(s) or individual(s) takes into account climate-related risks and opportunities when overseeing the issuer's strategy, its decisions on major transactions, and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities;</p> <p>(iv) how the body(s) or individual(s) oversees the setting of, and monitors progress towards, targets related to climate-related risks and opportunities, including whether and how related performance metrics are included in remuneration policies</p>	3.1 ESG Governance Structure	P.27
<p>19 (b). An issuer shall disclose the management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about:</p> <p>(i) whether the role is delegated to a specific management-level position or management-level committee and how oversight is exercised over that position or committee; and</p> <p>(ii) whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.</p>	3.1 ESG Governance Structure	P.27
<b>(II) Strategy</b>		
<p>20. An issuer shall disclose information to enable an understanding of climate-related risks and opportunities that could reasonably be expected to affect the issuer's cash flows, its access to finance or cost of capital over the short, medium or long term. Specifically, the issuer shall:</p> <p>a) describe climate-related risks and opportunities that could reasonably be expected to affect the issuer's cash flows, its access to finance or cost of capital over the short, medium or long term;</p> <p>(b) explain, for each climate-related risk the issuer has identified, whether the issuer considers the risk to be a climate-related physical risk or climate-related transition risk;</p> <p>(c) specify, for each climate-related risk and opportunity the issuer has identified, over which time horizons – short, medium or long term – the effects of each climate-related risk and opportunity could reasonably be expected to occur; and</p> <p>(d) explain how the issuer defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the issuer for strategic decision-making</p>	4.2 Climate Strategy and Risk Management – Climate Risk and Opportunity Identification	P.45

<sup>11</sup> This content index is based on the HKEX's Appendix C2 Environmental, Social and Governance Reporting Code effective on 1 January 2025.

Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(II) Strategy</b>		
<p>21. An issuer shall disclose information that enables an understanding of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain. Specifically, the issuer shall disclose:</p> <p>(a) a description of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain; and</p> <p>(b) a description of where in the issuer's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).</p>	4.2 Climate Strategy and Risk Management – Climate Risk and Opportunity Identification	P.45
<p>22 (a) An issuer shall disclose information that enables an understanding of the effects of climate-related risks and opportunities on its strategy and decision-making. Specifically, the issuer shall disclose information about how the issuer has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the issuer plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. Specifically, the issuer shall disclose information about:</p> <p>(i) current and anticipated changes to the issuer's business model, including its resource allocation, to address climate-related risks and opportunities;</p> <p>(ii) current and anticipated adaptation and mitigation efforts (whether direct or indirect);</p> <p>(iii) any climate-related transition plan the issuer has (including information about key assumptions used in developing its transition plan, and dependencies on which the issuer's transition plan relies), or an appropriate negative statement where the issuer does not have a climate-related transition plan; and</p> <p>(iv) how the issuer plans to achieve any climate-related targets (including any greenhouse gas emissions targets (if any)), described in accordance with paragraphs 37 to 40;</p>	4.1 Decarbonisation Initiatives – Net-zero goals 4.2 Climate Strategy and Risk Management – Climate Risk and Opportunity Identification	P.39 P.45
<p>22 (b) An issuer shall disclose information about how the issuer is resourcing, and plans to resource, the activities disclosed in accordance with paragraph 22(a).</p>	4.2 Climate Strategy and Risk Management – Climate Risk and Opportunity Identification	P.45
<p>23. An issuer shall disclose information about the progress of plans disclosed in previous Reporting Periods in accordance with paragraph 22(a).</p>	4.1 Decarbonisation Initiatives – Our net-zero journey	P.39
<p>24 (a) An issuer shall disclose qualitative and quantitative information about how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the Reporting Period;</p>	For qualitative information 4.2 Climate Strategy and Risk Management – Climate Risk and Opportunity Identification	P.45
<p>24 (b) An issuer shall disclose qualitative and quantitative information about the climate-related risks and opportunities identified in paragraph 24(a) for which there is a significant risk of a material adjustment within the next annual Reporting Period to the carrying amounts of assets and liabilities reported in the related financial statements.</p>	For quantitative information: Financial Effects Relief Adopted	

Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(II) Strategy</b>		
<p>25 (a). The issuer shall provide qualitative and quantitative disclosures about how the issuer expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration:</p> <ul style="list-style-type: none"> <li>(i) its investment and disposal plans; and</li> <li>(ii) its planned sources of funding to implement its strategy;</li> </ul>	Financial Effects Relief Adopted	
<p>25 (b). The issuer shall provide qualitative and quantitative disclosures about how the issuer expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities.</p>	Financial Effects Relief Adopted	
<p>26 (a). An issuer shall disclose information that enables an understanding of the resilience of the issuer's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the issuer's identified climate-related risks and opportunities. An issuer shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with an issuer's circumstances. In providing quantitative information, the issuer may disclose a single amount or a range. Specifically, the issuer shall disclose the issuer's assessment of its climate resilience as at the reporting date, which shall enable an understanding of:</p> <ul style="list-style-type: none"> <li>(i) the implications, if any, of the issuer's assessment for its strategy and business model, including how the issuer would need to respond to the effects identified in the climate-related scenario analysis;</li> <li>(ii) the significant areas of uncertainty considered in the issuer's assessment of its climate resilience; and</li> <li>(iii) the issuer's capacity to adjust, or adapt its strategy and business model to climate change over the short, medium or long term;</li> </ul>	4.2 Climate Strategy and Risk Management – Climate Scenario Analysis	P.45
<p>26 (b). An issuer shall disclose how and when the climate-related scenario analysis was carried out, including:</p> <ul style="list-style-type: none"> <li>(i) information about the inputs used, including: (1) which climate-related scenarios the issuer used for the analysis and the sources of such scenarios; (2) whether the analysis included a diverse range of climate-related scenarios; (3) whether the climate-related scenarios used for the analysis are associated with climate-related transition risks or climate-related physical risks; (4) whether the issuer used, among its scenarios, a climate-related scenario aligned with the latest international agreement on climate change; (5) why the issuer decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties; (6) time horizons the issuer used in the analysis; and (7) what scope of operations the issuer used in the analysis (for example, the operation, locations and business units used in the analysis);</li> <li>(ii) the key assumptions the issuer made in the analysis; and</li> <li>(iii) the Reporting Period in which the climate-related scenario analysis was carried out.</li> </ul>	4.2 Climate Strategy and Risk Management – Climate Scenario Analysis	P.45



Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(III) Risk Management</b>		
<p>27 (a). An issuer shall disclose information about the processes and related policies it uses to identify, assess, prioritise and monitor climate-related risks, including information about:</p> <ul style="list-style-type: none"> <li>(i) the inputs and parameters the issuer uses (for example, information about data sources and the scope of operations covered in the processes);</li> <li>(ii) whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related risks;</li> <li>(iii) how the issuer assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the issuer considers qualitative factors, quantitative thresholds or other criteria);</li> <li>(iv) whether and how the issuer prioritises climate-related risks relative to other types of risks;</li> <li>(v) how the issuer monitors climate-related risks; and</li> <li>(vi) whether and how the issuer has changed the processes it uses compared with the previous Reporting Period</li> </ul>	4.2 Climate Strategy and Risk Management – Procedure for Climate-Related Risk and Opportunity Incorporation	P.45
<p>27 (b). An issuer shall disclose information about the processes the issuer uses to identify, assess, prioritise and monitor climate-related opportunities (including information about whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related opportunities);</p>	4.2 Climate Strategy and Risk Management – Climate Scenario Analysis	P.45
<p>27 (c). An issuer shall disclose information about the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the issuer's overall risk management process.</p>	4.2 Climate Strategy and Risk Management – Climate Scenario Analysis	P.45
<b>(IV) Metrics and Targets</b>		
<p>28. An issuer shall disclose its absolute gross greenhouse gas emissions generated during the Reporting Period, expressed as metric tons of CO<sub>2</sub> equivalent, classified as:</p> <ul style="list-style-type: none"> <li>(a) Scope 1 greenhouse gas emissions;</li> <li>(b) Scope 2 greenhouse gas emissions; and</li> <li>(c) Scope 3 greenhouse gas emissions.</li> </ul>	<p>For 28 (a) &amp; (b): 8.1 Environmental KPI Performance Table</p> <p>For 28 (c): Reasonable Information Relief Adopted</p>	P.100

Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(IV) Metrics and Targets</b>		
<p>29. An issuer shall:</p> <p>(a) measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional authority or another exchange on which the issuer is listed to use a different method for measuring greenhouse gas emissions;</p> <p>(b) disclose the approach it uses to measure its greenhouse gas emissions including: (i) the measurement approach, inputs and assumptions the issuer uses to measure its greenhouse gas emissions; (ii) the reason why the issuer has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and (iii) any changes the issuer made to the measurement approach, inputs and assumptions during the Reporting Period and the reasons for those changes;</p> <p>(c) for Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 28(b), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to enable an understanding of the issuer's Scope 2 greenhouse gas emissions; and</p> <p>(d) for Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 28(c), disclose the categories included within the issuer's measure of Scope 3 greenhouse gas emissions, in accordance with the Scope 3 categories described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)</p>	8.1 Environmental KPI Performance Table	P.100
30. An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related transition risks.	Reasonable Information Relief Adopted	
31. An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related physical risks.	Reasonable Information Relief Adopted	
32. An issuer shall disclose the amount and percentage of assets or business activities aligned with climate-related opportunities.	Reasonable Information Relief Adopted	
33. An issuer shall disclose the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities.	Reasonable Information Relief Adopted	
<p>34. An issuer shall disclose:</p> <p>(a) an explanation of whether and how the issuer is applying a carbon price in decision-making (for example, investment decisions, transfer pricing, and scenario analysis); and</p> <p>(b) the price of each metric tonne of greenhouse gas emissions the issuer uses to assess the costs of its greenhouse gas emissions; or an appropriate negative statement that the issuer does not apply a carbon price in decision-making.</p>	The Group did not implement internal carbon prices in decision-making during the Reporting Period.	
35. An issuer shall disclose whether and how climate-related considerations are factored into remuneration policy, or an appropriate negative statement. This may form part of the disclosure under paragraph 19(a)(iv).	The Group did not include climate-related considerations which are factored into remuneration policy during the Reporting Period.	

Part D: Climate-related Disclosures Requirements <sup>11</sup>	References Section/ Sub-section	Page
<b>(IV) Metrics and Targets</b>		
<p>36. An issuer is encouraged to disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterise participation in an industry. In determining the industry-based metrics that the issuer discloses, an issuer is encouraged to refer to and consider the applicability of the industry-based metrics associated with disclosure topics described in the IFRS S2 Industry-based Guidance on implementing Climate-related Disclosures and other industry-based disclosure requirements prescribed under other international ESG reporting frameworks</p>	8.1 Environmental KPI Performance Table	P.100
<p>37. An issuer shall disclose:</p> <p>(a) the qualitative and quantitative climate-related targets the issuer has set to monitor progress towards achieving its strategic goals; and</p> <p>(b) any targets the issuer is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the issuer shall disclose: (a) the metric used to set the target; (b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives);</p> <p>(c) the part of the issuer to which the target applies (for example, whether the target applies to the issuer in its entirety or only a part of the issuer, such as a specific business unit or geographic region);</p> <p>(d) the period over which the target applies;</p> <p>(e) the base period from which progress is measured;</p> <p>(f) milestones or interim targets (if any);</p> <p>(g) if the target is quantitative, whether the target is an absolute target or an intensity target; and</p> <p>(h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target.</p>	4.1 Decarbonisation Initiatives – Net-zero goals	P.39
<p>38. An issuer shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including:</p> <p>(a) whether the target and the methodology for setting the target has been validated by a third party;</p> <p>(b) the issuer's processes for reviewing the target;</p> <p>(c) the metrics used to monitor progress towards reaching the target; and</p> <p>(d) any revisions to the target and an explanation for those revisions</p>	4.1 Decarbonisation Initiatives 4.3 Environmental Management	P.39 P.52
<p>39. An issuer shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the issuer's performance.</p>	4.1 Decarbonisation Initiatives – Our net-zero journey	P.39

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<b>(IV) Metrics and Targets</b>		
<p>40. For each greenhouse gas emissions target disclosed in accordance with paragraphs 37 to 39, an issuer shall disclose:</p> <p>(a) which greenhouse gases are covered by the target;</p> <p>(b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target;</p> <p>(c) whether the target is a gross greenhouse gas emissions target or a net greenhouse gas emissions target. If the issuer discloses a net greenhouse gas emissions target, the issuer is also required to separately disclose its associated gross greenhouse gas emissions target;</p> <p>(d) whether the target was derived using a sectoral decarbonisation approach; and</p> <p>(e) the issuer's planned use of carbon credits to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target. In explaining its planned use of carbon credits, the issuer shall disclose: (i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits; (ii) which third-party scheme(s) will verify or certify the carbon credits; (iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and (iv) any other factors necessary to enable an understanding of the credibility and integrity of the carbon credits the issuer plans to use (for example, assumptions regarding the permanence of the carbon offset).</p>	4.1 Decarbonisation Initiatives – Net-zero goals	P.39
<p>41. In preparing disclosures to meet the requirements in paragraphs 21 to 26 and 37 to 38, an issuer shall refer to and consider the applicability of cross-industry metrics (see paragraphs 28 to 35) and (ii) industry-based metrics (see paragraph 36).</p>	4.1 Decarbonisation Initiatives 4.2 Climate Strategy and Risk Management	P.39 P.45





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