



# SUSTAINABILITY 2024 @ PSA SG



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# ABOUT THIS REPORT

## Sustainable progress through strategic action

PSA Corporation Limited (PSA Singapore; PSA SG) is pleased to present Sustainability 2024 @ PSA SG, our 8<sup>th</sup> annual sustainability report that showcases our continued journey towards a more sustainable future through ongoing sustainability strategies and efforts, as well as our progress in meeting our sustainability goals.

Sustainability is a collective responsibility that necessitates minimising the impacts of our operations on the environment, society, and economy, while also enhancing our business's resilience to climate change. PSA SG's sustainability framework serves as a blueprint to guide PSA SG's current and future sustainability efforts to contribute towards the group's wider sustainability goals. It prioritises key areas that are critical for advancing our business and enhancing the sustainability performance of our port services and value chain activities.

Sustainability 2024 @ PSA SG has been prepared in accordance with the GRI 2021 Universal Standards, an internationally recognised reporting framework encompassing sustainability disclosures that are relevant for our business. This report also incorporates the climate-related disclosure recommendations from the Taskforce for Climate-related Financial Disclosures (TCFD), with an aim to progressively align to the International Financial Reporting Standards (IFRS) S2 Climate-related Disclosure Standards. Consistent with our commitment to transparency, integrity, and accountability,

this sustainability report aims to provide our stakeholders with insights of our ESG (Environmental, Social, and Governance) performance and key ESG initiatives undertaken by PSA SG during the fiscal year from 1 January to 31 December 2024. Major initiatives undertaken by our business units across Southeast Asia region have also been highlighted on page 88.

This report incorporates the relevant data gathered from our business units to accurately reflect our ESG progress. Any restatements of data or information from previous fiscal years will be clearly identified within the respective sections of the report. We have used standardised units of measurement and included the necessary conversion factors to enhance data transparency and comparability.

To ensure accuracy and reliability, the data and information featured in this report has undergone a thorough interval review process. Our Scope 1 and 2 greenhouse gas (GHG) emissions data for fiscal year 2022 to 2024 and our Scope 3 GHG emissions data for fiscal year 2024, has been externally assured against the ISO 14064:2018 standard, in line with PSA International's commitment to enhancing reporting credibility. PSA SG aims to obtain external assurance for future sustainability reports to further strengthen the credibility and transparency of our reporting.

PSA SG welcomes any feedback on our sustainability practices and disclosures. You can reach us at [sg.psa.contact@globalpsa.com](mailto:sg.psa.contact@globalpsa.com) for any inquiries or comments.



# MESSAGE FROM REGIONAL CEO, SOUTHEAST ASIA

Welcome to Sustainability 2024 @ PSA SG, our eighth edition. At PSA Singapore (PSA SG), our mission remains steadfast: to be the port operator of choice in the world's gateway hubs, renowned for best-in-class services and successful partnerships.

This annual report showcases our ongoing commitment to achieving net zero by 2050, with 2019 as the baseline year. It is a testament to our dedication to transparent and responsible reporting, and crucial for assessing our progress on sustainability goals.

## A Year of Record-Breaking Performance

Despite global economic uncertainties and supply chain disruptions, we continue to deliver high levels of service and reliability, meeting our customers' needs. Our agility, commitment to customers, and the dedication of our employees define our success. We handled a record volume of 40.9 million TEUs in 2024, surpassing our previous annual high of 38.8 million TEUs set in 2023 with a 5.4% increase.

The company's continued growth solidifies our position as a vital super hub in PSA's network and in the global supply chain ecosystem.

## Advancing towards Net Zero Emissions

The World Meteorological Organization has confirmed that 2024 is the warmest year, underscoring the urgent need for climate action.

PSA SG is committed to reducing our carbon footprint and promoting sustainable practices. In line with the Paris Agreement and the Singapore Green Plan 2030, we aim to reduce our Scope 1 and 2 greenhouse gas emissions by 50% by 2030 and achieve net zero emissions by 2050, against baseline year 2019. We are transitioning to low-carbon fuels, electrifying our fleet, investing in our workforce, and leveraging smart and sustainable technology, including automation projects.

Digitalisation and decarbonisation go hand-in-hand. Our green projects support our transition to cleaner fuels to power our port equipment and vehicles. By replacing diesel-powered container handling equipment (CHE) with electric ones and using green



electricity, we can significantly reduce GHG emissions. We aim to deploy over 500 electric prime movers and convert 90% of our yard cranes to electric or hybrid variants by 2030. Our LNG prime mover fleet grew to 240 units in 2024, and we continue to test electric and hydrogen prime movers to evaluate their performance and feasibility for further integration into our operations.

## Forging Industry-Wide Collaboration

Beyond our own operations and digital innovations, we recognise the importance of industry-wide collaboration. Our suite of digital products supports our partners and stakeholders in streamlining their work processes, reducing paperwork and enhancing operational efficiency. We are integrating the award winning OptETruck with, SmartBooking™, and iBOX™ to form an intelligent logistics ecosystem. This digital network will connect container terminals, depots, hauliers, and logistics facilities across Singapore. This initiative will not only strengthen Singapore's supply chain ecosystem but also foster sustainability and competitiveness, particularly among SMEs, by improving business agility and aiding in achieving sustainability targets.

Furthermore, in 2024, PSA SG successfully completed our first simultaneous methanol bunkering and cargo operation (SIMOPS) at Tuas Port in partnership with X-Press Feeders and Global Energy Trading (GET). PSA SG and Pacific International Lines (PIL) successfully completed the first trial of low-carbon green shipments, in a joint effort to build a more sustainable end-to-end supply chain ecosystem.



## Pioneering Automation at Tuas Port

Tuas Port has reached a significant milestone, with 11 operational berths by the end of 2024. We have handled over 10 million TEUs, showcasing the port's strategic importance and its cutting-edge automation capabilities.

The development of Tuas Port and the scaling up of operations continue, with our departments at Tuas Port growing to 1300 employees by the end of 2024 and expected to reach 1900 in 2025. Tuas Port will continue to be a symbol of our commitment to innovative and sustainable technologies, and lead the way in environmental stewardship, setting industry benchmarks in maritime trade.

## Reinforcing Supply Chain Ecosystem

PSA SG faces significant challenges in global supply chains management due to ongoing volatility and disruptions. Since the beginning of 2024, PSA SG has ramped up our capabilities to support increased demand and mitigate these disruptions by reinforcing frontline capacity, commissioning new berths at Tuas Port, and reactivating berths at Keppel Terminal. Despite these improvements, supply chain demand remains volatile, and PSA SG is committed to enhancing partnerships through our Node to Network initiatives to improve network efficiency and to better facilitate seamless trade.

Additionally, PSA SG collaborates with liners and cargo owners to decarbonise cargo flows across Southeast Asia, Intra-Asia, and Asia-Europe. This approach aligns with our commitment to achieving net zero greenhouse gas emissions by 2050, shaping a more sustainable shipping industry while responding effectively to changing market demands and unexpected disruptions. In recognition of our efforts, we are honoured to receive the 'Container Terminal Operator of the Year' award at the 2024 Supply Chain Asia Awards.

In 2024, we marked a significant milestone with the groundbreaking of the PSA Supply Chain Hub @ Tuas (PSCH), a cutting-edge facility poised to revolutionise logistics in Singapore. PSCH will be the largest Free Trade Zone cargo handling facility in Southeast Asia when completed in 2027. It will offer a comprehensive suite of value-added services and unparalleled connectivity and scale as a Regional Distribution Centre and a Container Freight Station. This state-of-the-art building is expected to be PSA SG's second Super Low Energy Building (SLEB), incorporating eco-friendly features such as natural ventilation, renewable energy via use of solar panels, harvesting rainwater through a sustainable drainage system, and energy usage tracking via a central utility building system.

## Investing in Our People and Paying It Forward

People remain the heart of our business and are our biggest asset. We take a holistic approach to developing our workforce, recognising that when we take care of our people, we take care of our business. Our commitment to people development is evident in our efforts to raise awareness on mental health and wellness, healthy lifestyles, and occupational health and safety.

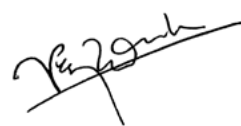
Through our regular mental health and caregiver wellness talks, workshops, and peer support training, we empower our employees to support each other and manage stress and daily challenges. We also invest in upskilling and reskilling our workforce with future-ready capabilities, such as data analytics and automation, to support the digital transformation of our port and supply chain businesses. Through our Annual Five-Year Workforce Strategy review, we have identified four key areas for development, including strengthening the pipeline for frontline staff transitioning into supervisory roles. Our 4E Programme—Engage, Encourage, Expand, Enhance—seeks to nurture talent and provide meaningful growth opportunities.

Our success is also closely linked to the well-being of the communities and ecosystems we operate in. We aim to be a positive force in society by amplifying our "Doing Good" movement and making a meaningful impact through our flagship Corporate Social Responsibility (CSR) programme, PSA Health@Home, which provides vital care and support to senior beneficiaries and vulnerable individuals. At the same time, we encourage active volunteerism amongst our employees to foster a culture of giving and social responsibility. Over the years, we have built many mutually beneficial long-term relationships with the communities, championing projects with different causes and making a difference to the lives of many. In 2024, we deepened our community impact through strategic partnerships with organisations like the Agency for Integrated Care (AIC) and the National Volunteer and Philanthropy Centre (NVPC). We are proud to have been recognised with AIC's Friends of Community Care (FOCC) and the National Volunteer and Philanthropy Centre's (NVPC) "Champions of Good" award for the second time, affirming our commitment to community service.

## Charting a Course for Sustainable Growth

As we look ahead, we will continue to evaluate technologies with the greatest potential and develop the most effective strategies for implementation. Our success is built on the deep collaboration with our customers, the government agencies and industry partners. We will focus on staying relevant, agile and adaptable to achieve excellence and drive innovation alongside our stakeholders.

Guided by our Node to Network vision, we will align ourselves with purpose, act with perseverance and achieve new heights with pride as we shape the future of trade as one PSA. I would like to thank our employees, unions, customers, and partners for their continued support and commitment to sustainability. Together, we can make a difference and create a more sustainable future for generations to come.



**Nelson Quek**

Regional CEO, Southeast Asia  
PSA International

# ABOUT THE COMPANY



Headquartered in Singapore, PSA SG is a wholly-owned subsidiary of PSA International Pte Ltd (PSA), a leading global port operator and trusted partner to cargo stakeholders.

PSA drives trade connectivity by leveraging on an extensive network of ports and expertise in marine and digital solutions to connect customers to global markets and facilitate smooth international trade flows.

PSA's global portfolio includes over 70 deepsea, rail and inland terminals strategically positioned across more than 180 locations in 45 countries. PSA's two flagship port operations are located in Singapore and Belgium. PSA's diverse team leverages on global expertise to build strong partnerships and deliver innovative supply chain solutions to drive

sustainable trade and create world-class port ecosystems.

PSA SG operates the world's largest transshipment hub that facilitates cargo movements globally all year round. In 2024, PSA SG handled a record 40.9 million Twenty-foot Equivalent Units (TEUs), representing a growth of 5.5% as compared to 2023.

We go beyond traditional port operations and differentiate ourselves by providing innovative mid-mile logistics services, backed by advanced digital solutions that leverage our port adjacency. This bespoke and unique offering provides customers with enhanced visibility and control across their supply chains. As a result, PSA is recognised as 'The World's Port of Call' and a preferred partner in port and supply chain operations.



# Seizing Opportunities to Shape a Better Tomorrow

We recognise that today's world is becoming increasingly complex and uncertain, characterised by geopolitical shifts, resource constraints, economic volatility, climate change, and talent demand. PSA remains

committed to our regional strategy that prioritises close collaboration with our customers, partners, and key stakeholders to anticipate uncertainties, seize opportunities and shape a better tomorrow.

1

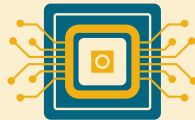
## Node to Network Strategy: Forming a Cohesive and Integrated Network



Across Southeast Asia, we are strategically expanding our port ecosystems through digitalisation and forging partnerships with key PSA's Node to Network initiatives to optimise shipping schedule reliability and network efficiency. Building on our successful partnership with CrimsonLogic, PSA Marine, and PSA BDP to establish a robust and integrated network across Singapore's key logistics nodes, we have extended this growth strategy to Indonesia, Vietnam and Thailand, whereby inland container depots, warehouses, rail capabilities and digital solutions are being integrated into port operations. This interconnected approach aims to maximise synergies between different nodes to create a more efficient and connected regional network, and as a result, deliver greater value to our customers.

2

## Sustainability Through Digitalisation



We strive to develop and deliver products that are value-adding and help our customers achieve their sustainability goals. By leveraging on digitalisation and technological advancements in the market, our products are designed to optimise resource utilisation, improve operational efficiency, and support our internal and external stakeholders in the green energy transition. Continuous investments into technology and our workforce, such as automation projects, has formed a key part of our strategy to drive sustainability through digitalisation.

3

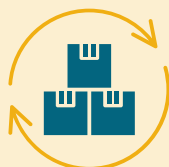
## Investing in Our People, Creating a Sustainable Future



Our people are our greatest asset. We foster a culture of continuous, self-directed learning by providing opportunities for our employees to upskill and reskill themselves and develop their competencies to support career growth and embrace new challenges in Singapore and Southeast Asia. By supporting our employees' professional growth, we are able to enhance our collective success as an organisation.

4

## Fostering a Resilient and Sustainable Supply Chain



We prioritise resiliency, agility, and sustainability at the core of our operations. We have expanded our service offerings beyond traditional port operations, such as through supporting shippers and cargo owners by offering efficient and sustainable solutions across the entire supply chain. By leveraging digital technologies, we are building a connected global network that positions us as a resilient and robust global port hub. This commitment underpins our vision of co-creating a fully integrated ecosystem where all stakeholders are connected.

## Mission

To be the port operator of choice in the world's gateway hubs, renowned for best-in-class services and successful partnerships.

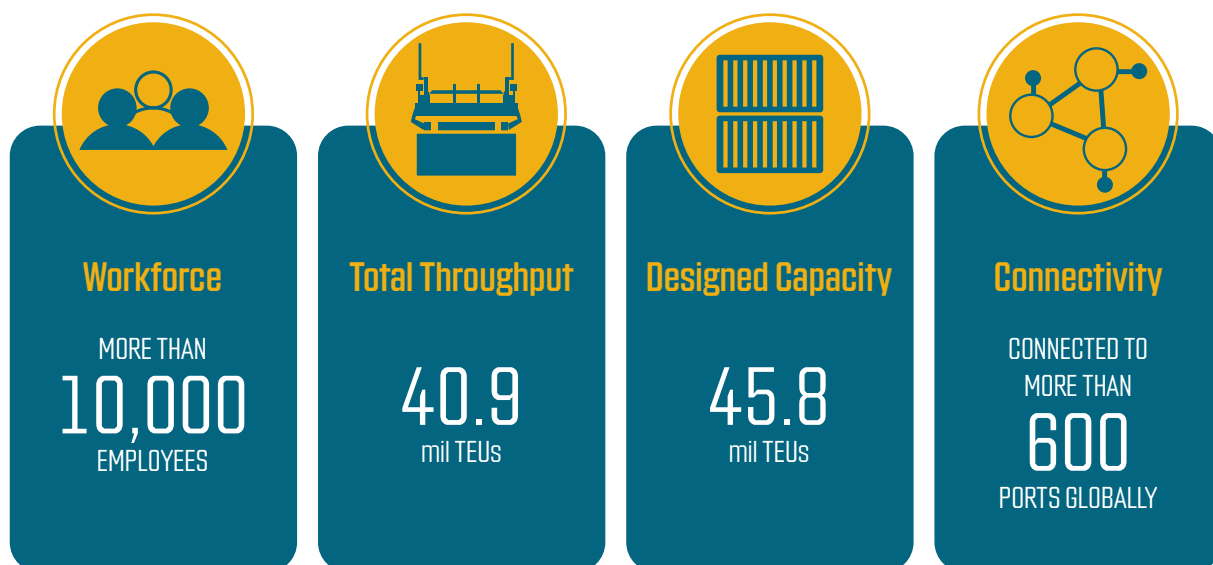


## Our Terminals

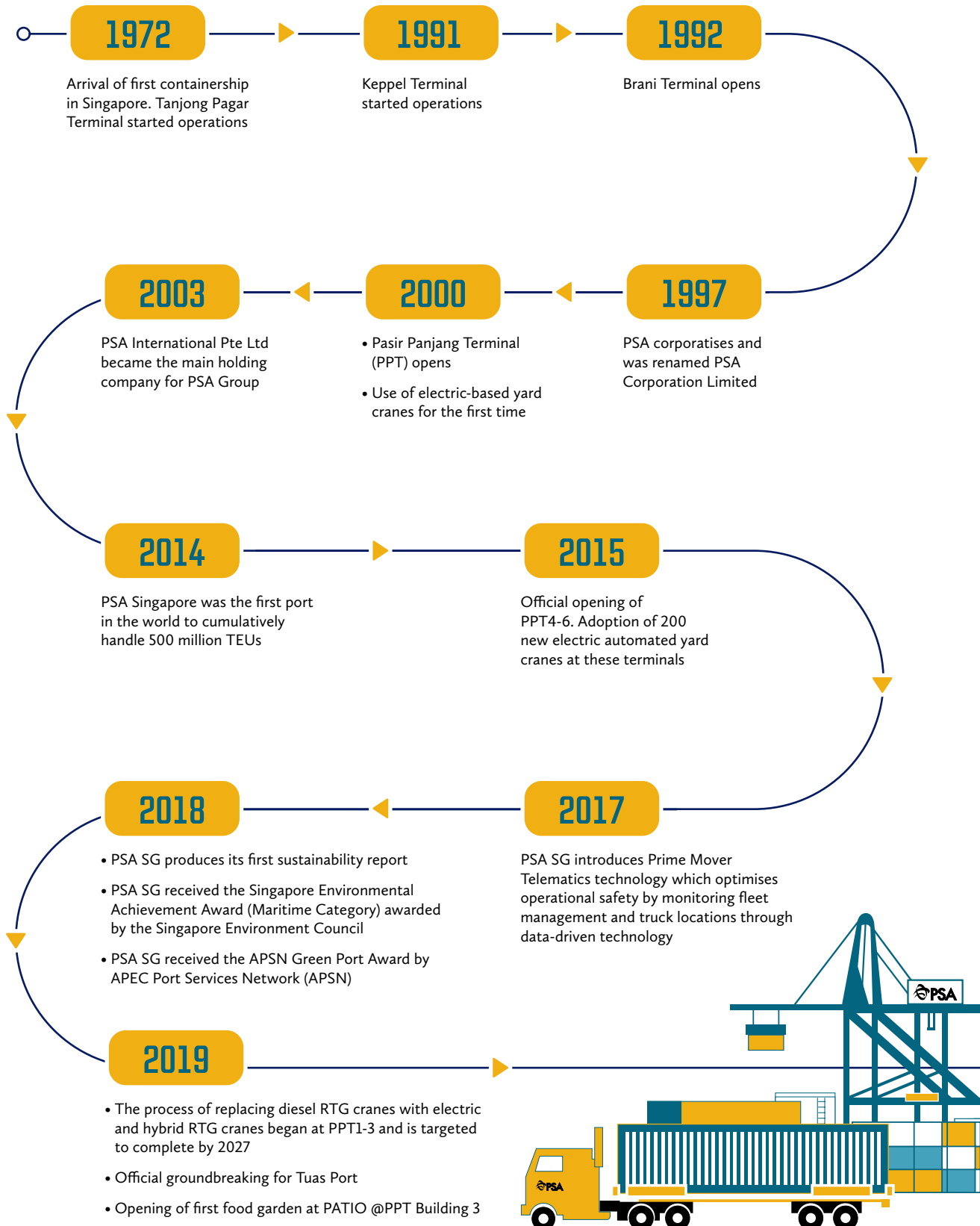




## Key Figures of PSA SG (FY 2024)



# Key Development and Sustainability Journey





## 2022

- Official opening of Tuas Port, Singapore's next-generation port with automated equipment and integrated operations systems
- Launch of OptETruck – a proprietary cloud-based transport management solution for Singapore's haulier sector. Its AI features enable fleet optimisation and a greener footprint
- PSA SG won the SGBC-BCA Business Leadership in Sustainability Transformation Award
- PSA Horizons, our corporate headquarters, achieved carbon neutrality for the second year
- PSA SG was awarded the "Champions of Good" Award by the National Volunteer and Philanthropy Centre

## 2021

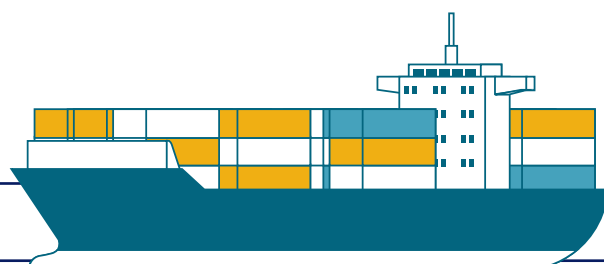
- First 2 berths at Tuas Port Phase 1 began operations. Tuas Port Maintenance Base – the world's first Super Low Energy Building in a port facility – was opened
- Adoption of new electric automated RMG cranes and battery-powered Automated Guided Vehicles at Tuas Port
- Adoption of LNG fuelled prime movers to replace diesel fuelled PMs at PPT 4-6
- PSA SG was awarded the President's Award for the Environment - the highest environmental accolade to recognise organisations that have made outstanding contributions towards environment and sustainability

## 2023

- Tuas Port handled its first million TEUs in February
- PSA SG began trial of battery-powered electric prime movers (ePM) in PPT. Six units are onboarded
- Delivery of two units of on-road electric inter-gateway hauliers (eIGH)
- Started ecosystem testing for a fleet of Autonomous Prime Movers (aPM) in mixed traffic conditions
- PSA SG won the "Best Green Container Terminal" for the first time at the Asian Freight, Logistics and Supply Chain Awards
- PSA SG was awarded the Agency for Integrated Care's Friends of Community Care (FOCC) Award, recognising our longstanding contributions to Singapore's community care sector

## 2024

- PSA SG handled a record annual volume of 40.9 million TEUs
- Tuas Port had 11 operational berths by year end
- Groundbreaking for PSA Supply Chain Hub @ Tuas in October
- PSA SG introduced "Agreed Berthing Time" to complement OptEVoyage solution, enabling vessels to arrive just-in-time in Singapore port
- Announced the expansion of PSA Jurong Island Terminal to meet growing demand for sustainable, resilient supply chain solutions
- PSA SG was awarded the "Champions of Good" award by the National Volunteer and Philanthropy Centre for the second time



# OUR APPROACH TO SUSTAINABILITY



Recognising the evolving sustainability landscape, including increased regulatory requirements, growing investor expectations, and the significant impacts of climate change, PSA SG is proactively developing sustainability strategies which can be integrated into every aspect of the business to foster operational resilience and contribute to the global transition towards sustainability. Our sustainability objectives and strategies are guided by and aligned to the six key United Nations Sustainable Development Goals, whereby we are able to contribute the greatest impact towards. In line with the Singapore Green Plan 2030, we also support Singapore's efforts to create a sustainable and climate-resilient nation.



**7** Affordable and Clean Energy



**11** Sustainable Cities and Communities



**8** Decent Work and Economic Growth



**12** Responsible Consumption and Production



**9** Industry, Innovation and Infrastructure



**13** Climate Action



# Our Sustainability Strategy Framework

PSA's Sustainability Strategy Framework was developed in 2020 and serves as a blueprint to guide sustainability efforts across global operations. PSA SG is committed to aligning to these group-wide goals and aspirations, by translating them into concrete actions within our operations and actively contributing to PSA's broader sustainability objectives.

## Strategic Growth Drivers

### Creating Sustainable Value



## Underpinned by Business Fundamentals

### Stewarding Responsible Business

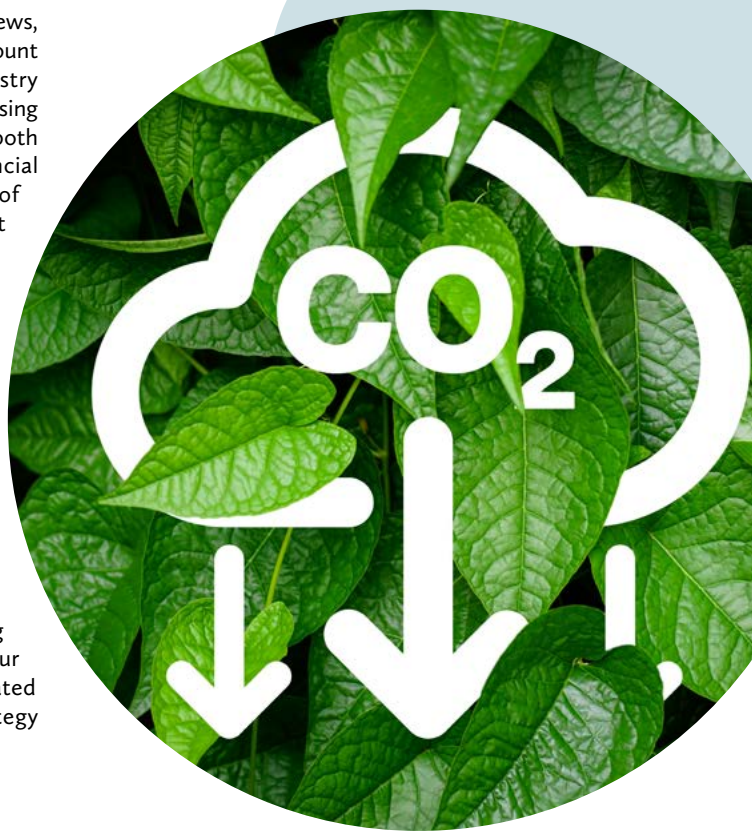


# Material Sustainability Topics







PSA International (PSAI) conducts regular materiality reviews, with the latest assessment completed in 2022, to account for changes in the sustainability landscape and industry since PSAI's inaugural materiality assessment in 2020. Using a "double materiality" approach, the review assessed both the potential impact of these topics on PSAI's financial performance ("financial materiality") and the effects of PSAI's operations on the environment and society ("impact materiality"). Recognising the importance of a localised approach, PSA SG has also reviewed the Group's list of material issues and developed our own list to better reflect the specific context in Singapore\*.

\* PSA SG aligns our material topics closely to PSA's with exception of the following: Topics not included: Marine Protection and Conservation, Additional topics: Environmental Protection and Green Port Culture.

PSA SG confirms that the following ESG material topics remain relevant for FY2024, reflecting the evolving regulatory and industry landscape and our current operating environment. To effectively communicate our dedication to advancing sustainability within PSA SG, we have incorporated our sustainability priorities, goals, and achievements related to these material topics into our sustainability strategy and reporting.










## Environmental

MATERIAL TOPIC	DESCRIPTION OF MATERIAL TOPIC
 <b>CLIMATE CHANGE ADAPTATION</b>	Strengthening our resilience and management of the physical and transition impacts of climate risks on our infrastructure, operations, surrounding communities and ecosystems, as well as our readiness to leverage opportunities in a low-carbon economy.
 <b>EMISSIONS AND ENERGY</b>	Reducing GHG emissions across our businesses and supporting the decarbonisation of the shipping and logistics industry. Reducing our energy consumption and intensity by harnessing energy-saving and efficiency technology, as well as increasing the use and generation of renewable energy.
 <b>ENVIRONMENTAL PROTECTION</b>	Protecting our people by ensuring a safe working environment where air quality and boundary noise level are within healthy limits with good haze response management in place.
 <b>GREEN PORT CULTURE</b>	Cultivating a generative culture where our people are green-minded, green-skilled, and green-motivated.
 <b>WASTE MANAGEMENT AND RECYCLING</b>	Adopting more circular approaches to optimise resource use, minimise the waste generated in our operations and increase recycling. Examples include refrigerant reclamation, materials upcycling, and reuse.
 <b>WATER USE AND POLLUTION</b>	Ensuring efficient use of water through water conservation efforts and responsible management of wastewater discharge.

## Social






MATERIAL TOPIC	DESCRIPTION OF MATERIAL TOPIC
 <b>COMMUNITY RELATIONS</b>	Contributing meaningfully to the lives and wellbeing of the communities where we operate, and engaging community stakeholders to address the social and environmental impact of our operations.
 <b>EMPLOYEE DIVERSITY AND INCLUSION</b>	Creating a workplace environment that respects and promotes diversity and inclusion.
 <b>LABOUR RELATIONS AND WORKER WELL-BEING</b>	Maintaining strong relationships and engagement with labour unions, establishing best practice labour standards, including respecting human rights, having zero tolerance of modern slavery and ensuring worker wellbeing.
 <b>OCCUPATIONAL HEALTH AND SAFETY</b>	Ensuring the highest standards of health and safety for workers across our operations.
 <b>PEOPLE DEVELOPMENT</b>	Building a future-ready organisation by attracting and retaining an engaged workforce, providing learning and development opportunities, and cultivating a purpose-driven organisational culture that is aligned with our values and supports our people to do their best work.

## Governance

MATERIAL TOPIC	DESCRIPTION OF MATERIAL TOPIC
 <b>CYBERSECURITY AND DATA PRIVACY</b>	Protecting our business systems and ensuring data privacy through the adoption of robust cybersecurity measures.
 <b>ETHICAL BUSINESS CONDUCT</b>	Upholding high standards of ethics and regulatory compliance, to go beyond minimum legal requirements, reflecting our long-term commitment to building a business that is successful, honest and responsible.
 <b>INNOVATION AND TECHNOLOGY</b>	Innovating and harnessing technology to drive digitalisation and create more efficient and sustainable operations.
 <b>OPTIMISATION OF GLOBAL SUPPLY CHAINS</b>	Driving sustainability improvements in shipping and logistics supply chains by working with suppliers, partners and customers on route optimisation and alternative transport options for better efficiency and safety. Examples include intermodal solutions (shift from trucking trains/vessels, technology-enabled control tower, etc.)
 <b>PORT SECURITY</b>	Ensuring safety and security of port operations, including responsible handling of dangerous goods, as well as working with relevant authorities and partners to put in place adequate controls to safeguard against terrorism and illicit trade.
 <b>SUSTAINABLE PORT DEVELOPMENT</b>	Ensuring that the planning, design and development of port infrastructure and operations address the environmental impacts from land development and reclamation.
 <b>SUSTAINABLE PROCUREMENT</b>	Minimising environmental impacts and creating positive social impacts through our procurement of goods and services, by integrating sustainability criteria in the selection, monitoring and evaluation of suppliers, including ethical behaviours, environmental protection and upholding human rights.



# Stakeholder Engagement

STAKEHOLDER GROUP	BASIS OF IDENTIFICATION AND SELECTION	FREQUENCY AND MODE(S) OF ENGAGEMENT	TOPICS OF CONCERN
<b>EMPLOYEES</b> 	<p>Employees are the heart of our organisation and are essential in creating value and bringing success.</p>	<ul style="list-style-type: none"> <li>• Employee Opinion Poll.</li> <li>• Volunteering opportunities (e.g. H@H Initiatives, Go Green CSR).</li> <li>• Workshops (e.g. Starfish Safety Workshop).</li> <li>• Staff Engagement Sessions (e.g. Safety Walkabouts, Lunch Time Talk).</li> <li>• Staff Communications (e.g. internal publications such as Portraits and Newsletters).</li> </ul>	<ul style="list-style-type: none"> <li>• Equal opportunities for growth and development.</li> <li>• Health, safety and wellbeing.</li> <li>• Supportive work environment.</li> <li>• Doing good for the community.</li> </ul>
<b>CUSTOMERS</b> 	<p>We strive to provide world-class port services for our customers and establish meaningful collaborations with them to meet their changing needs.</p>	<ul style="list-style-type: none"> <li>• Annual celebratory dinners (e.g. Lunar New Year).</li> <li>• Annual engagement events (e.g. Golf Invitational, Chill Out event).</li> <li>• Go Green CSR activities (e.g. beach cleanups).</li> </ul>	<ul style="list-style-type: none"> <li>• Raising awareness about sustainability in shipping, logistics and supply chains.</li> <li>• Innovative end-to-end supply chain solutions.</li> </ul>
<b>SUPPLIERS</b> 	<p>Construction, equipment, IT, and labour are our key Scope 3 emission sources; we collaborate with our suppliers to identify and address ESG gaps and opportunities to drive ecosystem wide changes in the shipping and logistic supply chains.</p>	<ul style="list-style-type: none"> <li>• Supplier Code of Conduct (SCC).</li> <li>• ESG and GHG Emissions Questionnaires.</li> <li>• Data and information collection platform for new suppliers and tenders.</li> <li>• Supplier Engagement workshop — suppliers providing labour and logistics services in November 2024.</li> </ul>	<ul style="list-style-type: none"> <li>• Bringing suppliers alongside PSA SG's Sustainability Journey.</li> <li>• Minimising environmental impacts and creating positive social impacts by identifying and monitoring key ESG gaps.</li> <li>• Sharing resources to spread ESG awareness.</li> </ul>
<b>PARTNERS / SHAREHOLDERS</b> 	<p>We work with various Residents' Committees (RC), and Residents Network (RN) along the South West Community Development Council and Central Area to keep residents staying near the port areas updated on its developments.</p>	<ul style="list-style-type: none"> <li>• Port visits were conducted for residents staying near Pasir Panjang Terminal to engage and keep them informed on the port's developments, as well as for their understanding.</li> </ul>	<ul style="list-style-type: none"> <li>• Improving the public's perception and understanding of the port and its operations.</li> </ul>
<b>AUTHORITIES</b> 	<p>We work with the relevant authorities such as the Ministry of Transport (MOT) and the Maritime and Port Authority of Singapore (MPA) who regulate and license port and marine services, and facilities in Singapore, also managing vessel traffic in Singapore's port while ensuring safety and security.</p>	<ul style="list-style-type: none"> <li>• Close collaboration and coordination with ministries such as the MOT, MPA and the Ministry of Foreign Affairs (MFA) through high-level visits, meetings and events.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintaining the safety and security of port and marine services in Singapore.</li> </ul>

# Our Sustainability Governance

The PSAI Board acknowledges the significance of sustainability as a business imperative. To effectively manage and oversee sustainability- and climate-related risks and opportunities, a formal sustainability governance structure has been established which outlines the roles and responsibilities of various parties.



PSA SG aligns with the policies and procedures of the Group. The PSAI Board of Directors at PSA International holds ultimate responsibility and oversight over sustainability- and climate-related matters across the Group, including overseeing PSA SG's materiality assessments and the integration of sustainability considerations into the business strategy. PSA SG's measures to effectively manage and oversee climate-related risks and opportunities are guided by the PSA's Climate Response Management System (CRMS), managed by Group Sustainability, to coordinate and align climate mitigation and adaptation efforts at PSA.

More information on the composition, competencies, roles, and responsibilities of the PSAI Board can be found in page 10 - 12 and 41 of PSA Annual and Sustainability Report 2024.

## Technology and Sustainability Solutions Division (TSUS)

TSUS drives and implements sustainability initiatives and efforts at PSA SG. TSUS comprises four departments, including the Engineering and Equipment Development Department, Smart System Solutions Department, Sustainable Business Practices and Partnerships Department and Sustainability Planning and Development Department.

TSUS engages internal and external stakeholders to develop and implement comprehensive sustainability policies and strategies that are aligned with PSA SG's mission and values. This encompasses setting ambitious GHG emission reduction targets, supported by rigorous measurement, reporting, and verification systems. PSA SG has a robust governance structure for all ESG focus areas that are material to the business. Specific divisions and departments are accountable for managing ESG matters within their area of expertise, aligning with their roles and functions. Through active collaboration with other divisions and departments, sustainability initiatives, such as sustainability education, data collection, and the development of innovative carbon abatement technologies to mitigate climate risks, are promoted and driven throughout PSA SG and its wider value chain.

Apart from internal stakeholders, TSUS also partners with external stakeholders, including relevant authorities, Institutes of Higher Learning, the wider maritime community and industry experts to foster wider collaborative efforts towards sustainability progress, leveraging public-private partnerships for technology and sustainability-related initiatives.

In alignment with PSA SG's commitment to effectively manage sustainability risks and encourage employees to drive sustainability initiatives in their work, ESG-linked key performance indicators (KPIs) have been integrated in PSA SG's remuneration policy. These KPIs contribute to employee performance evaluations and are reviewed annually to ensure continuous progress and adaptation in our sustainability journey.

TSUS reports key sustainability updates directly and on a regular basis to the Regional CEO of Southeast Asia, to ensure that sustainability- and climate-related issues remains a key focus and achieve proper oversight. At PSA International, the Senior Management Council and Group Sustainability (GSUS) reviews, strategises, and steers all sustainability activities undertaken by PSA entities. The Regional CEO of Southeast Asia sits on the Senior Management Council, and TSUS actively contributes their expertise to the GSUS when relevant to the agenda.

## Health, Safety, Security and Sustainability (HSSS) Council

The HSSS Council, chaired by the Regional CEO of Southeast Asia, comprises of unions' leaders, all heads of divisions and relevant personnel supporting the HSSS functions in PSA SG. The HSSS Council focuses on staff outreach, including efforts to raise awareness, training and education, as well as engage employees. Members from the HSSS Council meet quarterly to provide updates and guidance on HSSS performance and initiatives at PSA SG.

Through our established governance structure and well-defined roles and responsibilities, PSA SG is driving sustainability efforts that aims to align with and contribute towards the Group's broader sustainability goals and objectives.

# ENVIRONMENT



## IN THIS SECTION

### Taking Climate Action

- Climate Change Adaptation
- Emissions and Energy

### Ensuring Responsible Operations

- Waste Management and Recycling
- Water Use and Pollution



## TAKING CLIMATE ACTION

# Climate Change Adaptation

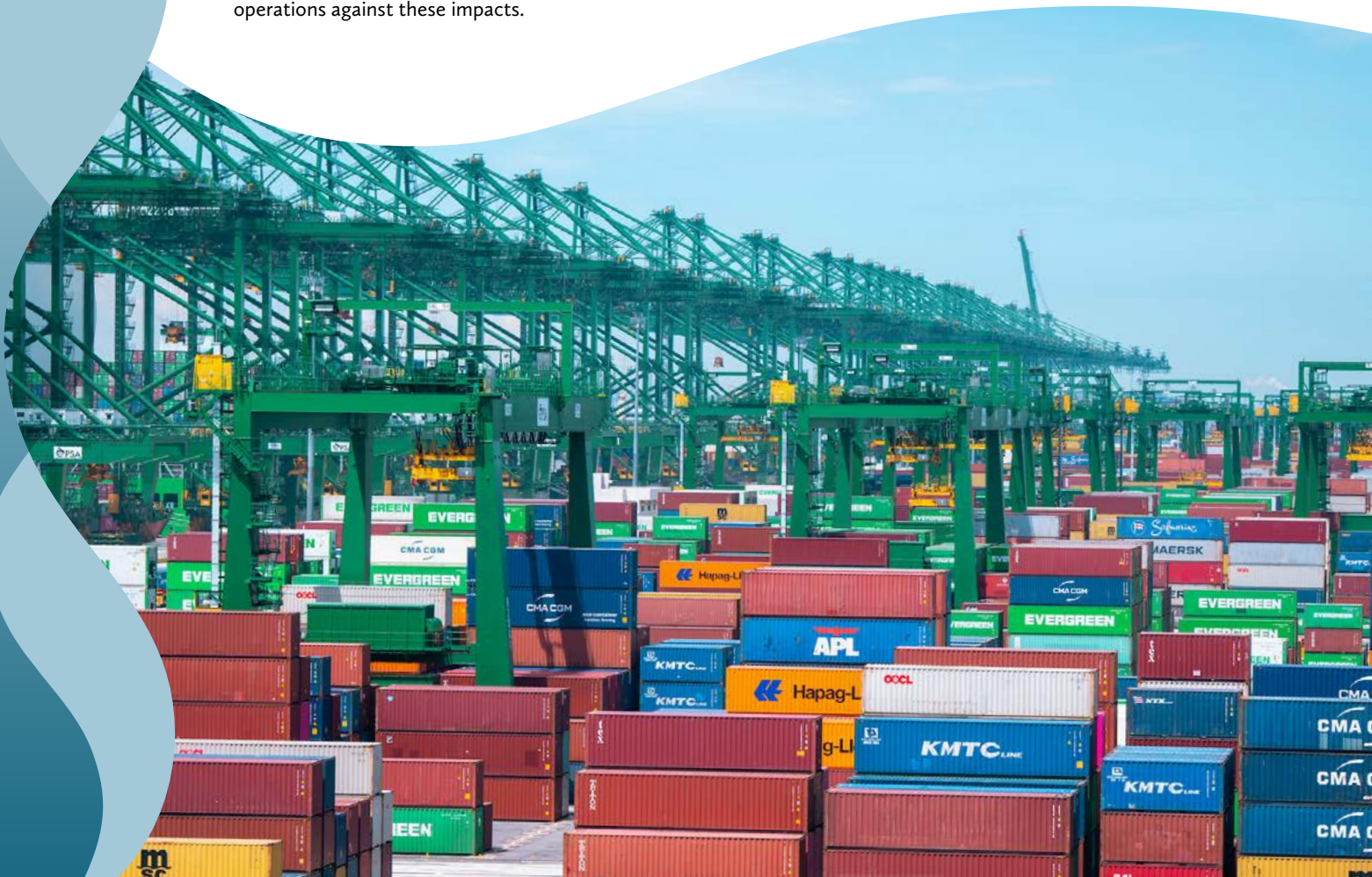
## Why It Is Important

Acute and chronic weather events disrupt global supply chains. Damage to ports and warehouses from storms and rising sea levels leads to business interruptions, while floods and droughts hinder transportation routes, delaying cargo and essential goods delivery. These disruptions can adversely affect our business partners, consumers, and the livelihoods of communities and individuals in the regions where we operate. At the same time, paradigm shifts in regulation, technology, and stakeholder expectations could have significant implications on PSA SG's revenue, operating costs and capital expenditure.

PSA SG understands the critical role of climate adaptation in bolstering our resilience and protecting our business operations against these impacts.

## Our Approach

Guided by the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD), PSA SG has developed a comprehensive strategy to address climate change. By systematically identifying and assessing climate-related risks and implementing appropriate mitigation and adaptation measures, we are ensuring the resilience of our operations and business. The Taskforce on Climate-related Financial Disclosures (TCFD) has now been incorporated under the International Sustainability Standards Board (ISSB) standards. To ensure alignment, we will progressively strengthen our climate-related disclosures.



## Governance

The oversight, strategy and management of climate-related risks and opportunities are guided by PSA SG's sustainability governance structure (found on page 17). Members from various functions work collaboratively to implement this strategy, helping PSA SG achieve our established climate-related objectives and targets.

PSA Group leads the development and implementation of our sustainability strategy, ensuring seamless integration with the overall business objectives and the incorporation of climate-related considerations. Supported by PSA SG's Regional CEO's representation on the SMC, the PSAI Board receives regular updates on sustainability initiatives and provides direction on the Group's decarbonisation pathways, including that of PSA SG.

PSA International's Climate Response Management System (CRMS) guides, coordinates and aligns climate mitigation and adaptation efforts across PSA. The CRMS encompasses our climate-related initiatives and targets to ensure the effective management of climate-related risks and opportunities. The CRMS is managed by GSUS and PSA SG provides regular updates on our climate change adaptation efforts, including findings and recommendations.

The TSUS supports the management of sustainability- and climate-related risks and opportunities at PSA SG, by driving and implementing initiatives throughout the operations. There is internal and external stakeholder engagement to develop sustainability policies and strategies, including setting of ambitious GHG emissions reduction targets, supported by robust measurement, reporting and verification processes. Collaborative efforts across divisions drive sustainability initiatives throughout PSA SG and its value chain, such as education, data collection, and developing innovative carbon abatement technologies to mitigate climate-related risks.

## Strategy

PSA SG actively identifies and assesses the actual and potential impacts of climate-related risks and opportunities on the business and strategy.

In 2022, we conducted a climate scenario analysis to stress test our terminals, assessing the impact of extreme weather events on our operations. This analysis used climate scenarios from the Shared Socioeconomic Pathways (SSP) and Representative Concentration Pathways (RCPs) scenarios — SSP1-RCP2.6 Sustainability and SSP5-RCP8.5 Fossil-fuelled Development, as defined in the International Panel for Climate Change (IPCC) Sixth Assessment Report on Climate Change published in 2021. The SSP1-RCP2.6 scenario represents a low carbon scenario, whereby there is a focus on sustainable development policies, effective international cooperation, and a stringent pathway of decarbonisation that is likely to keep global temperature rise to below 2°C by 2100. The SSP5-RCP8.5 scenario

represents a high emissions scenario, due to rapid growth of the global economy and adoption of resource and energy intensive lifestyles that is likely to result in global warming of above 4°C by 2100.

Under each climate scenario, PSA SG has analysed the exposure and potential impacts of climate-related risks and opportunities on operations. The short, medium, and long-term time horizons chosen for the assessment are aligned with PSA SG's short-term business planning cycles, Singapore's medium-term national commitments, and long-term global Net Zero goals.

Through this analysis, PSA SG identified physical risks (acute events such as extreme weather or chronic issues like rising temperatures) and transition risks (societal, regulatory, and economic changes toward a greener economy).

Based on the list of identified risks, we have reviewed and contextualised them to our operations in Singapore. At PSA SG, we recognise the importance of tracking and addressing the climate risks with the largest potential impact, both direct and cumulative, on our operations. The process in which PSA SG manages climate-related risks include risk identification, risk protection, detection, response as well as recovery.

We collaborated with Singapore's national agencies, including the Maritime and Port Authority of Singapore and PUB, Singapore's National Water Agency, to strengthen the resilience of our terminals against climate-related risks. This involved building awareness and capacity of our risk and engineering colleagues to assess and respond to the impacts of sea-level rise and changes in precipitation patterns.

Quarterly, we assess and report identified risks to Group Risk Management which informs the Audit Risk Committee at PSAI Board level. At PSA SG level, the overall risk profile is presented to the Risk Council chaired by Regional CEO of Southeast Asia twice yearly.



## Physical risks

CATEGORY	DESCRIPTION	POTENTIAL LONG-TERM IMPACT(S)
<b>ACUTE PHYSICAL RISKS</b>	Extreme weather events (wind, storms)	Operational difficulties, damage to infrastructure/ container handling equipment, disruption to supply chains and shipping schedules.
<b>CHRONIC PHYSICAL RISKS</b>	Rising mean sea levels	Increased risks of coastal inundation of quayside infrastructure and flooding risks.
	Rising mean temperatures	Loss of workforce productivity, higher occurrence and intensity of transboundary haze events.

## Transition risks and opportunities

CATEGORY	DESCRIPTION	POTENTIAL SHORT- AND MID-TERM IMPACT(S)
<b>POLICY / LEGAL RISKS</b>	Rapidly evolving regulatory and legal landscape over climate and ESG issues.	Risks emerging from current and future carbon taxes with increased compliance reporting requirements impacting supply chains and terminal operations, escalating compliance requirements relating to climate related and ESG regulations and disclosures.
<b>MARKET RISKS</b>	Changing market preferences and demographics.	<p>Customers, including shipping lines and cargo owners, are increasingly considering environmental factors in their supply chain decisions.</p> <p><b>Opportunity:</b> The growing focus on sustainability provides emerging market opportunities via green supply chain initiatives such as participation in end-to-end green shipping lanes.</p>
<b>TECHNOLOGY RISKS</b>	Rapidly evolving innovation and technological developments.	<p>The transition to a low-carbon economy is driving technological advancements, such as the development of electric and autonomous vehicles, digitalisation, and smart port technologies. However, adopting these technologies can be costly and entail significant adaptation efforts, including retraining of workforce.</p> <p><b>Opportunity:</b> Enhancement of productivity, competitiveness, and sustainability of operations through right application of technologies.</p>
<b>REPUTATIONAL RISKS</b>	Failure to meet compliance, societal and stakeholder expectations on material ESG matters such as climate response.	PSA's brand name and reputation are critical to maintaining stakeholder relationships, including talent, solution partners and customers. A weakened brand name and reputation may also decrease our ability to recruit and retain talent.



Our climate change strategy addresses both physical and transition impacts. Despite anticipated business growth, we aim for long-term decarbonisation targets of reducing our absolute Scope 1 and 2 emissions by 50% by 2030, 75% by 2040, and achieving net zero emissions by 2050 against baseline year 2019.

To achieve these goals, PSA SG has defined three key strategies:

1

Adoption of lower-carbon fuels.

2

Electrify our ports by replacing our current diesel-operated equipment (e.g. yard cranes and prime movers) to electric or hybrid ones.

3

Increase the amount of green electricity mix to reduce our Scope 2 emissions, which we project to be about 60% of our total Scope 1 and 2 emissions as we intensify our electrification efforts.

For more information on the progress against our key strategies, please refer to Emissions and Energy section on pages 23 to 25.

## Risk Management

PSA's robust approach to risk management is an integral part of our climate response strategy which seeks to maintain high operational resiliency. By identifying and assessing risks, PSA can develop a host of measures to mitigate against these risks and protect our assets.

PSA SG adheres to the Group's risk management processes. PSA's Enterprise Risk Management (ERM) Framework guides our overall approach to evaluating and managing PSA's exposure to risks. Corporate Centre functions and business units are delegated with the responsibility to develop and maintain a risk register to document all material risks for consolidation towards the organisational risk register. The Audit Risk Committee and PSAI Board are kept informed of key risks identified by the Corporate Centre functions and business units. Key sustainability- and climate-related risks, including governance, cybersecurity, health, safety, security and environment risks, have been identified and integrated into the ERM framework. These identified risks are subject to review on a biannual basis, to consistently identify, quantify and assess the controls for implementation in our strategic planning process.

A Risk Assessment Matrix (RAM) is used to assess impacts based on likelihood and consequences on people, reputation,

environment, and financial value, which culminates in an overall risk materiality. Depending on the RAM score (based on likelihood and impact), the necessary further measures are determined.

The Audit and Risk Committee is promptly updated on emerging risks and significant trends through Group Risk Management. PSA operates in a secure and safe environment and maintains a low tolerance for HSSE Risks. We seek to reduce our environmental impact and increase the efficiency and resiliency of our operations by adopting a systematic approach to assess inherent and significant sustainability and HSSE risks.

We manage our climate-related physical risks using PSA's Climate Risk Assessment and Adaptation Framework. This framework guides the integration of identified risks into the design and construction of Tuas Port and outlines adaptation measures for our existing Pasir Panjang Terminals, developed with external experts and input from Group Process Engineering and Group Risk Management.

Across our operations, we continue to implement key adaptation measures (following the risk philosophies of avoid, mitigate, transfer, and accept) to manage our exposure to climate-related risks. Building on our existing embedded controls against climate-related risks, we are future-proofing and increasing the resilience of our infrastructure to ensure the continuity of our operations.

## Metrics and Targets

PSA SG tracks several key environmental metrics to evaluate and monitor its climate-related risks, including energy consumption, Scope 1, 2 and relevant Scope 3 GHG emissions, renewable energy generation, water consumption and waste generated. The accounting methodology used to scope, measure and calculate PSA SG's GHG emissions is in accordance with the GHG Protocol Corporate Accounting and Reporting Standard, an internationally recognised framework, that ensures consistency and accuracy in the reported emissions figures. These metrics are disclosed annually in PSA SG's sustainability report for transparency.

To monitor progress, Group Sustainability provides a monthly emissions report, which includes PSA SG's carbon emissions, to the PSAI Board and SMC. This allows PSA SG to assess the performance in relation to our long-term targets and to evaluate the effectiveness of current policies and initiatives. All business units are also required to submit Energy Transition Plans, that outline actions and strategies planned to decarbonise and mitigate potential climate-related risks.

PSA SG remains committed to supporting PSA International's ambition to electrify our operations and achieve absolute Net Zero emissions by 2050.

For more information on PSA SG's climate-related metrics, targets and performance, please refer to Emissions and Energy, Waste Management and Recycling, and Water Use and Pollution sections on pages 23 to 28.

## TAKING CLIMATE ACTION

# Emissions and Energy

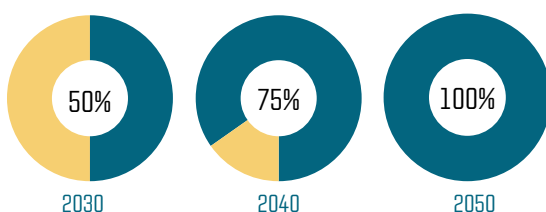
## Why It Is Important

To limit global warming and mitigate climate change impacts, the ports and logistics sector must take immediate and effective climate action aligned with international goals. Increasing pressures to decarbonise arise from regulatory requirements, stakeholder expectations, and heightened public awareness of environmental issues. As global trade continues to grow, the environmental footprint of logistics operations is under scrutiny, prompting PSA SG to adopt more sustainable practices.

## Our Approach

Decarbonisation is crucial not only for compliance but also for enhancing the resilience of our operations against climate-related risks. PSA is committed to playing our part in addressing the climate crisis. In alignment with the Paris Agreement and the Singapore Green Plan 2030, we are actively identifying and managing our emissions and energy consumption. We are implementing tangible decarbonisation initiatives to achieve net zero emissions by 2050, paving the way for a sustainable future.

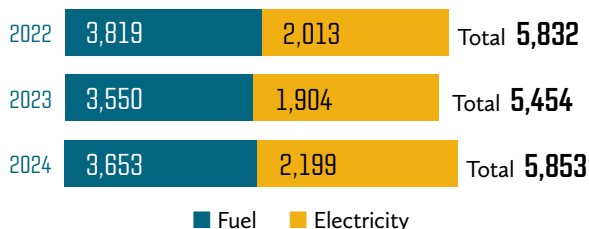
### Targets



Reduce absolute Scope 1 and 2 GHG emissions from 2019 baseline

### Energy Consumption

#### PSA SG Total Energy Consumption (TJ)



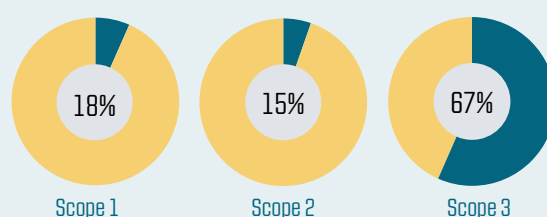
In 2024, PSA SG consumed 5,853 TJ of energy. Relative to 2023, our container volume handled year-on-year in 2024 increased by close to 5.5%, contributing to the overall increase in energy consumption. Furthermore, electricity consumption increased by approximately 15.5%, a result of the elevated throughput handled at the fully electric Tuas Port.

Notes: Energy consumption is reported on a 100% operational control basis, without equity adjustments. Fuel includes diesel and LNG and electricity includes purchased and self-generated electricity.

### Total Carbon Emissions Footprint in 2024

Since 2020, PSA SG has been disclosing our Scope 1 and 2 GHG emissions. We are committed to transparent and accountable GHG reporting. In 2022, we completed our Scope 3 GHG emissions screening exercise and in 2023, we have progressed further to fully disclose our entire GHG footprint in accordance with the GHG Protocol.

#### Composition of total GHG emissions (%)



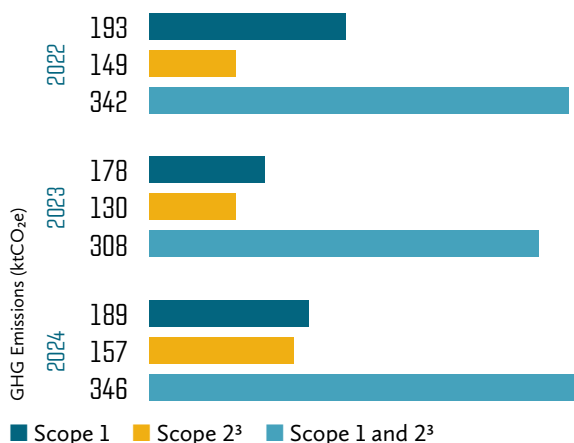
Furthermore, we have also established a robust methodology that ensures the accurate quantification and reporting of GHG-related information. This methodology aligns with the stringent requirements and principles set forth by the International Organisation for Standardization (ISO), including transparency, relevance, completeness, consistency, and accuracy. We are pleased to announce that PSA SG was awarded the ISO 14064-1:2018 verification statement.

With a goal to achieve net zero by 2050, PSA SG has consistently been seeking ways to decarbonise our port operations. We will continue our efforts to achieve our near-term target of reducing Scope 1 and 2 GHG emissions by 50% by 2030, against a 2019 baseline.

## Scope 1 and 2

The total Scope 1 and 2 GHG emissions for PSA SG in 2024 was 346 ktCO<sub>2</sub>e, based on equity share approach, which represented a 12% increase from 2023. The increase was mainly contributed by the increase in Scope 2. More throughput volume was being handled at Tuas Port which is fully electric with a corresponding decrease in throughput volume handled at City Terminals with mostly diesel-powered container handling equipment.

### GHG Emissions of PSA SG<sup>2</sup>



PSA SG's Scope 1 GHG emissions constitutes 55% of total Scope 1 and 2 GHG emissions.

The main source of our Scope 1 GHG emissions is diesel container handling equipment such as yard cranes and prime movers. They contribute about 174 ktCO<sub>2</sub>e of GHG emissions, which makes up about 50% of our total Scope 1 and 2 GHG emissions.

In terms of our Scope 2 GHG emissions, which constitute 45% of total Scope 1 and 2 GHG emissions, the main sources are from the consumption of electricity for our reefer points and electric container handling equipment such as quay cranes, yard cranes and automated guided vehicles (AGVs)<sup>4</sup>.

As part of our strategy to reduce our Scope 1 GHG emissions, PSA SG deploys electric-powered yard cranes such as electric-automated rubber tyre gantry cranes, automated/manual rail-mounted gantry cranes, and bridge cranes. In line with our transition plans, we aim to progressively switch to electric and hybrid yard cranes and shift our volume handling to Tuas Port, a fully electric port. There are plans to increase our ePM fleet size for terminal operations from current 6 units to 60 units by end of 2025. Hence, the proportion of Scope 2 emissions is likely to account for more than half of the total scope 1 and 2 emissions in the near future.

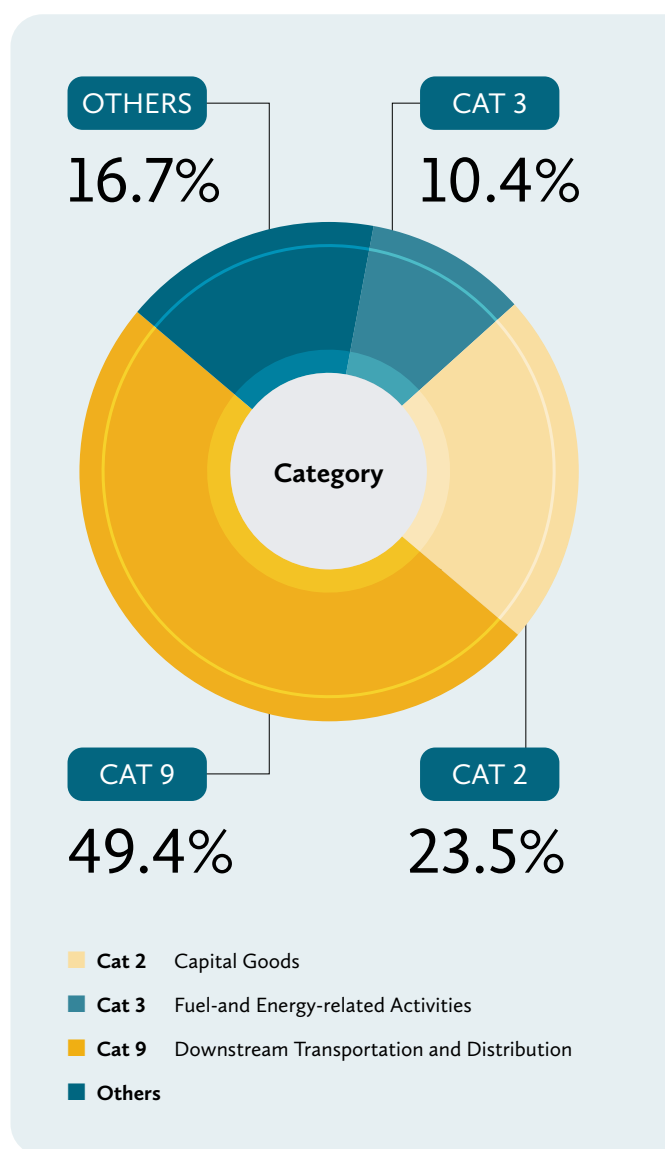
<sup>2</sup> Scope 1 and 2 GHG emissions in the above table are computed based on an equity share consolidation approach. Greenhouse gases included in the calculation are CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>. Emission factors for Scope 1 emissions were sourced from GHG Protocol Emission Factors for Cross Sector Tools (March 2017) and the UK Department for Environment, Food and Rural Affairs (DEFRA).

<sup>3</sup> Scope 2 GHG emission factors were sourced from the International Energy Association of Issuing Bodies (AIB).

<sup>4</sup> PSA SG adopts a market-based emission approach for the accounting of Scope 2 GHG emissions.

## Scope 3

Our commitment to transparency extends to our GHG emissions inventory. We have included top 3 categories that directly reflect our operational influence. Our primary focus is on Category 9, covering GHG emissions from vessels at berth and haulage vehicles operating within our terminals. Our Scope 3 inventory excludes categories 8 (Upstream Leased Assets), 10 (Processing of Sold Goods), 12 (End-of-Life Treatment of Sold Goods), 13 (Downstream Leased Assets), 14 (Franchises) and 15 (Investments) as PSA SG does not lease or lease out assets, manufacture products or sell goods, or own franchises. Overall, our Scope 3 emissions totalled 681 ktCO<sub>2</sub>e.



Note: PSA SG's Scope 3 GHG emissions are computed based on an equity share consolidation approach. Emission factors for Scope 3 emissions were sourced from the GHG Protocol and DEFRA Global warming potential of gases were obtained from IPCC's Fifth Assessment Report (AR5).

# Key Pathways to Achieve Our Decarbonisation Goals

Our decarbonisation pathway can be summarised by our three key strategies.

## Greening Horizontal Transport

Our green projects, set for completion by 2029-2030, aim to cut GHG emissions at Pasir Panjang Terminals. We are transitioning to cleaner fuels to power our port equipment and vehicles. By replacing diesel-powered container handling equipment (CHE) with electric ones and using green electricity, we can substantially reduce Scope 1 GHG emissions.

In line with our strategy, we have formalised our target to convert over 90% of our yard cranes in Pasir Panjang Terminal to electric or hybrid variants by 2030. As at 2024, our LNG prime mover fleet grew to 240 units. We introduced 6 electric prime movers, and 2 electric inter-gate hauliers as part of a battery-swapping trial. At present, we have onboarded and operationalised the first Proof-of-Concept (POC) hydrogen use project in Singapore, in preparation for the possible deployment of larger scale hydrogen vehicles in PSA in the future. For more information, please refer to Innovation and Technology section on pages 72 to 74.

### Target

Deploy more than  
**500 electric prime movers**  
and convert over  
**90% of yard cranes**  
to electric or hybrid variants by 2030.

### Progress against target

We have successfully deployed  
**8 electric prime movers**  
and converted more than  
**60% of yard cranes**  
to electric or hybrid variants as of 2024.

## PSA SG Solar Photovoltaic (PV) Installation Capacity

To strengthen our decarbonisation efforts, PSA SG is exploring methods to obtain and utilise green electricity to power our equipment. Electricity produced from renewable sources, including solar and wind, is projected to constitute about 60-80% of our electricity mix by 2030.

In December 2024, we successfully installed and activated a 15-hectare solar farm with a capacity of 18 MWp at Keppel Terminal. This solar farm will operate for approximately three years before the lease terminates in 2027.

Additionally, PSA SG installed approximately 70 solar panels on each of the 12 new Double Trolley Quay Cranes (DTQCs) delivered to Tuas Port. We are currently assessing the feasibility, efficiency, and scalability of solar panel integration within demanding quay crane operations. This includes evaluating the durability of the panels, their energy output under operational conditions, and the maintenance requirements necessary to sustain performance. An additional 18 DTQCs equipped with solar panels are expected to be operationalised across 2025 and 2026.

## Strategic Connections with Stakeholders for Bigger Decarbonisation Impact

Decarbonisation presents challenges that public-private partnerships can only address collaboratively. At PSA SG, we focus on building connections with internal stakeholders and external partners, including government agencies and industry players, to advance our decarbonisation goals.

PSA SG is a corporate member of the following, to contribute and learn from like-minded parties.

- Hydrogen Fuel Cell Association of Singapore (HFCAS)
- Singapore Green Building Council (SGBC)
- Sustainable Energy Association of Singapore (SEAS)
- Singapore Battery Consortium

With more aligned parties, the collective efforts towards decarbonisation will be more significant. For more information on PSA SG's decarbonisation initiatives and collaborations, please refer to Innovation and Technology section on pages 72 to 74.





## ENSURING RESPONSIBLE OPERATIONS

# Waste Management and Recycling

## Why It Is Important

As a responsible port operator, PSA SG recognises the importance of minimising our environmental impact. While our direct waste generation may be relatively low compared to some industries, we are committed to implementing robust waste management and recycling programmes to reduce waste and promote circular economy principles.

## Our Approach

We strive to align our waste management approach with Singapore's Zero Waste Masterplan of a sustainable, resource-efficient, and climate-resilient nation. As part of PSA SG's commitment to minimise our environmental footprint, we adopt a multi-pronged approach to manage waste and optimise the use of resources guided by the principles of Reduce, Reuse and Recycle Right.

In 2024, a total of 12,446 metric tons of waste was recorded, marking a significant decrease from 2023. The most notable reduction was in construction waste, primarily due to lower yard and berths construction work although the increase in container volume handled in PSA SG led to higher office and industrial waste.

### Waste Stream



**5,457,000**  
Construction



**619**  
Electronic



**1,913,871**  
General



**5,031,471**  
Industrial<sup>6</sup>



**34,316**  
Office<sup>7</sup>



**8,437**  
Packaging<sup>8</sup>

TOTAL (in kg)

**12,445,714**

TOTAL (in metric tons)

**12,446**

<sup>6</sup> Industrial waste includes steel wire rope, metal scrap, steel cables, hydraulic and lubricating oil, tyres, vehicle batteries, crane rails.

<sup>7</sup> Office waste includes paper, plastic, and aluminium cans.

<sup>8</sup> Packaging waste includes wood, plastic and cardboard.



## Minimising Materials and Waste

The waste generated can be broadly categorised into two streams: general and industrial waste. General waste arises from activities in the corporate headquarter and terminal buildings, whilst industrial waste is from the construction and renovation activities, as well as the repair and maintenance of our fleet of Container Handling Equipment.

General waste is collected and managed by general waste collectors licensed by the National Environment Agency. The waste is either sent directly to an incineration plant, or to a material recovery facility for further sorting and destruction. The weight of waste for both general waste and recyclable waste streams is recorded by licensed waste collectors.

In 2024, the total amount of general waste decreased by 9.3% from the previous year, reflecting PSA SG's continued efforts in waste reduction through digitalisation and initiatives that promote reduction and reuse. The 11.4% increase in industrial waste was contributed by the increase in container throughput and the corresponding increase in consumables to support our container handling equipment.

In our commitment to waste reduction, PSA SG has recycled 100% of its construction and electronic waste and 99% of its industrial waste. The remaining 1% of industrial waste and general waste are converted into energy through incineration, keeping the overall recycling rate high.

## Use of Reclaimed Refrigerant

In July 2022, PSA SG commenced to recover refrigerant which is released during laden reefer repairs. The recovered refrigerant is filtered, processed, and certified before it is re-used and pumped back into the laden reefers. Up to 94% of released refrigerant were recovered.

In 2024, PSA SG made great strides in environmental sustainability by enhancing our capability to recover all major types of refrigerants. This progress was fueled by our strong commitment to environmental stewardship, with over 70% of our major customers embracing the use of reclaimed refrigerants. As a result, 3,332 kg of refrigerants were recovered and reused, preventing 5,000 tCO<sub>2e</sub> in greenhouse gas emissions. Building on this momentum, PSA SG is actively engaging the remaining customers to adopt reclaimed refrigerants, further reducing our environmental footprint.

YEAR	RECLAIMED/ RECOVERED REFRIGERANT (KG) <sup>9</sup>	EMISSIONS AVOIDED (tCO <sub>2e</sub> )
2022	1,713	2,277
2023	3,801	5,465
2024	3,332	5,000

<sup>9</sup> Restatement for FY2022 and FY2023 data to include both reclaimed and recovered refrigerant. Previously, only recovered refrigerant was included.

## Adopting Circular Economy

To enhance our recycling efforts, we are collaborating with industry partners to explore innovative technologies as we transition to a circular economy. This initiative aligns with Singapore's goal of extending the Semakau Landfill's lifespan beyond 2035.

In consultation with internal stakeholders, we have established a 30% reduction target of the waste generation index (general waste tonnage/MTEU) by 2030. To achieve this target and reduce our Scope 3 emissions, we have made progress in our waste valorisation efforts, expanding the scale and scope across key streams such as rubber tyres and scrap industrial wood. In 2024, nearly 450 rubber tyres were sent to downstream partners for valorisation into materials such as rubber crumps, which were further recycled as feedstock for remanufacturing purposes. This closed loop effort reduced disposal costs by around 12% and abated approximately 180 tonnes of carbon emissions.

PSA SG is also actively pursuing new valorisation pathways, starting with a feasibility study in collaboration with a local partner to transform scrap industrial wood into biochar. This study will assess the economic viability, market demand, and carbon impact of this process.

As part of our sustainability and community initiatives to raise awareness, PSA SG launched a project to upcycle old versions of uniforms into bags, pouches, and more, in collaboration with circular fashion enterprises and recycling companies.

Functional lifestyle  
products upcycled  
from old versions of  
uniforms



## ENSURING RESPONSIBLE OPERATIONS

# Water Use and Pollution

## Why It Is Important

Water plays a vital role in PSA SG's operations, including maintenance, repair, and sanitation. We are committed to using water responsibly and managing wastewater properly to protect the well-being of surrounding communities.

## Our Approach

We approach water management via a three-pronged strategy that emphasises efficient use of water, water conservation efforts and responsible management of wastewater discharge. This aligns with Singapore's comprehensive strategy, which creates a "closed loop" in the water cycle by collecting and purifying rainwater, treating and reclaiming wastewater as NEWater, and desalinating seawater.

At PSA SG's corporate headquarters and terminal buildings, we utilise both potable and NEWater for operations such as toilets, pantries, canteens, engineering workshops, cooling towers, fire hydrant testing, emergency washing use and water testing. In our construction sites, potable water is primarily used for sanitation purposes.

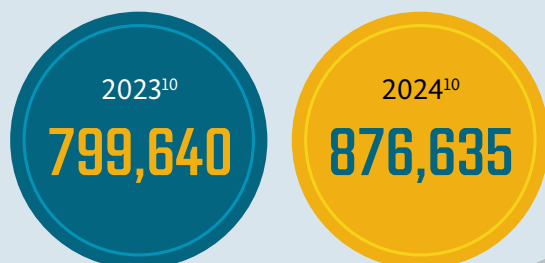
Overall, water withdrawal increased by approximately 9.6% in 2024, primarily due to higher terminal activities driven by an increase in the number of containers handled and overall business growth.

Guided by PSA SG's water management systems framework, our wastewater, sewage, and oil receptacles are treated and disposed of in accordance with industrial best practices and standards. All wastewater from sanitary and washing facilities is directed to PUB's water reclamation plants for treatment. Surface water is channelled into open drains and subsequently processed at PUB's Water Treatment Plant.

We are committed to water stewardship. Through our existing water conservation and improvement initiatives, we have collected 8,000 cubic metres of rainwater from nine rainwater harvesting tanks in our engineering workshops in City Terminals and PPT, corporate headquarters PSA Horizons, PSA Alongside and Tuas Port. Additionally, we have harvested 2,800 cubic metres of condensate water from the air-conditioning system at PSA Horizons. The non-potable water collected was utilised for washing equipment and maintaining horticulture.

In compliance with regulatory standards, PSA SG submits an annual review and comprehensive statistics on water usage to PUB. This commitment reflects our dedication to transparency and accountability in managing water consumption and advocating responsible water usage practices.

### Water withdrawal (cubic metres)



<sup>10</sup> Water withdrawal is from third-party water sources including NEWater.





# SOCIAL



## IN THIS SECTION

### Nurturing a Future-Ready Workforce

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- People Development
- Occupational Health
- Safety
- Stronger Together
- Green Port Culture

### Protecting Our People

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- Employee Diversity and Inclusion
- Labour Relations and Worker Wellbeing
- Environmental Protection

### Supporting Our Communities

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- Community Relations



## NURTURING A FUTURE-READY WORKFORCE

# People Development

## Why It Is Important

At PSA, we prioritise being alongside our people as we navigate organisational transformation. Acknowledging the ever-changing landscape, PSA SG envisions a workforce that is agile and resilient, skilfully managing change and embracing the concept of lifelong learning. To support this vision, we are committed to supporting the development of a future-ready workforce and fostering a nurturing culture that promotes reskilling and continuous innovation.

In addition, PSA launched the “Greenfish II” e-learning module which supports our key performance indicator for future-ready training within PSA SG. The module aims to equip employees with further knowledge on renewable energy options, and to inform them of the existing efforts adopted by PSA global business units (BUs) to harness renewable energy.

Firmly advocating for lifelong learning, PSA SG also promotes self-directed development and supports our workforce through the Lifelong Learning Fund and Self-Development Scheme. These programmes empower employees to take charge of their learning paths, facilitating continuous personal growth and professional development.

## Our Approach

### Building Future-ready Capabilities

A future-ready workforce is one that possesses the essential knowledge and skills necessary to confront upcoming challenges. In today's swiftly evolving environment, continuous learning is vital to stay abreast of the latest advancements. Therefore, to foster our workforce's growth, we advocate lifelong learning and are committed to allocating the time and resources needed for our employees to reach their full potential.

PSA SG is dedicated to facilitating the professional advancement and personal growth of our employees. PSA SG harnesses a variety of platforms, ranging from structured courses to external resources, coaching, and mobile app-based learning, to provide extensive training in key emerging domains such as Artificial Intelligence (AI), robotics, digitalisation, IT, cybersecurity, and sustainability. This strategy ensures that our employees acquire the latest skills and knowledge necessary to foster innovation and maintain a competitive edge in the swiftly changing business environment.

In 2024, we organised the Hooked-on Learning Fiesta which featured satellite roadshow booths, lunch talks, workshops and experiential learning to ignite new ideas and perspectives about learning, and to reinforce our FISH! culture and principles. FISH! And FISH+ are at the heart of our shared commitment to making PSA a great place to work, inspiring individuals to bring not just their skills, but also their hearts and minds to the workplace.

PSA SG also intensified efforts to onboard senior officers to the TalentTech 4.0 (TT4.0) platform in the past year. First introduced group-wide in 2022, the digital platform empowers employees to self-source projects, mentorships, and learning opportunities throughout PSA SG. The initiative aims to enhance organisational agility, cultivate a more diverse and innovative global workforce, and support talent and skills transformation by providing additional development opportunities for employee career growth.

Through a series of engaging roadshows and ongoing efforts by TT4.0 champions in promoting its adoption, PSA SG achieved a 92.7% onboarding rate by the end of 2024.

Participants with their self-made coaster at the end of a coaster marbling workshop at the Hooked-on Learning Fiesta



### Average number of training hours by employee category

#### Average Number of Training Hours

Executive  
**50 hrs**

Non-Executive  
**43 hrs**

#### Target

Achieve at least  
**16 training hours**  
per employee  
per year.

#### Progress against target

We achieved an  
average of  
**45 training hours**  
per employee per year  
in 2024.

### Empowering Our Workforce for Innovation, Transformation and Agility

As PSA SG advances our technological innovations, we are committed to enhancing our employees' skills through reskilling and upskilling initiatives. Since the commencement of Tuas Port in September 2022, over 1,300 employees have successfully transitioned into new roles. As part of our efforts to prepare employees for this transformation journey, PSA SG has continued to offer programmes such as the Work Study Diploma in Port Automation Technology, jointly developed with PSA University and Singapore's Institute of Technical Education, Automation Simulator Training and Thriving in a Digital Workplace. These programmes enable team members to develop new skills and competencies suited to the new work environment which are integral to the pioneering team managing the automated operations of the port.

PSA SG also continues to support leadership development through transition training programmes, extended to Corporate Centre employees, and cross-BU exchanges, fostering a cohesive and collaborative leadership community. The PSA SG Corporate Mentoring Programme has expanded its pool of mentors and mentees, with comprehensive training and resources provided to enhance effectiveness in guiding leadership and potential growth. Divisional mentoring programmes and networking sessions also facilitate strong, supportive relationships and open dialogue, empowering personal and professional growth and strengthening employee engagement. Additionally, PSA SG offers diverse job rotation opportunities, enabling employees to gain experience across different domains and business entities within the PSA Group, enriching expertise and broadening professional horizons to develop T-shaped managers.

### Tech Talk Series 2024

Launched in March 2024, this series of quarterly talks is organised by Insights, Digitalisation and Analytics Department (IDAD) in Container Division (CND) together with CND's staff engagement team with the objective to raise the tech quotient amongst PSA SG's executives. The first talk was "Demystifying AI and How AI Reshapes Industries" by a keynote speaker who shared the impacts of rapid advancements of AI in both professional and

personal spheres, such as how innovation, robotics and AI-driven analytics are revolutionising processes by automating labour-intensive tasks, optimising routes, and significantly reducing energy consumption and waste to achieve enhanced efficiency and contribute towards sustainability. Two more talks covering databases and quantum computing were also organised with plans for more talks to be organised in 2025.



PSA SG  
Tech Talk  
"Demystifying  
AI and How  
AI Reshapes  
Industries"

## US AI Roundtable

As a global leader in port operations, PSA leverages Artificial Intelligence (AI) to optimise complex processes and achieve service excellence. This includes enhancing terminal safety and traffic orchestration at Tuas Port, improving productivity and resilience while promoting more sustainable trucking operations.

PSA participated in a roundtable which facilitated discussions on collaboration and responsible AI development between Singapore and US, with participation from major organisations like Apple, Amazon Web Services, and the Maritime and Port Authority of Singapore (MPA). This participation helps PSA SG maintain our competitive edge by fostering partnerships that drive innovation.

Looking ahead, we aim to form deeper collaborations to achieve greater operational synergies and develop innovative AI solutions, which are essential for transforming port operations and the supply chain ecosystem.

## PSA SEA InnoFest

PSA SEA InnoFest 2024 is a celebration of groundbreaking innovations, with a strong focus on sustainability, technology, and evolving consumer experiences. During the annual PSA SEA InnoFest, employees were provided with a wide range of immersive experiences, including workshops and learning journeys led by industry experts. By engaging staff across the SEA region, these initiatives reinforced our innovative ethos, which is crucial for achieving service excellence and exploring new ways of operational methods.

The Innovation Fair was another highlight of the PSA SEA InnoFest where businesses, entrepreneurs, and innovators were invited to showcase cutting-edge products, engage in interactive experiences, and network. The fair serves as a vibrant and dynamic platform for employees to see how creativity and technology address contemporary challenges, complemented by port and industry visits that illustrate innovation in action.

The event also launched the “Reimagine Routine” campaign on PSA’s iCAN portal, encouraging employees to share life hacks, vote on ideas, and draw inspiration from the creative contributions of their colleagues. Additionally, PSA SG participated in the INNOVISION@PSA survey to assess and promote the organisation’s innovation journey, aiming to nurture an environment and culture of creativity and progress.

## Growing Leaders and the People Developer Culture

PSA SG actively takes a long-term view with workforce planning to strategically identify evolving needs as we reshape our workforce, in tandem with new technology, process and business portfolios. PSA SG introduced the 4E Programme—Engage, Encourage, Expand, Enhance for employees to transition into supervisory roles through increased outreach and structured training courses that prepare them for our port operations’ modernisation journey.

PSA SG remains committed to equipping its leaders with the essential skills needed to conduct effective performance appraisals and career development discussions with their teams. Transition training programmes are also offered to those moving into new leadership roles to accelerate their acquisition of essential skills and knowledge, ease their transition into the new roles and support their navigation through the next phase of leadership growth.

Through structured mentoring programmes, employees receive additional support for their professional and career advancement. Managers and leaders are equipped to fulfil their mentoring roles with the provision of training and resources such as mentoring kits. PSA SG also created safe spaces to facilitate the development of strong, supportive mentor-mentee relationships. Additionally, development roadmaps for emerging talent are continuously updated to ensure alignment with the changing demands of future leadership.

### Percentage of Employees who received performance and career development review (%)



*Note: All staff are required to complete an annual performance appraisal, except for employees who are away on long leave due to unforeseen reasons, employees who have resigned, or new hires that are under probation. New hires will undergo performance reviews upon completion of their probation.*

## Growing Global Mobility

PSA SG acknowledges the significance of leveraging global synergies and enhancing global mobility as the Group expands PSA’s network and portfolio worldwide. We leveraged developmental roles in our customer-facing departments within PSA SG and across SEA business units, and implemented a variety of short-term developmental assignments, business projects and attachments to strengthen business competencies, broaden perspectives, enhance cross-cultural acumen and nurture high potential talent for future international assignments.

We also actively participate in the group-wide talent development initiative, Short-Term International Development Experience (STRIDE), which enables our talents to gain global insights for development, broaden their perspectives and networks, and contribute to impactful business projects within the Group. In 2024, PSA SG hosted several STRIDE participants from diverse BU and regions, promoting diversity and encouraging the sharing of ideas and best practices, which aids in the growth and development of global talent. Through the STRIDE programme, we aim to develop a global mindset and cultivate talents who appreciate and utilise diversity, as we work together towards a unified vision as One PSA.



## Partnering with The Logistics Institute – Asia Pacific on an Overseas Learning Journey

PSA SG also collaborated with external partners to provide overseas developmental opportunities. We partnered The Logistics Institute – Asia Pacific (TLI-AP) to jointly organise an immersive learning journey titled “Envisioning ASEAN Logistics Connectivity: Indonesia”. Held in Jakarta, the learning journey provided selected PSA SG attendees the opportunity to gain deeper insights into the business climate, Indonesia’s logistics and supply chain landscape, and valuable networking opportunities with government officials, industry leaders, and academics.

## Growing our Talent Pipeline

As a prominent player in the ports and terminals industry, PSA SG is dedicated to developing a robust talent pipeline and nurturing the future generation of maritime leaders. The organisation aims to provide greater insights into the maritime industry and attract young talents through PSA’s Global Management Associate Programme (GMAP) by collaborating with relevant local Institutes of Higher Learning (IHLs), clubs and societies at universities to facilitate exclusive learning journeys and fireside chats featuring PSA leaders. Additionally,

PSA SG partnered with institutions such as the Singapore Maritime Foundation and Ministry of Education-Singapore-Industry Scholarship (MOE-SgIS) to feature career stories and conduct career and scholarships sharing sessions. PSA SG also worked with selected junior colleges to offer short work attachment programmes and career talks to build early mindshare of PSA.

In October 2024, PSA SG hosted our signature event – the PSA Code Sprint 2024 Hackathon – offering students the chance to network and devise solutions for real business challenges. The 2024 hackathon focused on three themes: “Resilient Port Operations”, “Efficient and Green Supply Chain Solutions” and “Future-Ready Workforce”. A total of 92 teams, comprising more than 300 students participated.

PSA SG also participated in the inaugural Maritime Port Authority Global Internship Award (MPA GIA), which offers high-achieving students a unique opportunity to gain hands-on experience with leading maritime companies worldwide. Participants are given the opportunity to explore diverse career paths while receiving mentorship from experienced professionals. As a participating company, PSA SG offers a hybrid internship opportunity that allows students to gain insights into stowage planning practices in both Singapore and Jakarta.



Finalists of PSA Code Sprint 2024

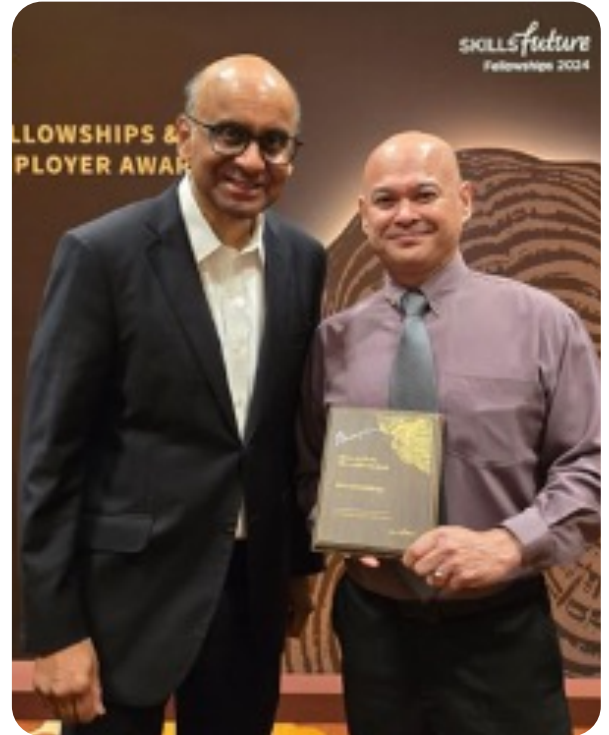


# Awards and Recognition

## PSA SG Recognised for Excellence in Employee Development with the SkillsFuture Employer Award (Gold) 2024

PSA SG was awarded the SkillsFuture Employer Award (Gold) 2024, recognising our dedication to employee development and lifelong learning. This follows our first award in 2017 and underscores PSA's ongoing commitment to nurturing talent. The SkillsFuture Employer Awards honour organisations that foster a culture of continuous learning, skill development, and align employee development with productivity and a positive work culture. PSA SG emphasises future-ready skills through PSA University, offering programmes that combine academic learning and hands-on experience.

In addition, a PSA SG employee, Mr Syed Mohamed Ali from the Container Specialist Resource Department (CSRD), received the SkillsFuture Fellowship Award for his achievements in navigating transformational shifts and technological disruptions. The award highlights PSA's commitment to both individual and organisational growth.



Mr Syed Mohamed Ali, PSA employee from the Container Specialist Resource Department (CSRD) receiving the SkillsFuture Fellowship Award 2024 from the President of Singapore, Mr Tharman Shanmugaratnam.



Ms Evelyn Seah, PSA SG's Head of HR receiving the SkillsFuture Employer Award (Gold) 2024 from the President of Singapore, Mr Tharman Shanmugaratnam.

## NURTURING A FUTURE-READY WORKFORCE

# Occupational Health

## Why It Is Important

PSA SG prioritises a healthy and safe work environment for all our stakeholders, including our employees and solution partners, to enhance productivity and performance while also boosting overall morale within the company. PSA SG remains dedicated to safeguarding the physical and mental wellbeing of our team by fostering a culture of wellness in the workplace. We achieve this by equipping our staff and solution partners with various tools and initiatives that empower them to take control of their health.

## Our Approach

PSA SG adopts a structured approach to effectively control risks, manage health, safety and security, and meet environmental compliance and regulatory legislation. Our Health, Safety, Security and Sustainability (HSSS) Management System conforms to the PSA Group HSSS policy and framework and is also compliant with ISO 45001:2018.

Throughout 2024, PSA SG implemented a diverse array of health and wellness programmes for our employees. These programmes included talks on physical and mental health, monthly fitness sessions, workshops focused on mental well-being, health challenges, as well as health coaching and screening events, which together attracted over 4,000 participants.





## NURTURING A FUTURE-READY WORKFORCE

# Safety

## Reinforcing our Commitment to Safety

Daily port operations involve the use of heavy machinery, equipment, and transportation vehicles, which can present significant safety risks to our workforce if not properly managed. Therefore, establishing a strong safety culture with effective practices is essential for preventing accidents and protecting both human lives and assets. This commitment to safety is also critical for maintaining port operations, ensuring compliance with regulations, and upholding the trust and confidence of our stakeholders.

PSA SG is unwavering in our dedication to promoting a robust safety culture throughout the organisation. Comprehensive safety programmes are implemented and continuously refined to improve training, procedures, and overall safety protocols. These trainings serve to educate and familiarise employees on workplace health and safety topics, such as hazard

recognition, risk assessment and safe work practices. Regular meetings are also conducted to review the control measures with department representatives. Newly employed engineering staff are required to attend an Engineering Safety Course which communicates the various risks at the workplace, including ergonomic and excessive noise risks. Signages are placed in designated areas within the workplace to communicate awareness of risks for staff working in the area.

By utilising data and technology, alongside open communication, we encourage everyone at PSA SG to report any potential safety risks. Furthermore, in collaboration with the IHLs, we enhance the behavioural safety practices of our staff and solution partners, thereby cultivating an even safer work environment for all.

## LTI and LTIF Performance 2022 - 2024

	2022	2023	2024
LTIF	0.8	0.9	0.6
LTI	36	43	31

PSA SG Loss Time Injury (LTI)<sup>11</sup> and Loss Time Injury Frequency (LTIF)<sup>12</sup> Performance from 2022 to 2024

<sup>11</sup> Loss Time Injury (LTI) refers to the number of injury cases

<sup>12</sup> Loss Time Injury Frequency (LTIF) refers to the number of injuries per 1,000,000 man-hours



	PSA SG EMPLOYEES	PSA SG CONTRACTORS
No. of fatalities due to work-related injuries	0	0
Rate of fatalities as a result of work-related injury <sup>13</sup>	0	0
No. of high-consequence work-related injuries <sup>14</sup>	0	0
Rate of high-consequence work-related injuries <sup>15</sup>	0	0
No. of recordable work-related injuries <sup>16</sup>	19	12
Rate of recordable work-related injuries <sup>17</sup>	0.79	0.45
No. of occupational disease incidents	1	0
No. of fatalities due to work-related ill-health	0	0
No. of recordable work-related ill-health	0	0

<sup>13</sup> Rate of Fatalities = No. of Fatalities per 1,000,000 hours worked

<sup>14</sup> High-consequence work-related injuries, work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within 6 months

<sup>15</sup> Rate of High-consequence work-related injuries = No. of High-consequence injuries per 1,000,000 hours worked

<sup>16</sup> Recordable work-related injury or ill-health, that results in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness; or significant injury or ill health diagnosed by a physician or other licensed healthcare professional even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness

<sup>17</sup> Rate of Recordable work-related injury = No. of work-related injury per 1,000,000 hours worked

In 2024, there were no significant incidents or fatalities at PSA SG. Furthermore, PSA SG achieved a record low Lost Time Injury Frequency (LTIF) of 0.6 and experienced a decrease in safety-related incidents as compared to 2023. Regardless, all safety incidents were meticulously investigated to identify the root causes for immediate and effective rectifications with preventive measures put in place. Insights gained from these incidents were disseminated across the organisation and shared with solution partners to raise awareness and prevent future occurrences.

#### Target

Aim for  
**zero**  
significant safety  
incidents resulting  
in fatalities  
or permanent  
disabilities.

#### Progress against target

There are  
**zero**  
safety incidents  
that resulted  
in fatalities  
or permanent  
disabilities in 2024.



## Addressing Health and Safety impacts in our Supply Chain

To manage supply chain Health, Safety, and Security (HSS), we conduct thorough mapping of all suppliers, solutions providers, and business partners. We evaluate potential partners' safety standards and compliance with WSH regulations, such as bizSAFE. We also identify potential hazards associated with each business relationship, considering industry-specific risks, past performance, and risk assessment to prioritise mitigation efforts.

## Implementing Prevention and Mitigation Strategies

We incorporate Health, Safety, and Security (HSS) clauses into contractual agreements, requiring suppliers to identify hazards, assess risks, and implement control measures. Regular audits and inspections are conducted to assess supplier compliance with HSS standards and our code of conduct. Training and support are provided to suppliers on HSS management systems and relevant regulations. Emergency response plans are developed and implemented to address potential incidents across the supply chain. Our HSS management systems are regularly reviewed and updated to ensure continuous improvement.

## Fostering Collaboration and Communication

Clear and open communication channels with suppliers are established to facilitate information sharing, address concerns, and foster collaboration on Health, Safety, and

Security (HSS) issues. Joint safety committees are formed with key solutions providers to enhance collaboration and knowledge sharing on HSS matters. We also engage with industry associations and other stakeholders to promote best practices and drive collective improvement in HSS.

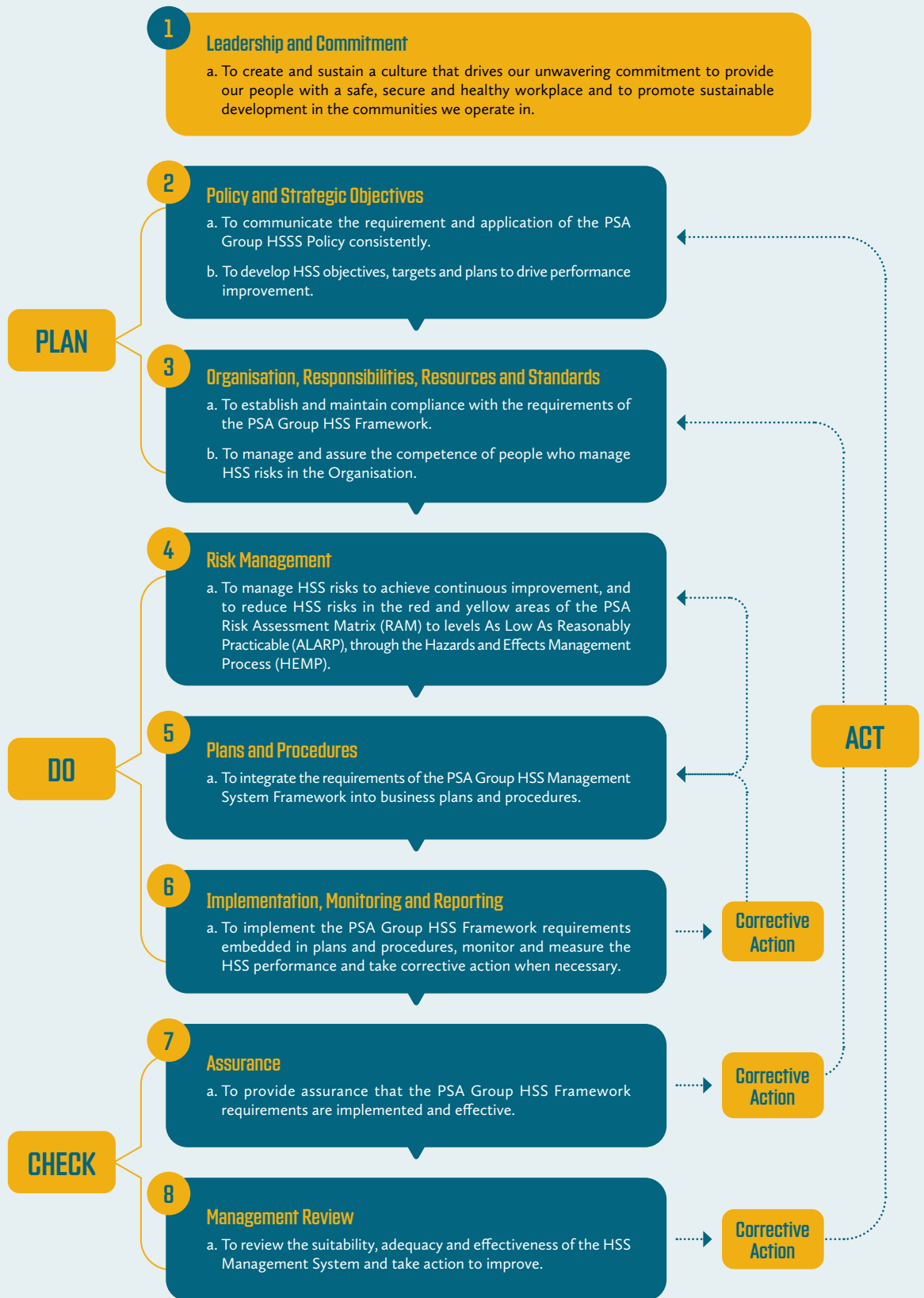
## Monitoring and Evaluation

We track key performance indicators (KPIs) such as HSS incident rates, audit findings, and supplier compliance to ensure our HSS management systems are effective. Regular reviews of our HSS management systems are conducted to identify areas for improvement and inform necessary adjustments. Through thorough investigations and analysis of HSS findings, incident learnings and industry best practices, we identify root causes and implement targeted corrective and preventive actions to enhance our HSS performance.

Leveraging technology, including digital platforms and data analytics, enhances HSS management and communication. Collaboration with industry partners and government agencies allows for the exploration and adoption of innovative technologies that drive meaningful improvements in HSS performance and overall impact.



## Plan-Do-Check-Act (PDCA) Cycle



PSA SG's PDCA cycle, a cyclical four-step method to continuously improve our processes.



PSA SG's PDCA cycle starts with establishing the tone from the top, by creating and sustaining a culture of unwavering commitment to our people's safety, security and health, as well as to promoting sustainable development in the communities we operate in.

We ensure that the requirements and application of the PSA Group HSSS Policy and Framework is consistently communicated to our employees and is used to guide PSA SG's own development of HSS risk assessment, objectives, targets, plans, and procedures. The Hazards and Effects Management Process helps us to manage HSS risk to achieve continuous improvement, and to reduce HSS risks to levels as low as reasonably practicable. Additionally, we continually monitor and measure our HSS performance to assess whether our HSS Management System is still suitable, adequate and effective.

## Noise Control and Monitoring Measures

### PSA SG Hearing Conservation Programme (HCP) Policy

To comply with the Workplace Safety and Health (WSH) (Noise) Regulations 2011, PSA SG established the HCP, which seeks to protect our people against exposure to excessive noise in the workplace. Exposure to excessive noise is also included in the risk assessment of our port activities. In May 2024, we conducted a workplace noise monitoring to assess noise exposure levels in PSA SG Terminal Engineering Workshops and the various Yard Crane Servicing Bays. Workplace noise monitoring will be conducted once every 3 years. Appropriate noise control measures are implemented

to eliminate or reduce such risks. Staff who are exposed to excessive noise are eligible for pre-employment, periodic and post-exposure medical examinations, including annual audiometry examinations. Records shall be maintained for all HCP related matters for 10 years and HCP will be evaluated to determine its effectiveness and areas for improvement. Regular inspections will be conducted to ensure that control measures are in place and properly implemented. Non-compliance with PPE requirements are addressed through enforcement actions.

## Internal Audits and Table-Top Exercises

In 2024, PSA SG's Audit and Compliance team in the Safety and Health Department (SHD) trained in ISO45001 conducted eight internal audits. The audits focused on critical aspects of the safety management system within the operations and engineering departments. The findings from the audits were promptly addressed by the respective departments and subsequently reported to the Operations/Engineering and HSS Steering Committee.

In response to the audits, 3 initiatives were organised to further enhance workforce competency and preparedness. Close to 300 participants attended 3 sessions of Risk Assessment Workshop, 2 sessions of Lashing Exception Handling Table-Top Exercise and 1 session of WSH Seminar on Management of Change.



## NURTURING A FUTURE-READY WORKFORCE

# Stronger Together

PSA SG actively collaborates and engages with diverse groups to foster a positive team culture and promote constructive thinking, thereby enhancing both team performance and overall well-being.

## Health, Safety, Security and Sustainability Week 2024

The annual PSA SG 2024 HSSS Week commenced with the HSSS Launch on 16 January, designed to promote awareness and encourage both staff and solution providers to embody HSSS values in their professional and personal lives. The week's events included health screening sessions, food rescue, 'nutritional health talk', 'peer supporting skills talk' and scent making workshop by the Health Promotion Board and National Parks Board. The Central Narcotics Bureau gave a presentation on the penalties for drug consumption and possession, while Singapore Customs presented on contraband items. In addition, some of our major suppliers exhibited personal protective equipment (PPE).

The theme of HSSS Week in 2024 was 'Valuing Lives'. A safety walkabout was organised by the management and unions, which involved 14 cross-functional teams engaging staff and solution providers. This initiative aimed to highlight the significance of valuing lives, practicing the TAKE5+ principles, promoting healthy longevity, and inspiring everyone to contribute to environmental sustainability and the security of our port.

Implementing preventive health measures and taking proactive steps towards maintaining health and well-being are essential for ensuring the welfare of our employees. As part of 2024



HSSS Launch 2024

HSSS Week at PSA SG, employees were given the opportunity to monitor their health through sponsored health screening sessions. These screenings included measurements of height, weight, and body mass index, as well as blood pressure readings and blood glucose checks. Each participant received personalised health report thereafter, empowering them to take responsibility for monitoring their health.



Management and unions safety walkabout



Fire fighting demonstration



## Starfish Safety Workshop

The Starfish Safety Workshop is designed to train PSA SG's operational and engineering staff, along with our solutions partners, to foster ongoing enhancements in our safety culture. The workshop effectively incorporates the four FISH! Principles (Choose your Attitude, Make Their Day, Be There, and Play) within its curriculum.

During the first segment, titled "Choose your Attitude," participants explore the application of the Take5+ principles, PSA SG's tool for hazard identification. They also benefit from insights shared by colleagues from the various job functions regarding strategies for accident prevention.



PSA SG's hazard identification tool, adopted by all employees and solutions partners

In the second segment, titled "Make Their Day," participants take part in reflective exercises where they share experiences of how someone influenced their workday in a positive way and discuss instances when they made a difference for others.

The third segment, "Be There," promotes group discussions centred around lessons learned from previous accidents, encouraging a shared understanding of safety protocols and practices.

Finally, the fourth segment, "Play," engages participants in interactive role-playing exercises. Using props, they reenact various scenarios to highlight both the positive and negative responses to case studies, thereby reinforcing practical safety measures in an engaging way.

Since its launch in 2018, 8,583 PSA staff and staff from our solutions partners have participated in the workshop.

Building on the success of the Starfish Safety Workshop, we have launched Starfish 2.0, a workshop designed to empower employees to take ownership of their safety. This initiative encourages individuals not only to voice out when they notice something is wrong but also to share their ideas for improving work conditions and processes, thereby fostering a safer workplace for everyone. Co-created by Group HR and PSA SG, this one-day signature programme builds on previous efforts by integrating the Fish+ principles to cultivate a safe working environment and further enhance our safety mindset. Since its launch in October 2024, 102 PSA staff members have participated in the session.



Participants of Starfish 2.0 Safety Workshop

### I Love My Hands Safety Campaign

At PSA SG, while we take pride in our efficiency and productivity, safety remains our top priority. To foster a culture of safety alongside operational excellence, we implement rigorous protocols, advanced monitoring systems, and continuous training. A notable initiative was the “I Love My Hands” safety campaign held on 19 March at the Pasir Panjang Terminal Resource Hub, which saw 60 participants from Lashing Services Resource Department (LSRD) and 11 solutions providers. The campaign aimed to raise awareness about the risks of hand injuries at work.

The event stressed the importance of safety compliance to ensure everyone goes home safely. Participants engaged in hands-on activities at four booths, which demonstrated risks associated with lashing operations and the challenges of performing daily tasks with simulated finger injuries. The event concluded with a closing speech from the LSRD management team and a group photo, with all participants receiving a water bottle from SHD as a reminder to “Take Time, To Take Care.”

I Love My Hands Safety Campaign



## Awards and Recognition

### Singapore Road Safety Awards (SRSA) 2024

Mr Husni Bin Omar from PSA SG's Prime Mover Resource Department (PRMD) received an accolade at the SRSA 2024 organised by the Singapore Road Safety Council (SRSC). Mr Omar was awarded the Safe Driver Excellence Award in the Heavy Goods Vehicle Category. The SRSA is a joint initiative involving the SRSC, Traffic Police, the Land Transport Authority and the Workplace Safety and Health Institute, aimed at recognising outstanding companies and drivers for their dedicated efforts in promoting road safety.

Mr Husni Bin Omar awarded the Safe Driver Excellence Award in the Heavy Goods Vehicle Category





## NURTURING A FUTURE-READY WORKFORCE

# Green Port Culture

## Why It Is Important

At PSA SG, we recognise that fostering a generative culture is not only ethically responsible but also contributes significantly to the success of our business. Our Green Port Culture aligns with PSA SG's core values of 'Focused on People' and 'Responsible Corporate Citizenship'. By offering diverse pathways, the Green Port Culture aims to enable, empower, and equip our employees and the wider community to adopt a sustainability mindset both at work and in their personal lives. Through our engagement initiatives, we strive to cultivate a more connected community, an engaged workforce, and a resilient company prepared to address future sustainability challenges. We firmly believe that everyone has the power to make a difference.

## Our Approach

### Empower and Equip

To promote awareness of sustainability issues throughout the company, we have developed a diverse range of engagement activities, including briefings, presentations, workshops, training sessions, and online publications.



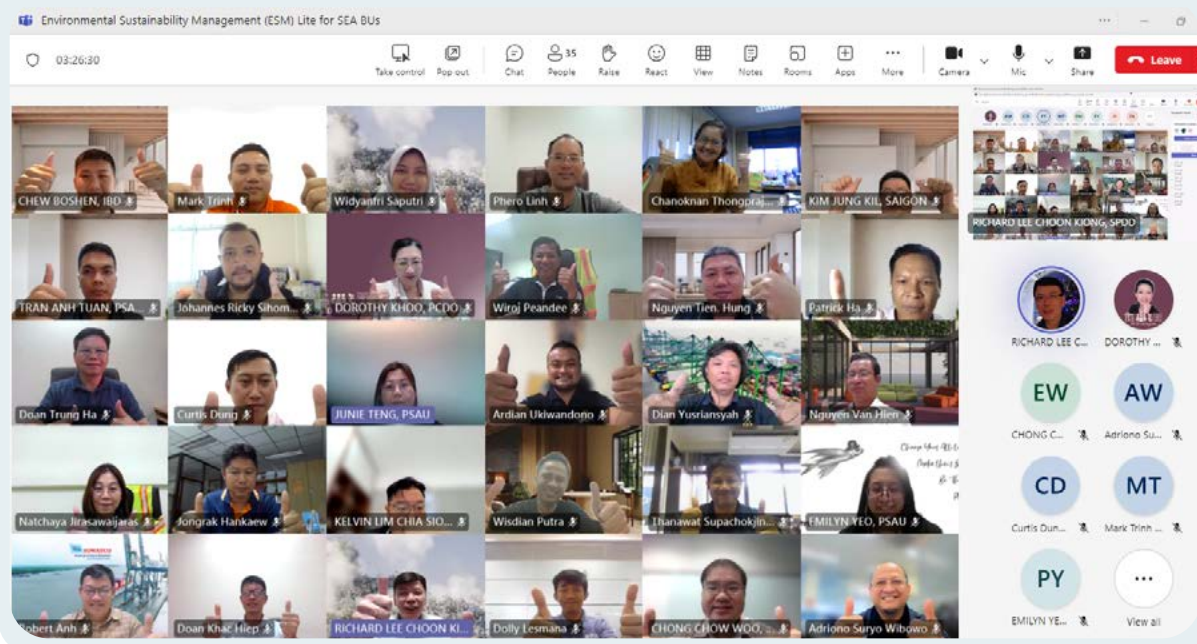
## Environmental Sustainability Management (ESM) Course

As part of our Climate Action Education initiative, we introduced the “Environmental Sustainability Management” (ESM) course in 2021. This one-day competency training programme is tailored for managers. Its goal is to foster a culture and mindset that aligns with global, national, and organisational objectives aimed at promoting environmental sustainability and effective management. The course examines the UN SDGs and their connection to PSA SG’s and Singapore’s sustainability initiatives. Through the course, participants can gain a thorough understanding of environmental issues, learn about PSA SG’s sustainability strategy, and acquire skills to manage

environmental impacts within their daily operational activities. In 2022, we expanded the programme to include deputy managers. Since its launch, over 800 deputy managers, section managers and departmental managers have received training in this one-day workshop.

The inaugural online ESM Lite programme was held on 20 September 2024, during PSA SG Go Green Month. TSUS and PSAU collaborated to deliver a 4-hour workshop to over 30 participants from five SEA business units. The workshop focused on developing environmental sustainability skills, fostering a supportive culture and mindset, advancing organisational ESM goals, and effectively communicating green sustainable management messages.

Participants of inaugural ESM Lite Programme



## Greenfish E-learning Programme

Our comprehensive “Empowering Action” e-learning programme is designed to equip frontline staff with the knowledge and motivation needed to actively engage in climate change solutions. The interactive 4-hour Greenfish Climate Action (Lite) e-learning programme covers the history and science of climate change, examines the global action agenda, and empowers individuals to recognise their roles in addressing these issues. It goes beyond mere awareness by encouraging participants to reframe their perspectives, identify opportunities amidst challenges, and reconsider their daily habits to reduce environmental impact. By fostering a culture of personal responsibility for sustainability, this programme enables our staff to effect positive change both within PSA and in the wider community. Illustrating our dedication to a well-informed workforce, over 5,000 participants completed the programme by the end of 2024.

As part of Greenfish II e-Learning initiative, PSA SG introduced a 2-hour e-learning programme for executives in 2024, developed collaboratively by PSAU and GSUS. In conjunction with Earth Day, this initiative was launched in April 2024, to remind us of the importance of continuous learning and engagement in our sustainability journey. This comprehensive training is targeted at deepening participants’ understanding of renewable energy options and highlight the initiatives undertaken by our global business units. Additionally, it addresses Scope 3 emissions, stressing the significance of measurement and management strategies for a holistic approach to sustainability. Over 1,300 executives completed this e-learning.

PSA SG plans to roll out Greenfish III e-Learning initiative in 2025. This 2-hour e-learning programme for executives has 3 modules. Staff will gain a better understanding of key sustainability regulations and standards, the importance of sustainability data for reporting and improving PSA SG’s sustainability efforts.



## Greenfish Sustainability Mobile App

In 2022, we introduced the Greenfish Sustainability Mobile App (Greenfish App) to improve access to engagement and facilitate communication with our employees regarding sustainability issues. Building on the success of the “Greenfish - Everybody Makes a Difference” campaign in 2022, we launched phase two of the Greenfish Sustainability Mobile App (Greenfish App)<sup>18</sup> in 2023. In 2024, two campaigns were launched by Container Division, HR Division and Technology and Sustainability Solutions Division (TSUS). Over 80% of PSA SG staff use the app.

Those who accumulated at least 100 Greenfish credits by the end of each campaign received \$25 worth of grocery vouchers as an incentive to promote sustainable practices in their daily lives. We are currently transitioning to the PSA Climate Action Wallet (CAW), which will replace the Greenfish app.

<sup>18</sup> An early phase of “Greenfish - Everybody Makes a Difference” campaign was launched in 2022 to encourage staff to adopt and embrace environmentally friendly habits as part of their lifestyle and contribute to PSA SG’s sustainability efforts.

## Go Green Corporate Social Responsibility (CSR) and Green Partnerships

Initiated in 2021, PSA SG’s Go Green CSR initiative strives to encourage our CSR partners, their beneficiaries, and the wider community to adopt sustainable practices. This objective is achieved through various events and training sessions tailored for our diverse partners and their beneficiaries. As a responsible corporate entity, we are committed to improving the lives of communities and contributing to a stronger nation for future generations. In 2024, we recorded 750 volunteer hours across 18 organised Go Green CSR activities.

The Go Green CSR activities and events include tree-planting, beach and waterway clean ups, donation of fresh produce from PSA SG’s food gardens and rescue and distribution of ‘ugly’ fresh supplies from Pasir Panjang Wholesale Centre to various community locations.

PSA SG also supports the Ministry of Sustainability and the Environment’s (MSE) Go Green SG initiative, launched in 2023. Go Green SG is a whole-of-nation movement led and coordinated by MSE to rally citizens, organisations, and the community to take collective action towards a more environmentally sustainable and climate-resilient Singapore.

### Impact achieved in 2024 through the Go Green CSR activities

No. of trees planted



55 trees

Weight of trash collected



924.3 kg

Weight of food garden produce donated



7.3 kg

Weight of ‘ugly’ fresh supplies rescued and distributed



21.5 tonnes



## Park and Beach Clean-ups

To kick off 2024's Go Green initiatives, colleagues from the Container Division (CND) undertook a cleanup mission at Changi Beach. 372kg of litter, mostly marine trash washed ashore, were removed.

On 11 March, staff volunteers from PSA SG teamed up with 40 youths and staff from Gracehaven and The Haven (The Salvation Army) to remove 320kg of litter from Yishun Dam. This activity was also organised in support of SG World Water Day.

CND colleagues cleaning up Changi Beach



PSA SG volunteers, and youths and staff from Gracehaven and The Haven at Yishun Dam





On 2 July, Engineering Quality and Inventory Management Department (EQIMD) incorporated a beach clean-up at Pasir Ris during their department get-together, where they removed 13.1kg of litter from Pasir Ris Beach.

On 11 July, more than 10 staff collected 26.5kg of litter and 700g of cigarette butts from East Coast Park. It was a rewarding morning spent contributing to the cleanliness of this recreational spot. Since 2022, PSA SG has collected close to 1,500 kg of litter through various clean-ups.



East Coast Park clean up



EQIMD colleagues at Pasir Ris beach



## Reducing Food Waste

PSA SG collaborated with a non-profit organisation, Fridge Restock Community SG (FRC) to rescue and distribute 21.5 tonnes of 'ugly' fresh supplies. Together with volunteers from FRC, PSA SG volunteers participated in 3 rescue sessions at Pasir Panjang Wholesale Centre and 5 distribution sessions in the community.



Colleagues from HSS SEA Division at Pasir Panjang Wholesale Centre



PSA SG volunteers distribute rescued 'ugly' fresh supplies



Colleagues from IDAD at Pasir Panjang Wholesale Centre



Colleagues from Procurement Division at Pasir Panjang Wholesale Centre



### Circularity in Practice – Upcycling Old Versions of PSA SG Uniforms

PSA SG collaborated with like-minded partners in the textile recycling and upcycling industry to upcycle old versions of PSA SG's engineering and operations uniforms. During the planning, the team took care to minimise fabric waste. The final product line up of laptop bags, laptop sleeves, sling bags, belt pouches and card holder cum coin pouches also reused buttons from the uniforms and were well received. This initiative encouraged PSA SG staff to explore other upcycling possibilities.

### Tree-planting at Mandai Wildlife Bridge

On 3 September 2024, during the week-long school holiday, 40 staff and beneficiaries from Gracehaven (The Salvation Army) and PSA SG planted 40 trees at the Mandai Wildlife Bridge, an ecological bridge in Singapore. Although it is not accessible to the public, the bridge has been instrumental in facilitating wildlife crossings, with nearly 70 different species observed using it since its inauguration, thus positively impacting Singapore's biodiversity. This tree-planting activity is part of on-going efforts to form a continuous canopy cover by 2025. To date, over 120 trees have been planted across Singapore as part of Go Green CSR efforts since 2016, aimed at safeguarding our natural ecosystems.



Tree-planting at Mandai Wildlife Bridge with our PSA SG employees and beneficiaries



## Go Green Engagements

Go Green engagements are aimed at engaging employees on sustainability related matters. In 2024, the Container Division (CND) organised 3 workshops to raise awareness on recycling different materials: plastic, textile and e-waste.

### Earth Day 2024 – newPlastics Workshop

In alignment with the Earth Day 2024 theme, “Planet vs. Plastics,” CND collaborated with a sustainability enterprise to conduct a workshop on 30 April 2024, for 20 participants. The workshop aimed to raise awareness about the detrimental effects of single-use plastics on the environment, focusing on the plastic waste crisis in Singapore and nearby regions. It explored how to manage recyclable and non-recyclable items in daily life and guided participants in creating usable objects from recycled plastics.

Prior to the event, participants were encouraged to collect clean, dry PP5 certified plastics, which were then shredded manually or with a machine, contributing to the sustainability enterprise’s supply for future newPlastics initiatives. The hands-on segment allowed participants to experience the challenges of plastic recycling, emphasising the importance of proper recycling practices and the urgent need to reduce and refuse single-use plastics to tackle the growing plastic waste issue.

### Upcycling Denim Pouch Workshop

On 7 August 2024, an upcycling workshop was organised for 45 participants. The workshop aimed to raise awareness of the local textile waste issue and promote the concept of slow fashion by encouraging environmentally conscious consumer habits. Participants were provided with a variety of pre-cut upcycled fabrics and learned how to customise and create their own upcycled pouches using sewing machines.

### Learning Journey to an Electronic Waste (e-Waste) Recycling Facility

On 25 September 2024, 19 CND participants went on a learning visit at an e-waste recycling facility. During the visit, participants observed the processes involved in managing and processing e-waste at the facility. Participants also gained insight into the challenges and constraints of handling e-waste in Singapore, while developing a deeper understanding of the complexities surrounding sustainability in the local context. By the end of the visit, participants were encouraged to reflect on ways to reduce waste in their daily lives and take small steps towards adopting more environmentally friendly habits.

In 2024, colleagues from the Regional IT SEA Division visited a Waste-to-Energy (WTE) plant and an e-waste recycling facility, where they learned about Singapore’s daily waste generation, WTE processes that convert waste into energy, and battery recycling for raw material recovery.



CND colleagues at Upcycling Denim Pouch Workshop

## PROTECTING OUR PEOPLE

# Employee Diversity and Inclusion

## Why It Is Important

PSA respects employees as unique individuals and believes in creating an inclusive workplace that embraces diversity. We are committed to providing equal opportunities within the organisation, based on competencies, abilities and performance. PSA does not discriminate against employees based on race, gender, religion, age, disability, family status, sexual orientation, pregnancy or any similar attribute or condition.

## Our Approach

In recognition of our commitment to employee well-being, PSA International has once again been recognised as one of Singapore's top employers in 2024 by The Straits Times.

PSA SG is dedicated to creating a positive and productive work environment. To enhance employee experience, we have introduced several initiatives. For instance, we installed privacy pods to provide quiet spaces for meetings and focused work.

We also offer several platforms to enhance employee experience and foster continuous learning. Our new cloud-based performance management system, iTalent, facilitates

seamless communication and supports ongoing learning and career development. Enhancements are also implemented for existing platforms based on feedback to provide a more seamless experience for employees, for example, migration of our SGconnect mobile application to a web-based platform and introduction of more self-service facilities on our staff enterprise portal, SGconnect, for better accessibility and productivity. These enhancements to SGconnect along with iTalent, are designed to make employee interactions more efficient and convenient.

Besides enhancing employee experience, we believe that a strong support system at home contributes to a happier and more engaged workforce. To strengthen family bonds and foster a sense of pride, we had the inaugural Family Day @ Tuas on 23 November 2024. Family members had the rare opportunity to see the automated container handling equipment in Tuas Port and toured the Tuas Port Control Centre, gaining insights on how the port operates, and our cutting-edge technology and innovative systems.

Improvements to our work environment are also part of PSA's ongoing commitment to employee wellbeing with the upgrading of facilities planned at our terminal buildings. For example, Pasir Panjang Terminal Building 1 canteen was upgraded to provide a more enjoyable dining experience, fostering a positive atmosphere that contributes to employee satisfaction and productivity.

Inaugural Family Day @ Tuas



## Empowering Women in Container Division

On International Women's Day, which falls on 8 March, PSA SG celebrated the remarkable strides women have made in the traditionally male-dominated port industry. The Container Division (CND) oversees PSA's core operations, encompassing port management, container handling, vessel coordination, and infrastructure development, ensuring seamless and efficient cargo flow. A CND Women's Committee was first formed as a beacon of empowerment to foster an inclusive and supportive environment for women. It provides a safe and open space so that female colleagues working in our terminals can voice their opinions, share concerns and prioritise their well-being. Comprising colleagues from various departments across CND, the committee advocates a culture of diversity and inclusion, providing support for fellow female colleagues, addressing feedback and offering developmental, well-being and career advice.

In 2024, PSA SG hosted a BBQ get-together themed 'Symphony of Sisterhood – Celebrating Togetherness', attended by women from CND, senior management, and union leaders. Discussions and initiatives focused on promoting diversity and inclusion, including female-friendly infrastructure upgrades, team-building sessions for CND women, and efforts to attract more women to the workforce. These actions have led to meaningful improvements in workplace facilities and greater organisational diversity.

### Enhancing Workplace Facilities and Inclusivity

A cornerstone of the Women's Committee's efforts has been its proactive role in enhancing workplace facilities at PSA's terminals, with a focus on creating functional and inclusive spaces for women. Noteworthy improvements include enhanced female restrooms and the establishment of dedicated nursing rooms. The committee has been instrumental in driving initiatives, not only to address the practical needs of female employees but also reflect PSA's broader commitment to foster an accommodating workplace with greater diversity and inclusion within the organisation.

### Expanding Outreach and Building Wellness Programmes

The Women's Committee has strengthened its outreach efforts to promote mental and physical well-being among women, particularly through wellness programmes and partnerships with our unions. By organising activities that nurture holistic well-being, the Committee fosters a sense of community among female employees and provides access to resources that support their physical and mental health. Initiatives like Spin, Yoga and Pilates classes, which brings women from various CND departments together, demonstrate the importance of work-life balance, and emphasise the value of mental resilience and personal health.

### Strengthening Community Engagement and Communication Channels

Building on its efforts to promote physical wellness, the Women's Committee is dedicated to enhancing communication and engagement within PSA SG. A significant achievement in this endeavour was the launch of a dedicated Women's Helpline Channel in October 2024, providing a confidential and direct platform for female staff to seek support and share feedback. The 24/7 helpline is designed to be anonymous, creating a safe and confidential environment for employees to share their concerns. An escalation framework is also in place to address critical issues, demonstrating the Committee's commitment to a supportive and responsive environment.

Regular quarterly committee meetings shape the direction of its initiatives and foster collaboration among members. These meetings serve as a vital platform for consolidating and reviewing feedback from employees, including solutions providers, and tracking the progress of ongoing initiatives. By maintaining open lines of communication, the Committee ensures that its initiatives remain relevant, responsive, and impactful, and that the evolving needs of the workforce are met.

### Celebrating Women's Achievements and Contributions

Through its strategic initiatives, the Committee has made substantial progress in promoting a culture of inclusion, empowerment and recognition for women within the organisation. By celebrating women's achievements and contributions, the Committee shines a spotlight on their impact, provides inspiring role models, and builds a culture of respect where accomplishments are consistently acknowledged. These efforts have reinforced the organisation's commitment to diversity and inclusion, creating a more supportive and equitable environment for all.

PSA SG is committed to fostering a diverse workplace for all genders, particularly in a traditionally male-dominated industry. The Committee's advocacy for the recruitment and retention of women plays a vital role in transforming PSA's culture, helping to create a more diverse and supportive environment for women across all roles.

PSA SG actively monitors gender diversity within our workforce as part of the annual talent review process. In 2024, PSA SG's total employee headcount stands at 10,130, with the proportion of females in its talent pool increasing from 17% in 2019 to 23% in 2024. The increasing presence of women in various roles within PSA SG signifies a transformative shift toward greater gender diversity and inclusion.



## Staff Games 2024

The PSA SG Staff Games made an exhilarating return in 2024, showcasing a thrilling array of new challenges as four teams battled it out for the coveted championship title. Spanning from late August to early November, the event brought together 1,800 employees from

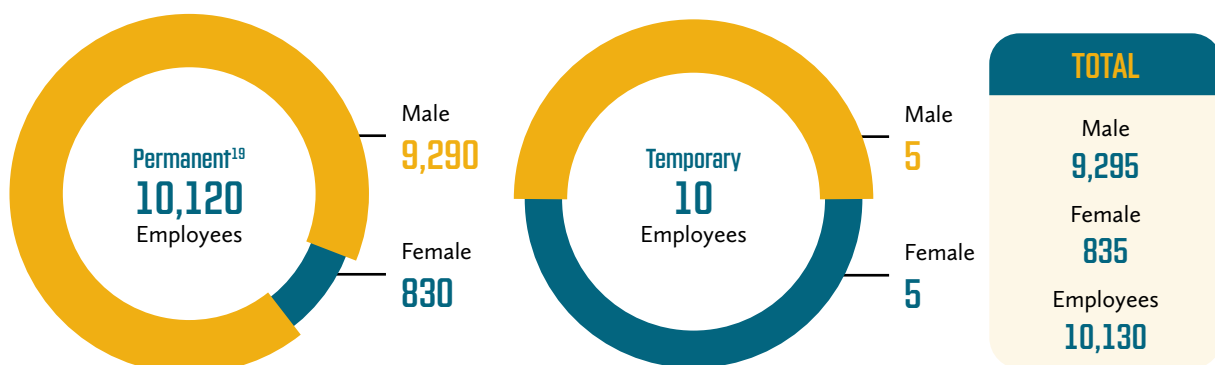
PSA SG, PSA Marine and the Corporate Centre across 14 diverse games. The theme for the 2024 Staff Games @ Alongside was “Align, Act, and Achieve,” centered on fostering unity, camaraderie and the collective spirit of One PSA.

PSA SG's Staff Games @ Alongside culminated in an incredible finale event on 5 November at PSA Alongside's Multipurpose Hall.



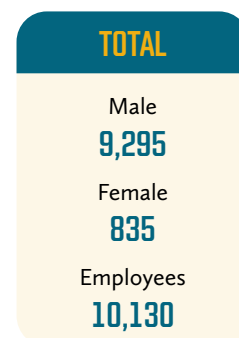
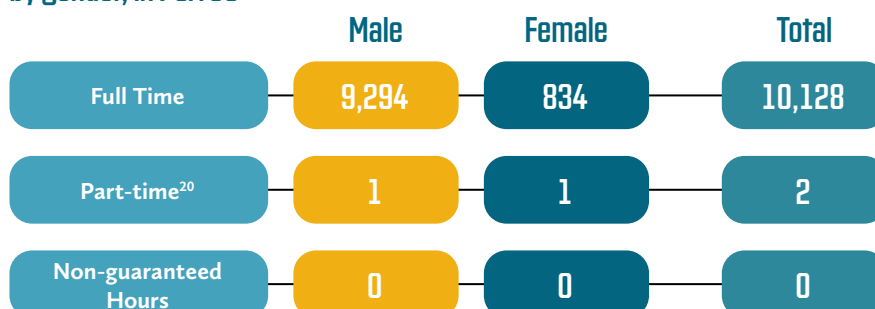
## Overview of employee profile

Number of employees by employment contract (permanent and temporary), by gender, in PSA SG



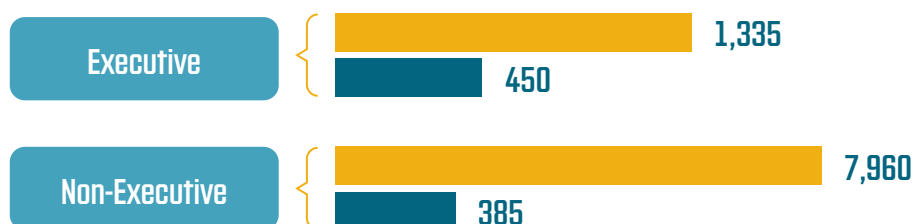
<sup>19</sup> Permanent employees include contract and re-employed staff.

### Number of employees by employment type (full time and part time), by gender, in PSA SG

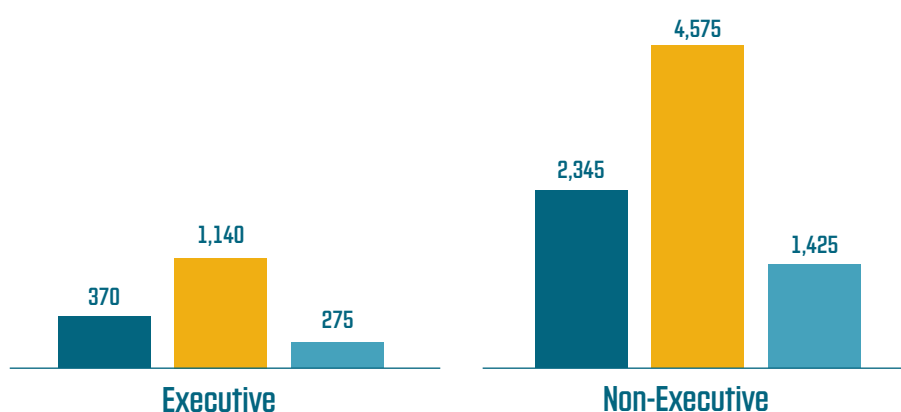


<sup>20</sup> Employees are on part-time arrangements due to personal reasons.

### Diversity of employees, by gender, in PSA SG



### Diversity of employees, by age group, in PSA SG

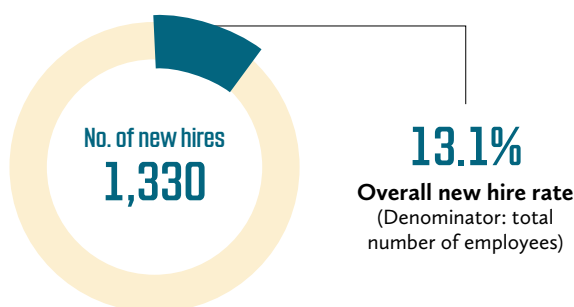


In 2024, PSA SG's new hire rate increased to 13.1%, up from 10% in 2023, in line with our proactive approach to support business growth. We continue to see a reduction in overall turnover rates, from 9.2% in 2023 to 8.7% in 2024. This is significantly lower than the national turnover rate of 15.6% as reported in the Labour Market

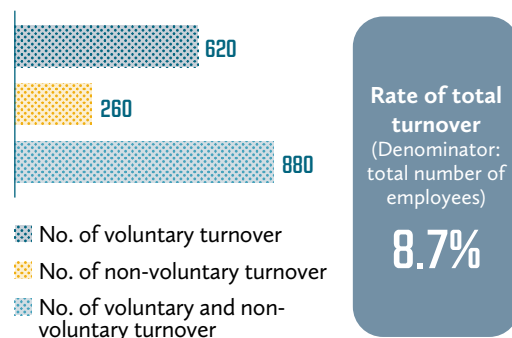
Report Fourth Quarter 2024 published by the Ministry of Manpower.

To maintain our competitive edge in the job market and retain top talent, we continue to enhance our employee benefits package.

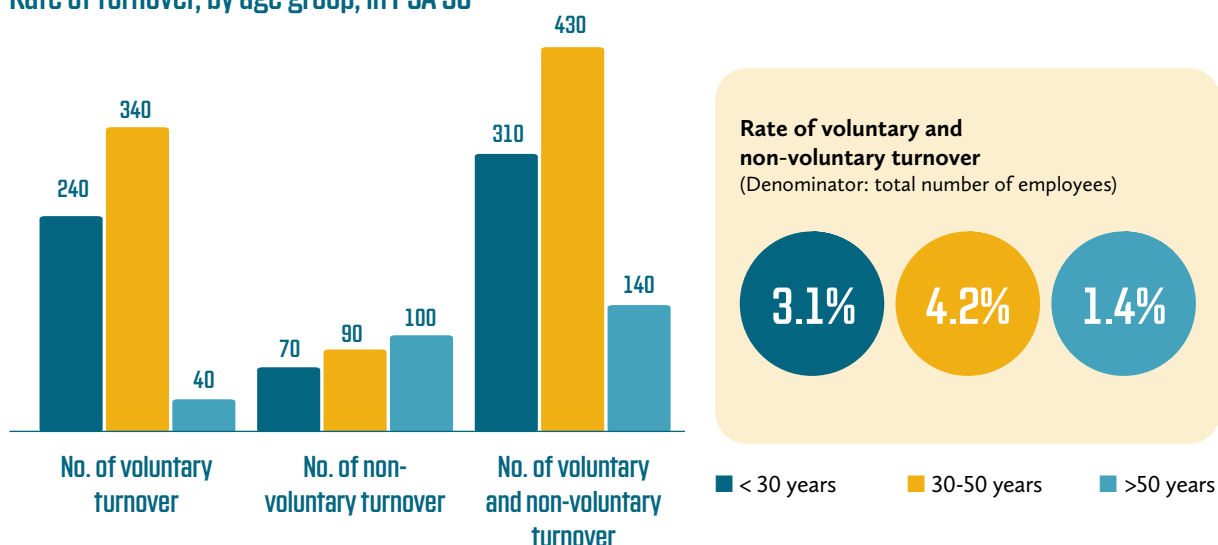
### Rate of new hires in PSA SG



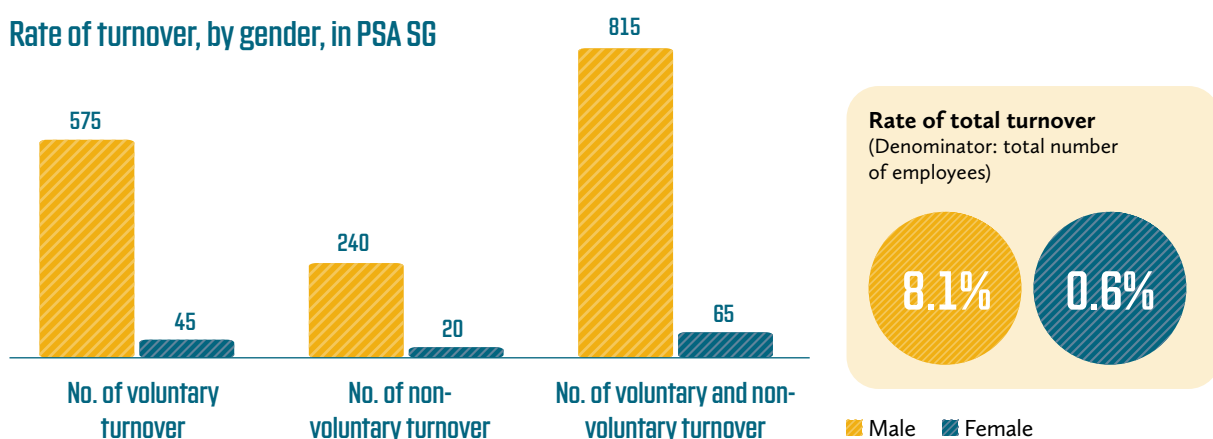
### Rate of turnover in PSA SG



### Rate of turnover, by age group, in PSA SG



### Rate of turnover, by gender, in PSA SG





## PROTECTING OUR PEOPLE

# Labour Relations and Worker Wellbeing

## Why It Is Important

Our commitment to a fair and ethical workplace includes fostering strong relationships with our unions. We uphold high labour standards and strictly prohibit discrimination in all forms. Maintaining strong employee and labour relations is vital to provide employees with a working environment that encourages empowerment and growth, resulting in higher workforce dedication and a healthy working culture.

## Our Approach

Regular communication channels are maintained with both employees and unions to ensure transparency and understanding. We treat all employees with dignity and respect, where we prioritise their well-being and invest in their professional development to secure their long-term employability.

### PSA Corporation Employees' Agreement 2024

PSA SG regularly collaborates with our unions to review and discuss the various schemes and benefits available for employees to ensure that PSA SG employees are competitively remunerated and in line with industry benchmarks.

The PSA Corporation Employees' Agreement 2024 was signed with the Singapore Port Workers Union (SPWU) in November 2024 and it is valid for three years. The agreement package represents a comprehensive and strategic approach, addressing the needs of our workforce while ensuring that the organisation remains agile and competitive in the face of ongoing geopolitical uncertainties. Furthermore, the package emphasises the importance of reskilling and multi-skilling initiatives that would support our staff in their continuous development and transformation.

In line with our commitment to maintaining policies that are relevant, updated and aligned with current standards, we conduct thorough reviews and implement enhancements to key policies. Revisions on policies relating to flexible work arrangements requests were made in response to emerging issues and changes in legislation, with the aim of improving clarity and ensuring stronger alignment with evolving legal requirements.

In 2024, 68.3% of our workforce was covered by collective bargaining agreements.

Signing ceremony of PSA Corporation Employees' Agreement 2024



## Partnering with Our Unions

Fostering positive labour-management relations with our unions is key to maintaining a safe, agile, and robust workforce. In this pursuit, PSA SG, together with SPWU and Port Officers' Union (POU), have actively engaged in a series of collaborative initiatives and events. Representatives from various departments within PSA SG and the unions meet every month to discuss new initiatives and workforce concerns. The unions are actively involved in these discussions, and any changes are communicated clearly and transparently before implementation. Senior management regularly engage with union leaders to share insights into the business outlook and future developments.

When there are significant operational changes, PSA SG's employees and unions are promptly engaged by Human Resource to gather feedback, address key concerns, and allow them with as much advanced notice as possible. For changes that may significantly impact our employees, we adhere to the minimum notice periods outlined in local labour agreements and laws, where applicable.

Our strong relationship with the unions has led to several initiatives under the 'Towards Endearing Partnership' framework. These initiatives aim to create a positive work environment and foster a culture of lifelong learning. The 2024 Gracious Communications walkabout, spearheaded by senior management, in collaboration with the unions, successfully engaged 1,200 employees across multiple terminals. This initiative was designed to raise awareness of the vital role that Gracious Communications plays in cultivating a positive and inclusive workplace culture. By promoting the FISH! Principles, the walkabout reinforced our commitment to creating a cohesive, respectful, and supportive environment for all staff.

On the learning front, POU, in partnership with PSA SG Human Resource and the Singapore University of Social Sciences (SUSS), continued their longstanding collaboration where they hosted a series of expert-led sessions on global trade, supply chain connectivity and maritime developments. Together, they successfully conducted their 16<sup>th</sup> and 17<sup>th</sup> Professional Development Seminars, which aims to help our employees stay ahead with the skills and knowledge needed to drive innovation and maintain a competitive edge.

## 'Towards Mental Wellness' Toolkit

PSA SG recognises the vital role of our employees in driving the organisation's success. As part of our commitment to promote healthy lifestyles, we have implemented various initiatives to support and prioritise the mental well-being of our workforce.

In tandem with these efforts, a "Towards Mental Wellness" toolkit was launched through a comprehensive three-part article

series in the Health, Safety and Security (HSS) Care publication. This series emphasises the importance of mental wellness and highlights the various support resources available within PSA. The series also features personal stories from union leaders of SPWU and POU, who share their own experiences and offer valuable insights to navigating mental health challenges. Through these ongoing initiatives, PSA SG remains steadfast in our dedication to fostering a supportive environment for mental health, ensuring that employees have access to the resources and care they need to thrive both personally and professionally.

## Confidant Programme

To bolster the resilience and mental well-being of our workforce, PSA SG introduced the Confidant Programme, providing employees with a confidential support network where they can share concerns and seek guidance in a safe and trusting environment.

In 2024, the programme was enhanced through the introduction of a new channel for connecting with Confidants - para-counselling trained colleagues within PSA SG. Employees now have the flexibility to reach out through the dedicated Confidant Hotline or via online forms, offering greater accessibility and convenience.

Building on this momentum, employees were given the option to directly contact PSA SG's appointed partner to schedule appointments with external professional counsellors, further expanding the range of support available. These initiatives underscore PSA SG's ongoing commitment to providing comprehensive, accessible mental well-being resources for our employees.





## Towards Healthy Longevity

We are committed to supporting our workforce and the local community in their pursuit of healthy lifestyles, as an integral part of our healthy longevity roadmap. In 2024, PSA SG provided a range of health and wellness programmes for employees. These included physical and mental health talks, monthly fitness workouts, regular mental wellness workshops, health challenges, health coaching, and health screenings, with total participation exceeding 4,000.

The 3Cs – Care for Self, Care for PSA Employees and Care for the SG Community – reflect our commitment to promoting well-being, health and engagement across all aspects of life. These initiatives aim to foster a supportive, healthier environment for both individuals and the community.

### Care for Self

This places emphasis on employees taking ownership of their physical and mental health, empowering individuals to make healthier lifestyle choices. Key initiatives included the Annual Health Roadshow, health screenings, and promoting preventive care.

### Care for PSA Employees

Our commitment includes promoting active lifestyles, providing health screenings, and supporting chronic disease management. We also strengthened mental health support services through programmes such as Confidant, counselling and in-house training programmes like the FishBALL workshops to help employees manage stress and maintain work-life balance.

### Care for the SG Community

In 2024, our community care initiatives focused on promoting healthy longevity, well-being and engagement for individuals at all life stages. We support mature employees and retirees through programmes encouraging lifelong learning, physical activity, social interaction and participation in Corporate Social Responsibility (CSR) activities, including the Health@ Home Retiree Programme. PSA was also a gold sponsor for the Race for Good 2024 (RFG 2024), a charity run organised by The Salvation Army.

## PSA SG Health Roadshow 2024

On 22 August 2024, a 900-strong crowd gathered at PSA Alongside for the “Healthy Longevity: Let’s Add Life to Lives” PSA SG Health Roadshow. The event featured a variety of educational booths from healthcare providers such as the Health Promotion Board (HPB), National Dental Care Singapore, Fullerton Health, and Care Corner Singapore. Beneficiaries from PSA SG’s adopted charity, Lion Befrienders, were also present. Participants learned about managing chronic diseases, the importance of mental well-being, and the benefits of good oral health.

Mr Nelson Quek, Regional CEO of Southeast Asia, was the guest of honour. In his address, he highlighted the significance of improving health span as we age and urged individuals to take a proactive approach to their well-being by investing in their physical and mental health

through regular exercise, a balanced diet and regular health screenings. New activities were introduced at this year’s roadshow, including the Digital Brain Scan Function (DBFS) and Lawn Bowling. The latter, a low-impact sport, offers a fun and accessible way to improve fitness and coordination, making it suitable for participants of all fitness levels.

In addition to the educational booths, the roadshow offered interactive games, health screenings, mass workout, tote bag paintings and more. At the Cycle for Charity station, the participants showed their enthusiasm in breaking a sweat to cycle an extra mile in the name of charity. \$50 was donated for every 1 km cycled and \$5,000 was raised for the Samaritans of Singapore (SOS), in support of their work in crisis intervention and suicide prevention.

PSA SG Health Roadshow 2024







Tote bag painting



PSA SG colleagues cycling for charity



PSA SG colleagues participating in a mass workout

# Awards and Recognition

## Wellbeing Innovation Award at 2024 WorkWell Leaders Awards

PSA SG received the Wellbeing Innovation Award at the 2024 WorkWell Leaders Awards, an annual event organised by the Singapore-based charity WorkWell Leaders that recognises excellence in promoting mental health in the workplace. This accolade highlights our ongoing commitment to mental wellness and the innovative strategies we have implemented over the years. The award selection was made by a panel of senior leaders and experts in organisational well-being, who noted PSA SG's standout approach, particularly our comprehensive well-being survey conducted in multiple languages. Gathering feedback from over 3,000 colleagues — including migrant workers, suppliers, and contractors — this comprehensive multilingual survey, developed in collaboration with a clinical psychologist, aimed to gather insights into enhancing workplace safety and support. Based on the survey results, more resources were directed to increase peer support, para counselling resources and recreational activities to foster stronger workplace connections. This recognition underscores our dedication to creating a healthier, more supportive work environment for all.

## Silver Ribbon Mental Health Awards for Employers 2024

The Silver Ribbon Mental Health Awards for Employers recognises and celebrates organisations in Singapore that demonstrate exceptional dedication to fostering a mental health-friendly work environment.

For 4 consecutive years, PSA SG has been recognised for our commitment to promoting mental well-being in the workplace at the Silver Ribbon Mental Health Awards for Employers 2024. PSA SG supports the Silver Ribbon (Singapore)'s vision in promoting a positive attitude towards mental health in our community.

PSA SG was among the 13 Singapore-based organisations honoured for impactful work in championing positive mental health and reducing stigma in the workplace.



Mr Cheang Chee Kit (centre), Head of Health, Safety and Security receiving the award at the Silver Ribbon Mental Health Awards Ceremony



## Singapore HEALTH Awards

PSA SG was awarded the Organisational Champion Excellence Award at the Singapore HEALTH Award ceremony in November 2024. The award was presented by the Health Promotion Board to recognise 27 organisations' efforts in developing and promoting health and wellness programmes in the workplace.

Mr Cheang Chee Kit (right), Head of Health, Safety and Security receiving the award at the Singapore HEALTH Award ceremony



## PROTECTING OUR PEOPLE

# Environmental Protection

## Why It Is Important

PSA SG's commitment to safeguarding the health and wellbeing of the communities where we operate in naturally extends to protecting the environment shared by all. PSA SG recognises that port operations can generate air and noise pollution, which directly impact quality of life. Through robust monitoring and management plans to mitigate noise and air pollution, PSA SG ensures air quality and noise levels are kept within safe limits, creating a healthier, more pleasant environment for surrounding communities.



## Our Approach

### Ambient Air Quality Monitoring (AAQM)

PSA SG fully complies with the guidelines and regulations set forth by the National Environment Agency (NEA) under the Environmental Protection and Management Regulations. We are committed to maintaining air quality at all terminals within the Singapore Ambient Air Quality Standards.

To ensure compliance with NEA's Singapore Ambient Air Quality Targets, we conduct annual Ambient Air Quality Monitoring (AAQM) at all terminals. In November 2024, we engaged a NEA licensed operator to conduct air quality testing at 20 locations across PSA SG, including Brani Terminal,

Keppel Terminal, Keppel DistriPark, Pasir Panjang Terminals and Tuas Port. Air quality sensors were installed, and the levels of air pollutants including Particulate Matter PM2.5 (<2.5 µm) and PM10 (<10 µm), Nitrogen Dioxide (NO<sub>2</sub>) and Carbon Monoxide (CO) were monitored throughout a 24-hour sampling regime.

The results indicated that all air samples collected at the terminals met Singapore Ambient Air Quality Targets. The average concentration of the various air pollutants at the monitoring sampling locations were as follows:

TYPE OF AIR POLLUTANT	VALUE RECORDED	WITHIN HEALTHY LIMIT
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>	47.2 - 113.4 µg/m <sup>3</sup>	200 µg/m <sup>3</sup> (1 hr)
<b>Carbon Monoxide (CO)</b>	0.4 - 0.8 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> (8 hr)
<b>PM 10</b>	20.7 - 43.7 µg/m <sup>3</sup>	50 µg/m <sup>3</sup> (24 hr)
<b>PM 2.5</b>	8.3 - 22.0 µg/m <sup>3</sup>	37.5 µg/m <sup>3</sup> (24 hr)



## Boundary Noise Assessment

PSA SG is committed to minimising noise pollution by adhering to the NEA's Environmental Protection and Management Act. We ensure that noise levels at all terminals remain within the specified thresholds outlined in the Environmental Protection and Management (Boundary Noise Limits for Factory Premises) Regulations 2008.

From November to December 2024, we commissioned a licensed NEA operator to conduct our annual boundary noise monitoring exercise. 24-hr noise monitoring stations were established within Keppel Terminal, Tanjong Pagar Terminal, Pasir Panjang Terminals and Tuas Port, as well as along the boundary of each terminal site. This comprehensive approach enables us to evaluate

noise levels and their impacts on both employees and local communities.

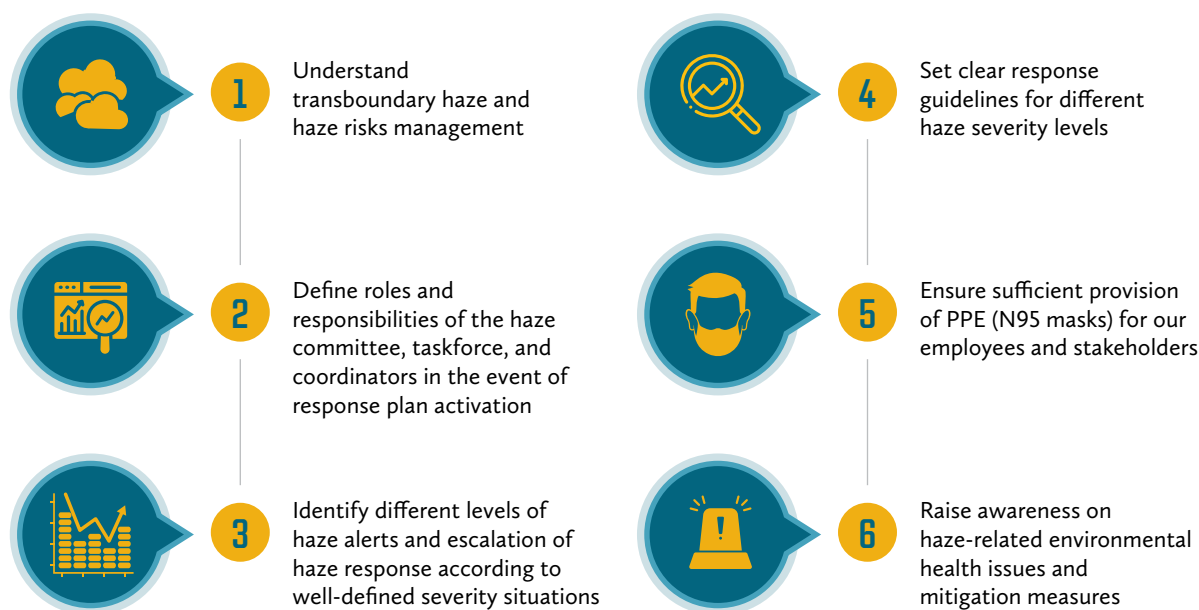
The findings demonstrated that all sampling locations complied with the corrected maximum permissible boundary noise levels (up to 75 dB) for morning, evening, and night periods.

## Haze Response Management

Singapore is periodically affected by smoke haze caused by forest fires in neighbouring countries, often resulting from land-clearing practices for agriculture. Dry seasons, shifts in wind direction, and low rainfall can exacerbate the issue. Prevailing winds, particularly during the Southwest monsoon season, can carry smoke haze over Singapore.

## Haze Response Plan and Guidelines

PSA SG's comprehensive haze response plan and guidelines include:



## PSA SG's Swift Response to Oil Spill at Pasir Panjang Terminal

In response to a collision that occurred at Pasir Panjang Terminal in June 2024, resulting in the release of low-sulphur oil into the sea, the PSA SG Emergency Response Team (ERT), along with the P56 Service Excellence team, PSA Marine Tug Section, and PSA SG Civil Engineering team, were immediately mobilised to contain and mitigate the spill. Various resources, such as PSA Marine's tugboats, dispersants and oil booms were deployed to arrest, control, and treat the oil spill. Simultaneously, the Civil

Engineering team inspected and repaired the damaged berth to ensure the quick reinstatement of operations. Thereafter, PSA SG was also involved in the cleanup process, to ensure that the long-term impact on the environment and operations was minimised.

Throughout the exercise, PSA SG worked closely with the Maritime and Port Authority of Singapore (MPA) to manage the broader impact of the oil spill, signifying the importance of inter-agency cooperation in addressing such emergencies. The incident also serves as a reminder of the importance of preparedness and swift action in mitigating such challenges to protect the environment.

## Supporting Our Communities

# COMMUNITY RELATIONS

## Why It Is Important

At PSA SG, we believe strong community relationships are the cornerstone of a thriving and sustainable business. We recognise the importance of maintaining a strong social license to operate through ongoing engagement with our communities. More importantly, a well-defined corporate purpose is helpful in enhancing brand reputation of the company, which can lead to positive impact in the industry. The conferment of the “Champions of Good” award for the second time underscores our commitment and inspires us to further elevate our community engagement efforts.



## Our Approach

We have a structure in place to guide our community engagement efforts, as we aim to become a positive force in society by creating opportunities to amplify our “Doing Good” movement and contribute meaningfully to the well-being of the communities and ecosystems we interact with.

To accomplish this, we turn to our 3Cs as guiding principles:



### Resilient Core

We remain steadfast in our mission to steward responsible business in the communities that we operate in, regardless of challenges faced



### Value Creation

We offer a variety of volunteering opportunities, with the aim of maximising our impact and outreach to engage a wider range of stakeholders



### Sustainability

We collaborate with partners to raise our and the community's awareness of the importance of sustainability, and to foster a go green mindset in all

Our 2024 initiatives can be categorised into 3 main areas:

1

**'Together, We Can Make a Difference'**, where we seek to uphold our strong tradition of uplifting communities and giving back to vulnerable groups through our flagship programmes such as PSA Health@Home (H@H) and the Howe Yoon Chong (HYC) PSA scholarships.

2

**'Developing Doing Good Mindset'**, where we aim to engage in impactful and meaningful CSR programmes that drive positive change while fostering greater employee engagement.

3

**'Multiplying our Doing Good Movement'**, where we collaborate with diverse stakeholders in philanthropic efforts, creating opportunities for our partners to directly support our beneficiaries.

## Together, We Can Make a Difference

### H@H Initiatives

Launched in 2015, PSA SG's flagship community programme, Health@Home (H@H), was established to support home-based healthcare and eldercare through corporate volunteerism involving Singapore-based staff. To fulfil both societal and community needs, the H@H initiative is built on two fundamentals - equipping staff with caregiving skills and enabling them to age well and age in place.

In 2024, our pool of more than 800 H@H volunteers dedicated 1,970 volunteering hours across 31 activities at

our partner beneficiaries. There was also an increase in the number of volunteer sign-ups over the course of the past 2 years, from 115 in 2023 to 143 in 2024.

For the first time in 2024, the H@H team collaborated with five of our shipping line customers, CMA CGM, Hapag Lloyd, HMM, ONE and Yang Ming, to bring over 60 seniors from Lions Befrienders (LB) to visit the Singapore River Wonders. The event marked solidarity amongst maritime industry players and showcased our common dedication towards giving back to the community.

With the H@H Programme reaching a milestone of 10 years since inception in 2025, the programme continues to be a guide and an orchestrator of the 'Doing Good' movement by reaching out, engaging and partnering with like-minded organisations within the maritime industry to reach out to a wider group of beneficiaries.



PSA SG H@H team and five of our shipping lines customers with 60 seniors from Lions Befriender at Singapore River Wonders

### Howe Yoon Chong (HYC) PSA Scholarships

PSA SG continued to provide financial assistance through the HYC PSA Scholarship to Singaporean students from financially disadvantaged families who have made a positive impact on the community. We have awarded the scholarship to 40 students in 2024, bringing the total number of beneficiaries to over 420 since the programme was inception in 2009.





## Developing 'Doing Good' Mindset

### Retiree Volunteer Programme (RVP)

Our commitment to community service and doing good extends beyond retirement. The RVP initiative allows PSA SG employees to continue their volunteering activities even after they leave the workforce. This aligns with our aim of promoting active aging among our employees; retired volunteers not only sustain social connections but also acquire valuable eldercare

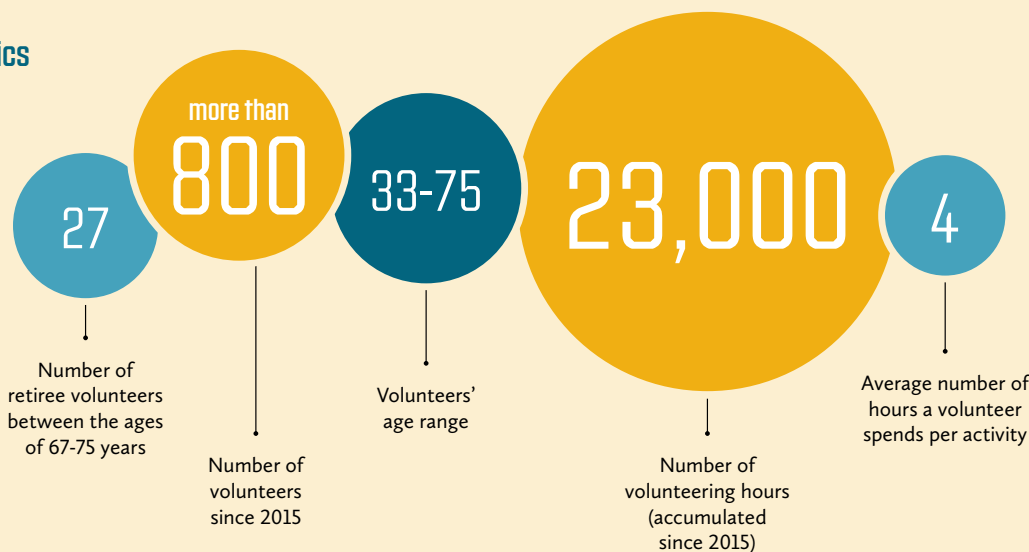
skills that enhance their mental and physical well-being. This initiative enables them to age gracefully while still making significant contributions to the community.

The retiree volunteer programme currently has 27 volunteers, including 14 new signups in 2024.

### Multiplying our 'Doing Good' Movement

- Since 2023, PSA SG has collaborated with Fridge Restock Community SG (FRC), a grounds-up non-profit organisation, to organise food rescues for "ugly" fresh supplies at Pasir Panjang Wholesale Centre and distribute them to the community. In 2024, PSA volunteers rescued and distributed more than 20 tonnes of fresh supplies.
- In July 2024, PSA SG donated close to \$70,000 to Lions Befrienders for the development of the 'Our Kampung' app. The app is designed to enable seniors to sign up for communal activities, such as exercising and gardening, conveniently through the app. Tailoring to the seniors' needs, it will function as part and extension of their interactions with the Active Aging Centres.
- In November 2024, PSA SG, together CrimsonLogic and PSA BDP, organised the 'Wishing for 300 Smiles' activity where staff fulfilled 300 wishes from beneficiaries of the Children's Cancer Foundation and Gracehaven, a children's home under The Salvation Army.
- In late 2024, PSA SG and Ocean Network Express (ONE) organised a Christmas craft making workshop for the beneficiaries at HCA Oasis Day Hospice @ Outram Community Hospital, and also served them Christmas lunch.

### Metrics



### Advancing beyond H@H

At PSA SG, we want to go beyond volunteering. By offering our office space to HCA Hospice for their activities, we not only provide not-for-profit organisations with a venue but also allow their beneficiaries an up-close view of Singapore's port.

The Community Engagement (CE) Team, together with PSA University and the Safety and Health Department (SHD), have also launched a caregiver training course on eldercare knowledge and caregiving skills for staff. Two sessions of this one-day course were conducted. In addition, the CE Team, together with SHD, rolled out a series of health-related

lunchtime talks to staff. In collaboration with our CSR partners, topics covered include understanding dementia, managing stroke, end-of-life care and caregiver wellness. These talks seek to equip staff with basic caregiving skills which will be useful at different stages of their lives. The talks were well received by our staff. Beyond this, the CE team had also engaged with the Residents' Committees (RCs) and Residents' Networks (RNs) of the Group Representation Constituencies in our community, bringing the residents to visit PSA Horizons and the port to share developments in Singapore's port and maritime industry.

## PSA SG in Bloom

PSA SG strives to engage the broader community to cultivate a sense of unity in our shared pursuit of sustainability. Our PSA SG in Bloom initiative aims to connect nature and biodiversity with the port and local community through a variety of activities, including tree planting and cultivating food gardens.

PSA SG has since organised various tree-planting activity in support of NParks' 'One Million Trees' movement, planting 177 trees to date, since 2016.

PSA SG planted 10 trees at Canberra Walk in collaboration with CMA-CCM and NParks



To encourage the consumption of locally sourced food, PSA SG has food gardens within our premises. Managed by our dedicated staff volunteers, these gardens have yielded a combined harvest of 1 tonne of fresh produce, comprising an impressive variety of flowering plants, fruits, herbs, and vegetables. Of this harvest, more than 170 kg has been donated to charitable causes, with the remaining produce shared with our colleagues. On 9 September 2024, over 7kg of harvested produce from Botanicals Sky@MB was donated to charity Child At Street 11. Teams have also bonded over gardening activities in the food gardens.



Procurement Division's team bonding session at award winning food garden, Botanicals Sky@MB



## Awards and Recognition

## 'Friends of Community Care' Award

We are honoured to be awarded the 'Friends of the Community Care' award from the Agency for Integrated Care (AIC). We extend our appreciation to our community care partners, HCA Hospice and Lions Befrienders Service Association (Singapore), for acknowledging our ongoing dedication to supporting the community through our volunteering efforts.

## Champion of Good Award 2024 by NVPC

PSA SG was once again awarded the Champion of Good Award 2024 by the National Volunteer and Philanthropy Centre (NVPC) for our exemplary efforts in driving social good within the community and influencing stakeholders to create a multiplied impact on society. This award recognises PSA SG's contributions to the national philanthropy landscape and it is valid for 3 years.

Mr Nelson Quek, Regional CEO  
Southeast Asia (centre) and PSA  
SG team with the Champion  
of Good Award 2024





# GOVERNANCE



## IN THIS SECTION

### Transforming Supply Chains

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- Optimisation of Global Supply Chains
- Innovation and Technology

### Acting With Integrity

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- Ethical Business Conduct
- Sustainable Procurement

### Ensuring Responsible Operations

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- Sustainable Port Development

### Keeping Our Operations Safe And Secure

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- Cybersecurity and Data Privacy
- Port Security

### Regional Development

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## Transforming Supply Chains

# Optimisation of Global Supply Chains

Optimisation of the supply chains is a crucial part of our operations at PSA SG, essential for maintaining our competitiveness in the global market and achieving operational excellence.

## Why It Is Important

As a key player in port operations, we recognise that the global supply chains significantly influence our efficiency and effectiveness. It directly impacts cargo volumes, shipping routes, and demand for our services, making well-optimised supply chains vital for ensuring smooth movement of goods from manufacturers to consumers. This minimises delays, reduces costs, and enhances customer satisfaction.

## Our Approach

At PSA SG, we are dedicated to advancing sustainable practices in local and regional shipping and logistics through collaboration with our stakeholders. By focusing on the global supply chains, we not only strengthen our operational capabilities but also contribute to a greener future.

### Establishing an Integrated Logistics Ecosystem in Singapore

The PSA Supply Chain Hub @ Tuas (PSCH) which is strategically situated next to Tuas Port within the Free Trade Zone, will be seamlessly integrated with Singapore's extensive supply chain ecosystem. When completed in 2027, it is poised to transform the logistics and supply chain landscape in Singapore. The development of the PSCH builds upon PSA SG's extensive experience in port adjacencies ecosystem. It will strategically integrate with the country's supply chain ecosystem by offering unparalleled connectivity and scale as a Regional Distribution Centre and a Container Freight Station. Its comprehensive suite of value-added services and the supply chain synergies it creates will further enhance Singapore's position as a global logistics and supply chain powerhouse.

Beyond boosting connectivity and operational efficiency, the PSCH also minimises environmental impact with the integration of eco-friendly features such as natural ventilation, renewable energy via use of solar panels, harvesting rainwater through a sustainable drainage system, and energy usage tracking via a central utility building system.



## Navigating Toward Sustainability: Barging as the Greener Transport Solution for Energy and Chemical Manufacturers in Jurong Island (JI)

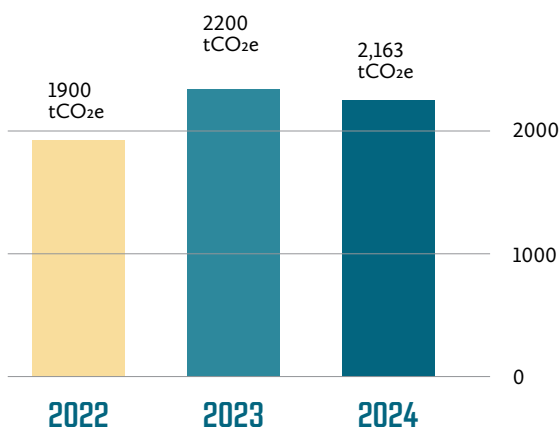
PSA SG is enabling the sustainable growth of Jurong Island by facilitating the shift from road to water transport, reducing environmental impact and supporting the island's transformation to a sustainable Energy and Chemicals Park. In alignment with the Singapore Green Plan 2030, PSA SG is championing the adoption of barge sailings that connect beneficial cargo owners (BCOs) on Jurong Island with PSA's main hubs across Singapore. Barging is a more efficient and environmentally friendly option, requiring less labour, reducing road congestion, and generating approximately 30% fewer carbon emissions compared to trucking.

Located on the northwestern seafront of JI, PSA's Jurong Island Terminal (JIT) offers twice-daily barge sailings, connecting island-based businesses with PSA's main hubs at Tuas, Pasir Panjang, and Brani. This enhances connectivity and leverages Singapore's strong maritime infrastructure.

Demand for barging has grown steadily in recent years, with JIT volumes recording a year-on-year growth of 19% in 2024, reaching a record-breaking 175,889 TEUs (approximately 2,163 tCO<sub>2</sub>e of carbon emissions savings). To support the increasing demand, PSA SG will collaborate with JTC to expand its JIT annual handling capacity to 300,000 TEUs. The expansion of JIT will support the transformation of the Jurong Island Ecosystem into a sustainable Energy and Chemicals Park, in line with Singapore's Green Plan 2030.

Beyond barging, PSA SG offers a range of value-added logistics services to JI manufacturers, including Advanced Inventory Management, Transloading, and enhanced digital track and trace. These services are designed to address the specific needs of JI businesses, improve efficiency, and further enhance the sustainability of their supply chains. New facilities for handling Dangerous Goods (DG) and cargo transloading will be developed, complementing PSA SG's growing suite of physical and digital solutions designed to help beneficial cargo owners (BCOs) optimise their inventory management and supply chain operations.

### Carbon Emissions Savings from Barging



GHG emissions reductions achieved by eliminating truck trips between JI and PSA Terminals

## Enabling Efficient Container Reuse and Return through iWX (Intelligent Warehouse Exchange)

PSA SG has developed and launched the iWX platform to improve productivity of truck trips between Keppel Distripark and external depots at Penjuru and Tuas, saving approximately 1,175,850 kg CO<sub>2</sub>e from avoided empty container trucking trips.

iWX is a digital solution that integrates real-time data from the logistics ecosystem, leverages AI and machine learning for actionable insights, and streamlines workflows. It also digitalises and optimises the container reuse and return workflow, providing a digital platform for enhanced communication among stakeholders like ports, warehouses, trucks, and shipping lines.

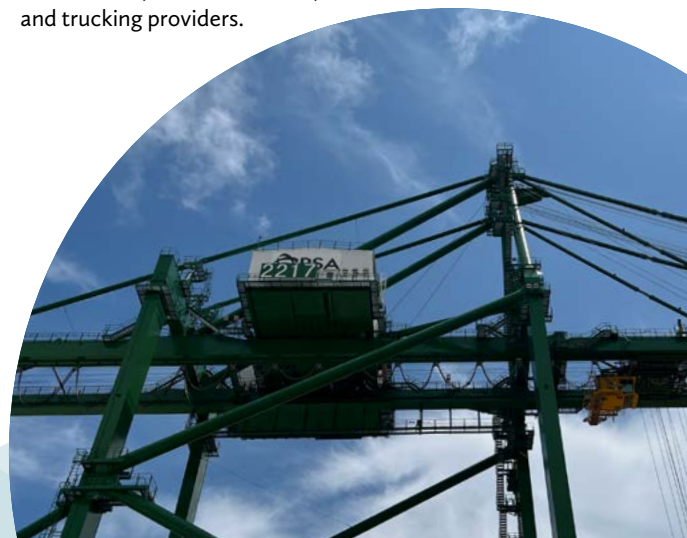
The platform facilitates reuse of empty containers by identifying other tenants in Keppel Distripark that need to re-export, and if reuse is not possible, arranges for return of the empty containers to PSA On Dock Depot, located in closer proximity to Keppel Distripark. This approach maximises container utilisation for shipping lines, improves utilisation of warehouse dock bays, and minimises congestion. The current pilot at Keppel Distripark will be extended to PSCH when it is operational in 2027.

## Advancing Sustainability at Jurong Island via Sustainable Container Exchange

PSA SG, PSA BDP, and JTC Corporation have collaborated to implement a sustainable container exchange trial on Jurong Island, offering innovative solutions for Sembcorp Solar and ExxonMobil. Jurong Island Terminal (JIT), situated on the northwestern coast of Jurong Island, plays a critical role in connecting businesses to global markets through twice-daily barge sailings to PSA SG's terminals on the mainland.

The innovative solution involves reusing Sembcorp's empty containers for ExxonMobil's export needs, which significantly reduces empty container movements between the mainland and Jurong Island, leading to significantly fewer truck trips, lower carbon emissions, and improved operational efficiency.

The successful initial trials have demonstrated substantial emissions reductions and streamlined logistics for both Sembcorp and ExxonMobil. This achievement is the result of close collaboration between PSA SG, PSA BDP, JTC, Sembcorp, ExxonMobil, marine carriers, and trucking providers.





## Transforming Supply Chains

# Innovation and Technology

## Why It Is Important

Embracing innovation and technology is integral to PSA SG's vision for the future, as it strives to contribute to a greener future for the shipping and logistics industry while setting industry standards for operational excellence and sustainable practices. Through these efforts, PSA SG is not only enhancing its own capabilities but also playing a vital role in driving the transformation of the broader logistics ecosystem.

## Our Approach

We leverage a range of cutting-edge solutions, such as Automated Quay Cranes, Smart Grid Management Systems, and intelligent logistics platforms like OptETruck and OptEVoyage, to drive our efforts. These innovations enable us to optimise energy use, streamline logistics, automate processes, and utilise data analytics for improved decision-making. By focusing on these areas, we aim to minimise our environmental impact, enhance operational efficiency, and significantly reduce carbon emissions across all operations.

### Automated Quay Crane (aQC)

Automated quay cranes (aQCs) are advanced systems designed for the precise and rapid handling of containerised cargo at ports. By automating crucial processes, aQCs enhance throughput and safety while streamlining operations, allowing for efficient and effective cargo movement.

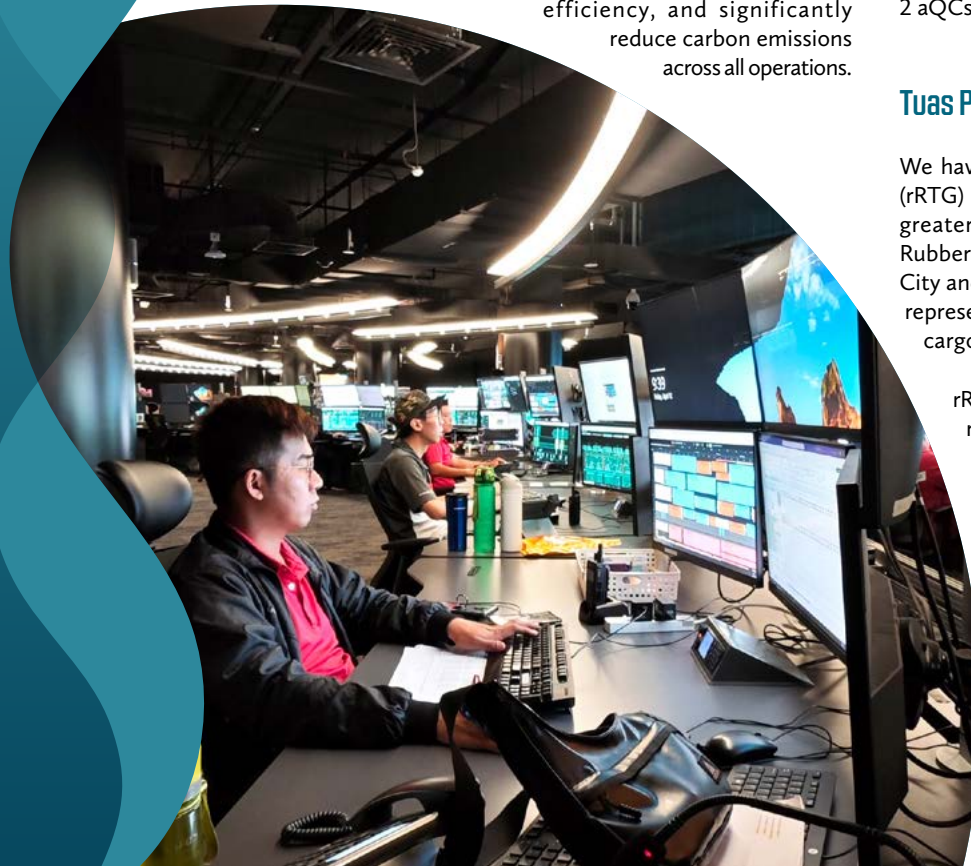
In 2024, we made significant advancements in trajectory path planning strategies with the implementation of the "dynamic clear height" and "vessel side parabolic" approach. This innovation optimised the automated trolley pathways between the wharf and vessels, leading to reduced overall handling time. Additionally, the Terminal Operating System (TOS) was upgraded to accommodate dynamic vessel stowage and wharf traffic scenarios. These enhancements further minimised the need for manual interventions, enabling more automated movements, which not only reduced the workload for remote operators but also significantly improved the efficiency of container handling operations.

Looking ahead, we plan to equip an additional aQC with an optimised hardware configuration designed to maximise efficiency, ensuring improved performance and productivity in our operations. This will enable an ecosystem testing of 2 aQCs with autonomous prime movers (aPMs) in 2025.

### Tuas Port's Next-Gen Rubber-tired Gantry Cranes

We have introduced the first Remote Rubber-Tire Gantry (rRTG) cranes at Tuas Port, marking a crucial step toward greater automation in our operations. While traditional Rubber-Tire Gantry (RTG) cranes are already prevalent at City and Pasir Panjang Terminals, the deployment of rRTGs represents a move towards more innovative and efficient cargo handling solutions.

rRTG cranes, controlled from a safe, climate-controlled remote station, provide improved working conditions and enhanced safety. Unlike automated Rail-Mounted Gantry (aRMG) cranes that operate on fixed rails, rRTGs are tire-operated and can be deployed across any yard block, offering greater flexibility. This introduction is particularly beneficial for handling out-of-gauge (OOG) cargo, damaged containers, and door-turning operations at Tuas Port, ultimately increasing efficiency and reducing the environmental impact of our terminal activities.



## OptETruck

PSA SG has developed OptETruck, a cloud-based transport management solution that uses AI to optimise trip planning and reduce operational inefficiencies for hauliers in Singapore. With features such as automated scheduling and asset pooling, OptETruck enables hauliers to improve asset utilisation, reduce carbon emissions, and optimise operating costs by minimising empty trips and sharing resources. This solution has been welcomed by multiple haulier companies, helping them to achieve over 50% reductions in empty truck trips, which translates to an annual reduction of about 10 million kg CO<sub>2</sub>e (equivalent to planting 300,000 trees a year). In recognition of its transformative impact, PSA SG received the Recognition of Excellence award for OptETruck at the 9<sup>th</sup> Annual Singapore OpenGov Leadership Forum.

OptETruck and PSA SG's two other digital solutions, SmartBooking™ and iBOX™, will be integrated to form an intelligent logistics ecosystem to digitally connect container terminals, depots, hauliers, and logistics facilities in Singapore. OptETruck and the full suite of digital solutions will enhance Singapore's supply chain ecosystem, driving sustainability and competitiveness among local SMEs. This initiative will improve business agility and support local SMEs to achieve their sustainability targets.

## OptEVoyage

Similarly, PSA SG has implemented OptEVoyage, an innovation aimed at achieving bunker savings and reducing carbon emissions by enabling vessels to arrive at the port just in time. PSA SG introduced the concept of "Agreed Berthing Time" (ABT) to our customers in 2024. ABT facilitates the planning of vessel arrivals in Singapore for liners, enabling just-in-time at an optimised speed when the berth is available, which further optimises anchorage space and marine resources. This would enhance PSA SG's service reliability through higher berth certainty and direct berthing. In 2024, we significantly expanded the scale of our trials, increasing the number of services from 116 (1,138 calls) in 2023 to 135 services (2,580 calls). Our efforts resulted in substantial environmental benefits, with a total of 106,938 metric tons and 332,998 metric tons of inferred bunker and CO<sub>2</sub> emission savings, respectively, achieved in 2024.

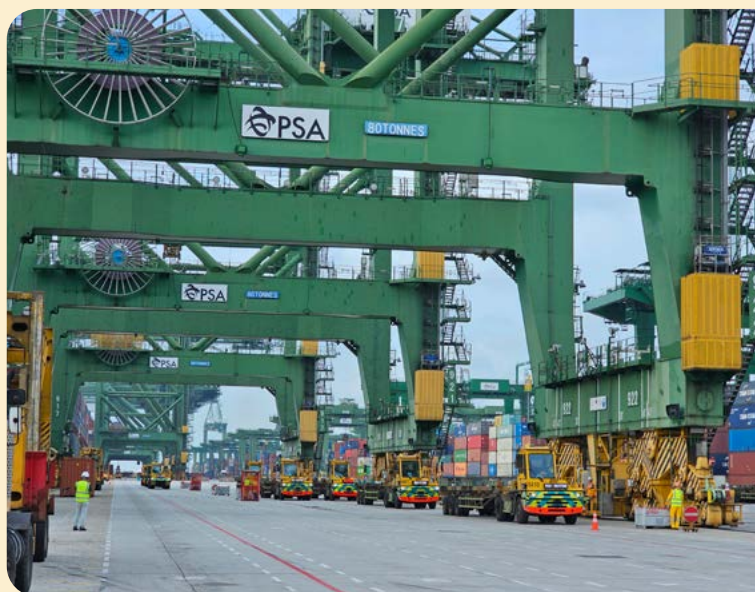
## Autonomous Prime Mover (aPM)

The aPM adopts autonomous vehicle technology for port horizontal transport, enabling deployment with minimal changes to layout, environment, cranes and processes. The aPM aims to enhance labour resilience by leveraging self-driving autonomy capabilities. We have continued working with solution providers to develop and test these solutions.

In 2024, we started operational trials with a fleet of aPMs in Pasir Panjang Terminal (PPT), running 24/7 for yard shifting in our aRMG yards in all weather conditions

and supported by remote exception handling capabilities. Automation rates continue to be enhanced as technology and implementation experience evolve.

2025 will see an increased focus on the development of fleet management systems which will be pivotal for multi-aPM orchestration at a larger scale, and wharf navigation capabilities, to ultimately enable end to end ship operations. Trials have already commenced, and early results are promising.



aPM trials at PPT



## Hydrogen Prime Mover Proof-Of-Concept (POC) at PSA SG

Building on Singapore's national hydrogen strategy, which aims to leverage hydrogen as a key driver for decarbonisation, PSA SG has successfully onboarded and operationalised the first Proof-Of-Concept (POC) hydrogen use project for horizontal port transportation in Singapore. This pioneering project features cutting-edge Liquid Organic Hydrogen Carrier (LOHC) technology, utilising Methylcyclohexane (MCH) as a hydrogen refuelling medium, a hydrogen refuelling station, and a fuel cell electric prime mover.

This hydrogen ecosystem project has been operational since June 2024, with operational data being actively collected and analysed to assess performance and inform future developments. The POC project showcases the technological viability of the technology, augmenting in-house expertise in hydrogen refuelling infrastructure and capabilities. This lays the groundwork for the future deployment of larger scale hydrogen vehicles in PSA SG when hydrogen reaches cost parity. Furthermore, PSA SG is collaborating with various industry and government agencies to develop standards for hydrogen refuelling stations and safe refuelling operations.

The POC project will continue into 2025, with its success serving as a catalyst in accelerating Singapore's hydrogen development and generating interest from various companies to explore hydrogen as a viable fuel alternative.

## Predictive Maintenance and Equipment Data Analytics

PSA SG continued our partnership with the NUS Centre of Excellence in Modelling and Simulation for Next Generation Ports (C4NGP) for Preventive Maintenance for Quay Crane's Hoist System. Two quay cranes in PPT were enhanced with sensor data collection. The data collection is on-going but preliminary observations are promising, providing insights on potential frequencies that are correlated to failures. The team is reviewing the data collected to explore their reusability in Tuas Port while expanding on data useability to include new use cases such as computation of vessel loading accuracy and cycle time.

A portable vibration data collector will be set up for other equipment without sensors. This will enable periodic data collection across all quay cranes to expand the study of the component health without the need for sensor installation.

The fleet of quay cranes and aRMGs equipped with anomaly detections in their respective crane system continues to expand with our current fleet consisting of 129 quay cranes and 186 aRMGs.

Increasing the reliability of our key container handling equipment is important in ensuring our operations remain reliable and sustainable in the long run.



Fuel cell electric prime mover at hydrogen refuelling kiosk

## Automation and Robotics Solutions

There is a continued collaboration on various fronts with industry partners and Institutes of Higher Learning (IHLs) to jointly develop automation and robotics solutions, as potential means to alleviate labour intensive wharf and vessel-side activities.

For wharf coning and de-coning operations, a robotic platform was developed with our industry solutions provider in 2024, to be fitted onto a Double Trolley Quay Crane (DTQC) lashing platform at Tuas Port. It is undergoing commissioning and live operational trials are planned for the later part of 2025.

We will continue to assess the technologies with greatest potential and work out the most effective implementation strategies for container handling operations.



## ACTING WITH INTEGRITY

At PSA SG, ethics and integrity are core values that guide all our business decisions. We strive to create a workplace and build a reputation that reflects these values, fostering a sense of pride in all of us.

# Ethical Business Conduct

## Why It Is Important

At PSA SG, we hold the belief that ethical business conduct is not merely an add-on to business operations, but rather an integral component of achieving both economic efficiency and long-term sustainability.

By prioritising ethical business conduct, we cultivate trust with our key stakeholders, enhance our brand reputation, and safeguard the integrity of our business operations and processes. This is exemplified in our efforts to foster a business environment built on honesty, responsibility, and a shared sense of pride among all employees.

## Our Approach

Our commitments are embodied in PSA's Code of Business Ethics and Conduct (The Code), which outlines the principles that guide our decision-making and behaviour to ensure alignment with the company's values and aspirations. The Code includes the Whistle Blowing policy and channel, providing employees with a safe and confidential avenue to report any concerns regarding potential misconduct, such as violations of company policies, legal or regulatory issues, or unethical behaviour, without fear of retaliation. All reports received through the dedicated Whistle Blowing hotline or email are thoroughly investigated, and appropriate action is taken to ensure compliance to address any wrongdoing.

All PSA SG employees, including both existing and new hires, are obligated to adhere to The Code. The Code is readily accessible online and regularly communicated through various internal channels, including our customised e-learning courses.

The e-learning programme launched in 2023 serves to enhance understanding of The Code and related policies, cover a diverse range of topics such as cybersecurity, data analytics, environmental trends, and PSA SG's sustainability initiatives. Additionally, the modules provide guidance on data privacy regulations (PDPA), workplace safety, and procedures for reporting suspicious characters, behaviours, and activities. Although no e-learning was conducted in 2024, the updated version with new content is to be launched in 2025.



Recognising the importance of ethical business conduct, we have introduced a target to achieve an 80% refresh rate among senior officers in PSA SG on The Code by 2027. This targeted approach aims to ensure that those in leadership positions have a deep understanding of ethical principles and can effectively champion these values throughout the organisation.

For more information on PSA SG's Whistle Blowing Policy, please visit <https://www.globalpsa.com/psa-international/#thecode>

We are also committed to creating a safe and transparent working environment, supported by a grievance mechanism in place that allows our employees to raise concerns and seek remediation without fear of retaliation if they have been adversely affected, such as through disputes or violations of their rights. Employees can either raise any concerns to their direct supervisor or through our unions. All grievances received in good faith will be thoroughly investigated and addressed. Our commitment and the grievance procedure is communicated in the PSA Corporation Employees' Agreement 2024.

PSA SG ensures full compliance with all applicable local laws and regulations. This commitment is demonstrated through active collaboration with authorities, respect for local culture

and businesses, and careful consideration of social and environmental impacts in all commercial decisions.

In 2024, we continue to comply and there are no instances of non-compliance, including both monetary and non-monetary penalties, and no confirmed incidents of corruption.

### Introducing PSA Group Customer and Partner Business Principles

Building on the foundation of The Code, PSA has developed a Customer Code of Conduct for PSA's customers and business partners in 2024. The Customer and Partner Business Principles (CP Principles) outline the expected standards of behaviour for all stakeholders engaging with PSA, covering key areas such as gifts and entertainment from suppliers, anti-money laundering, sanction laws, health and safety, cyber and data security, and social media. These principles clearly communicate PSA's expectations and ensure compliance with regulatory obligations.





## ACTING WITH INTEGRITY

# Sustainable Procurement

## Why It Is Important

At PSA, we believe in extending our commitment to environmental and social stewardship beyond our operations. As a leading global port operator, we recognise the significant role we play within our supply chain to minimise environmental impacts and create positive social outcomes.

## Our Approach

We are committed to drive responsible practices through the procurement of goods and services, by integrating sustainability criteria into the selection, monitoring, and evaluation of suppliers. These criteria encompass ethical business practices, environmental protection, and respect for human rights.

Building upon the Group's Sustainable Procurement Framework, we continue to focus on aligning strategic direction with key suppliers while actively supporting those with less mature sustainability practices.

## The 7 Key Elements of the PSA Sustainable Procurement Framework



### ENSURING RESPONSIBLE OPERATIONS

- 1 Practising circular economy
- 2 Exploring green alternatives



### PROTECTING OUR WORKERS

- 3 Strengthening contractor HSSE
- 4 Caring for contract and migrant workers



### ACTING WITH INTEGRITY

- 5 Raising the bar on ourselves and our suppliers



### SUPPORTING OUR COMMUNITIES

- 6 Supporting local or minority businesses



### KEEPING OUR OPERATIONS SAFE AND SECURE

- 7 Strengthening cybersecurity





## Embedment of Suppliers' Code of Conduct

Our commitment towards a sustainable and responsible supply chain is reflected in the development and implementation of our Supplier Code of Conduct (SCC). The SCC was launched in 2022 and has been incorporated into tender requirements and supplier contracts. Developed by PSA's Group Legal and Group Procurement, the SCC sets clear expectations to our suppliers on the standards of behaviour that emphasises transparency,

robust health and safety measures, environmental stewardship, and ethical conduct – in line with our shared commitment to ESG performance. PSA SG requires that SG suppliers meet the standards set out within the SCC.

For more information on PSA SG's SCC, please refer to [PSA's webpage](#).

### Collaborating with our suppliers

We support our suppliers in uplifting their capabilities. We are also collecting GHG and ESG-related information from key suppliers and integrating ESG considerations into our tender evaluations, ensuring alignment with our sustainability goals.

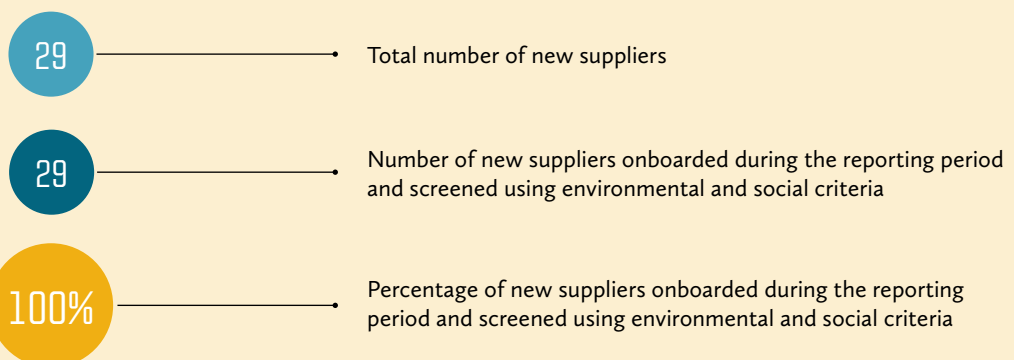
Our data and information collection platform, launched in 2022, allows us to onboard suppliers to track their GHG footprints and assess their ESG maturity through comprehensive surveys covering ESG considerations in labour practices, health, safety and environment, supply chain management, personal data protection, anti-bribery and corruption and cybersecurity.

In 2024, all newly awarded suppliers in major tender\* were screened using both environmental and social criteria, providing valuable insights into their ESG performance and enabling us to make more informed and sustainable procurement decisions.

PSA SG is committed to supporting local suppliers who are small and medium enterprises (SMEs) to bridge their identified gaps in ESG. Contracts were awarded to SMEs that were keen to partner us in bridging these gaps, with relevant gap closure plans in place to support their ESG journey. These SMEs also committed to meeting all other contractual requirements, including policy development and initiating efforts to estimate their greenhouse gas emissions.

\*Major tenders defined as at least SGD 10 million in value.

### New Suppliers that were Screened Using Environmental and Social Criteria



The insights gained from the ESG survey responses guide our ongoing efforts to enhance supplier sustainability. We have identified best practices among high-performing suppliers, while recognising the unique challenges faced by smaller and medium enterprises and those in the transport sector.

Moving forward, we will utilise these insights to continually enhance our engagement strategies, addressing any existing gaps and implementing essential improvements in environmental and social practices. This includes providing targeted support to SMEs, enhancing data collection and analysis, facilitating knowledge sharing among suppliers, and strengthening collaboration with industry partners to drive collective action on sustainability.

## PSA Suppliers Forum 2024 – ESG Xchange

Recognising that our suppliers play a key role in our sustainability journey, PSA SG is committed to collaborating with our partners and stakeholders on their green initiatives. In November 2024, Group Procurement and PSA SG Procurement team jointly organised the PSA Suppliers Forum 2024 – ESG Xchange. This forum focused on ESG issues applicable to suppliers and contractors providing labour and logistics services for PSA SG's operations. Over 60 leaders from 24 companies within our contractor network who play vital roles in port operations, inter-gateway haulage, and land freight

transportation attended and participated actively in the forum, sharing their perspectives and expertise on business operations, sustainability, and human resources.

PSA SG also presented an overview of the community's progress and readiness, highlighting specific expectations for suppliers lagging in areas, such as labour rights policies and Scope 1 and 2 emissions tracking. With the aim of fostering continued improvement, PSA SG reaffirmed our dedication to supporting our partners' sustainability journeys, with further initiatives planned for 2025 and beyond.



PSA Suppliers Forum 2024 – ESG Xchange

## Uplifting Capabilities

As part of PSA SG's commitment to enhancing internal capabilities within the Procurement Division (PCD), a 60-member team, led by the Head of Procurement and Vice President of Group Procurement, successfully completed the Chartered Institute of Procurement and Supply (CIPS) Ethical Procurement and Supply Operations course.

CIPS is the largest procurement professional body in the world for procurement and supply chain management, offering training, qualifications and certification for individuals working in procurement and supply chain roles across various industries. The self-paced e-learning programme focused on critical topics such as environmental procurement, human rights, and ethical business practices. All team members received a certificate of achievement. The certification has helped to enhance the procurement team's ability to evaluate and engage suppliers, with a strong focus on ethical and sustainable procurement.

15 members from PSA SG Procurement team were also trained in ISO 20400:2017 which provides guidance to organisations on integrating sustainability within procurement. The learnings better equip the team to continue to drive responsible practices across its operations and supply chain.

## Awards and recognitions

PSA SG is proud to announce its recognition as the Overall Winner for the first time and the Procurement Team of the Year for the second time at the CIPS Asia Excellence in Procurement Awards 2024, held during the ProcureCon Asia event in July.

These accolades reflect PSA SG's commitment to excellence and innovation in procurement and highlights the agility and innovative spirit of PCD. In response to the ever-evolving challenges within the dynamic procurement landscape and the wider value chain, the team has prioritised efficiency and commercial acumen through initiatives that align procurement strategies with business objectives, leverage technology for data-driven decision-making, and implement the Sustainable Procurement Framework.

PSA SG named Overall Winner for the first time and the Procurement Team of the Year for the second time at the CIPS Asia Excellence in Procurement Awards 2024



## ENSURING RESPONSIBLE OPERATIONS

In line with our commitment to environmental and social responsibility, PSA SG has implemented various initiatives to integrate sustainable practices across our planning and operations, with a focus on sustainable port development.

# Sustainable Port Development

## Why It Is Important

Sustainable port development is crucial for PSA SG as it directly impacts both our operational efficiency and our broader environmental and social responsibilities. In line with our commitment to responsible growth and innovation, we recognise our role as a leading port operator to drive and lead sustainable practices within the industry.

advanced technologies such as 4 Double Trolley Quay Cranes (DTQCs) and 9 Automated Rail-Mounted Gantry (aRMG) yard blocks, significantly enhances Tuas Port's container handling capacity.

Furthermore, the operationalisation of the first AGV-Prime Mover Crossing exemplifies PSA SG's commitment to smart and efficient operations. The crossing features motorised sliding gates and a smart traffic light system, facilitating seamless and safe movement of Automated Guided Vehicles (AGVs) and improving overall operational efficiency.

## Our Approach

PSA SG proactively integrates environmental considerations into all phases of our infrastructure development and operations, from planning and design to execution and maintenance. This proactive approach ensures the resilience of our infrastructure while mitigating environmental impacts stemming from land development and reclamation activities. We continuously strive to stay abreast of the latest sustainability trends and best practices to further enhance our environmental performance.

These advancements demonstrate PSA SG's dedication to building a world-class, sustainable port that sets new benchmarks in port operations and contributes to Singapore's maritime ambitions.

## Sustainable Tuas Port Development

Sustainability has been a cornerstone of Tuas Port's development since its official opening in September 2022. Recognising the significant environmental impact of cement production, which accounts for up to 8% of global GHG emissions, PSA SG has prioritised the reduction of embodied carbon emissions from the outset of our construction phases. Tuas Port is being developed in phases, with completion expected by the 2040s. By end 2024, 11 berths are operational at Tuas Port.

In 2024, a key milestone was achieved with the recent operationalisation of the first southern berth in Tuas Port. This berth, equipped with





## Green Concrete and Recycled Concrete Aggregate

PSA SG will continue to use sustainable concrete for new civil infrastructure construction projects. We utilised ground-granulated blast-furnace slag (GGBS), a steel production by-product to replace 80% of cement in Tuas Port. Through the use of GGBS, stacking carbon mineralisation and sequestration technology where carbon dioxide is locked up in the production of concrete, PSA SG abates 1.4 mil tonnes CO<sub>2</sub>e when Tuas Port development is fully completed.

Additionally, we have established a concrete recycling facility at the Tuas Port development site to process salvaged concrete, which includes cut-off sections from reinforced concrete piles used in foundations or caissons for berth construction. In 2024, we recycled and processed more than 5,400 tonnes of concrete.



Concrete recycling facility at Tuas Port

## Flexible Green Concrete ConFlexPave

In collaboration with an IHL, PSA SG embarked on a proof-of-concept (POC) study on the implementation of flexible green concrete, ConFlexPave. With the addition of polymer microfibres, this novel mix allows the concrete to flex rather than break under pressure.

Based on preliminary findings, ConFlexPave has displayed greater strength and increased flexibility, compared to standard concrete; potentially leading to longer expected lifespan and cost savings. Carbon emissions savings are also reaped through the reduced thickness of the pavement and the removal of steel reinforcement. The team is currently exploring the use of GGBS in the ConFlexPave mix to improve potential carbon emissions savings.

## Sustainable Specifications in Construction

PSA SG is currently adopting Cera-duct to replace traditional UPVC pipes in a civil yard contract. Cera-duct is a factory-made high compressive ceramic duct which replaces conventional PVC concrete encased pipes for underground cable protection. Usage of Cera-duct reduces carbon emission by approximately 70% as it eliminates the need for concrete.

Cera-duct promotes circular economy as the raw materials used for its manufacturing uses 50% recycled waste materials/ defective Cera-duct. Old Cera-duct in good condition can be reused for future installation after the end of existing infrastructure usage. Due to its small and modular nature, Cera-duct can be efficiently transported, which further reduces its carbon footprint.

## Sustainable Development of PSA Supply Chain Hub @ Tuas

Sustainability considerations were emphasised during the design and tender stages of the PSA Supply Chain Hub @ Tuas (PSCH). As a pre-requisite, tenderers were required to meet PSA's Minimum Sustainable Civil Infrastructure for Construction and Building Requirements and obtain BCA Green Market Platinum Super Low Energy Building (SLEB) certification upon project completion. Slated for completion in 2027, PSCH is expected to be PSA SG's second SLEB after Tuas Maintenance Base Administrative Building. PSCH will feature renewable energy sources, sustainable drainage systems and energy-efficient designs.

Artist's impression of PSA Supply Chain Hub @ Tuas



## KEEPING OUR OPERATIONS SAFE AND SECURE

At PSA SG, both online and physical security is our top priority. We adhere to our internal cybersecurity policies, standards, and guidelines to implement effective cybersecurity controls throughout our operations, creating a safer and more sustainable environment for global trade. This commitment involves proactively addressing port vulnerabilities and strengthening our cybersecurity measures.

# Cybersecurity and Data Privacy

## Why It Is Important

PSA SG operates one of the world's busiest and most technologically advanced port. Ensuring cybersecurity and data protection is essential for safeguarding critical infrastructure, including IT systems, networks, and communication channels.

## Our Approach

PSA SG is committed to defending against potential cyber threats that could disrupt port operations, compromise data integrity, or lead to financial losses.

To address these challenges, PSA SG adopts a proactive approach to cybersecurity by implementing robust measures designed to deter, detect, and respond to threats. Our cybersecurity and data protection governance framework, aligned with the Group, ensures business continuity by safeguarding our digital assets, maintaining customer trust, enhancing staff cyber competency, and minimising the risk of costly security incidents. To stay ahead of emerging and evolving cyber threats, we have established multi-year cybersecurity roadmaps to bolster our resilience.

In 2024, there were no substantiated complaints regarding breaches of customer privacy, and no incidents of identified leaks, thefts, or loss of customer data.

### Robust Governance for Cybersecurity Management

Stewardship and corporate governance oversight on enterprise risks are championed by the Risk Council, which includes the Regional CEO for Southeast Asia and senior leaders from various divisions within PSA SG. Specifically on cybersecurity governance, the Cyber Security Steering Committee comprises

the Managing Director of the Container Division, the Head of Cyber Security (SEA), the Regional Head of IT (SEA), and leaders from Cybersecurity, Information Technology (IT), and Operational Technology (OT). This committee is responsible for approving security strategies and monitoring security metrics, incidents, and exceptions.

Establishing a robust governance framework is essential for safeguarding our operations and maintaining stakeholder trust by identifying, strategising, and mitigating operational and external risks. A key focus area under the Enterprise Risk Management (ERM) framework is Personal Data Privacy and Security. This includes ensuring strict compliance with the Personal Data Protection Act (PDPA) and internal policies. The Personal Data Protection Office (PDPO), established in 2021, is responsible for overseeing PSA SG's compliance with these regulations by translating them into actionable processes and procedures that mitigate the risk of reputational, regulatory, or legal exposure.





## Internal Awareness, Education and Training

Cybersecurity awareness, education, and training are effectively communicated from the top down and tailored to employees' functions.

PDPO members enhance their expertise through cross-learning trips to partners certified with the Data Protection Trustmark, fostering best practice exchanges. To further strengthen the competencies of cyber security, IT/OT and engineering teams, PSA SG has implemented specialised security training, which covers topics such as compliance requirements, cyber risk management, cyber hygiene practices, cyber incident response, data protection and cyber threat awareness especially phishing and ransomware attacks.

Employees are expected to adhere to Group policies, including the PSA Group Data Policy, PSA Group IT Security Policy, PSA Group Document and Information Policy, and PSA Personal Data Protection Policy. To reinforce collective awareness on these areas, PSA SG conducts regular training sessions, phishing exercises, and relevant security advisories. Regular security drills are also conducted to ensure continuous improvement and assess the effectiveness of our cybersecurity measures, enhancing our overall cyber readiness.

The PDPO has also launched e-learning programmes on personal data protection for all employees, including those

on the frontline of container operations. Recognising that employees are our last line of defence, we focus on equipping them with the essential knowledge and skills to safeguard sensitive information.

Furthermore, a Data Detox Week was organised across various divisions to raise awareness about how to reduce the amount of personal data stored in mailboxes, and shared drives. The goal was to prevent the unnecessary retention of personal data beyond its designated retention period.

## Data Protection Assurance

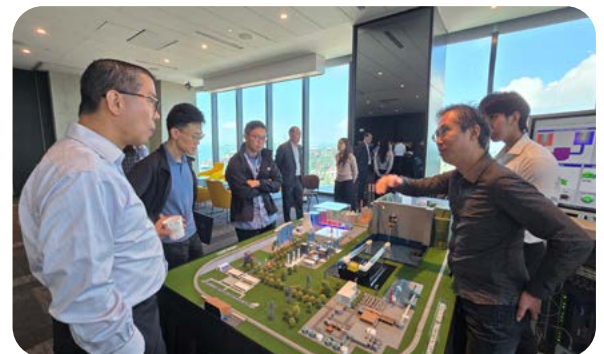
In compliance with the PDPA, we conducted a joint audit with an external consultant and PSA Group Internal Audit, which allowed us to evaluate our data protection controls effectively. We also took proactive measures to address risks from third parties and data intermediaries (DIs) by implementing due diligence checklists and assessments, alongside providing guidelines for managing third-party data interactions. Additionally, we carried out simulated data breach notification exercises with DIs to reinforce their obligations under the PDPA and familiarise them with our response procedures.

## Cultivating Cyber Preparedness with Annual Total Security Day

In June, the Total Security Day, organised by the Total Security Convergence (TSC) Competency, Skills and Awareness Sub-Committee, brought together over 300 PSA management and staff, including colleagues from SEA Business Units and Department Security Champions.

This year's theme, "Towards Resiliency," underscored the critical need for robust risk management and effective cybersecurity practices amid a complex threat landscape. It highlighted the importance of addressing physical, cyber, and safety risks collectively to establish a multi-layered defence.

The event featured a live integrated physical-cyber security exercise conducted at Pasir Panjang Terminal, in collaboration with Immigration & Checkpoints Authority (ICA) and AETOS, which tested stakeholders' playbooks and crisis communication strategies. Additionally, exhibition booths from KPMG and the Singapore Police Force showcased an OT Breach Simulator and the ScamShield App, reinforcing the importance of a comprehensive approach to security.



PSA SG Total Security Day 2024



## CIDeX 2024

CIDeX, held in November, is an OT Critical Infrastructure defence exercise that focuses on training and strengthening Whole-Of-Government cyber capabilities to detect and tackle cybersecurity threats to IT and OT networks that control the operations of critical infrastructure.

Organised by the Digital and Intelligence Service (DIS) and the Cyber Security Agency of Singapore (CSA), the CIDeX exercise is supported by various partners such as iTrust/SUTD and the National Cybersecurity RandD Laboratory (NCL), Defence Science and Technology Agency (DSTA), Defence Science Organisation (DSO), Amazon Web Services (AWS), Dragos, ST Engineering, Splunk and Google Cloud Security.

CIDeX 2024 saw over 200 personnel involved, including 31 in the Red Team (Hackers), 21 in the Green Team (Infra),

and 166 participants representing 7 key sectors: Aviation, Cloud, Power, Land Transport, Telco, Water and Maritime (MPA, PSA, and Jurong Port) actively participated. PSA SG was represented by a multidisciplinary team.

## Maritime Cyber Readiness 2024

PSA SG participated in the maritime sector cybersecurity exercise; codenamed Exercise Cyber Maritime 2024 (XCM24) held by MPA in April 2024. XCM24 puts to test sectoral coordination on cybersecurity incident management, emergency response plans and crisis communications. The exercise evaluated the participants' response mechanisms to cyber and data-related attacks and incidents, and their ability to recover. The observations and recommendations contributed towards improving our cyber-readiness.

CIDeX 2024



## KEEPING OUR OPERATIONS SAFE AND SECURE

# Port Security

## Why It Is Important

Ports are vital not only for facilitating global trade but also for ensuring national and international security. Robust port security measures are essential for maintaining the integrity of supply chains, protecting vital infrastructure, and safeguarding the interests of stakeholders, including government authorities, shipping companies, and local communities.

## Our Approach

PSA SG is committed to maintaining the highest safety and security standards to uphold its reputation as a trusted and preferred port of call. As a protected area, protected place and Free Trade Zone, we strive for zero security breaches.

In collaboration with relevant ministries and government agencies, PSA SG has implemented a comprehensive security regime to safeguard critical entrepot trade and transshipment activities. This includes a dedicated team of Port Facility Security Officers, Emergency Response personnel, and Auxiliary Police, ensuring full compliance with international and local security regulations.

There was no port security breach in 2024.

## PSA SG assures Safe and Secure Port Operations

PSA SG strictly adheres to relevant legislation, including the Maritime and Port Authority of Singapore Act, Immigration Act, Free Trade Zone Act, Infrastructure Protection Act, as well as relevant international codes, including the International Maritime Organisation's International Ship and Port Facility Security Code.

Our commitment to security is demonstrated through a multi-layered approach, including restricted port access managed by a comprehensive system of safety, security, and environmental rules. Our Secure Trade Partnership certification, aligned with the World Customs Organisation's SAFE Framework of Standards, underscores our commitment to robust security throughout the supply chain.

Preparation is key. We regularly conduct drills and exercises to ensure our readiness. In addition to internal drills, the Company Emergency Response Team (CERT) also undergoes regular emergency response drills and audits conducted by the Singapore Civil Defence Force (SCDF), which include assessments of emerging threats such as fires involving batteries, hydrogen-powered and electric vehicles. The Pass Centre's digital transformation has also streamlined access processes, enhanced security and fostered sustainable practices through online applications, safety and security knowledge assessments and e-payments.

To enhance security capabilities, the Emergency Response and Security Control Centre (ERSCC) established in 2023, demonstrates how PSA SG leverages cutting-edge technologies to safeguard port infrastructure and ecosystems. The ERSCC significantly enhances operational efficiency as a centralised hub integrating IT/OT and physical response capabilities. It utilises a unified dashboard to monitor access control, conduct digital surveillance for incident management and forensics and deploy video analytics for perimeter and gateway threat alerts.

In addition, PSA SG collaborated with Ministry of Health, MPA and ICA in 2024 to implement the monkey pox response plan, including heightened screening for seafarers from affected countries.





## Collaboration and Compliance

PSA SG fosters strong collaborative relationships with key agencies, including MPA, Immigration and Checkpoints Authority (ICA), Singapore Customs, Singapore Police Force (SPF), and SCDF, to enhance security and emergency response capabilities. There is a 40% increase in joint exercises with government agencies

such as exercise codenamed “Exercise Lara”, a joint exercise with the Police Coast Guard for armed incident response on vessels, and “Exercise Mustang”, a joint exercise with ICA, SPF, and the Gurkha Contingent for simulated responses to critical scenarios.



Inter-agency collaboration with ICA, SPF and Gurkha Contingent for “Exercise Mustang”

Additionally, PSA SG’s Port Facility Security Plan is endorsed by MPA under the International Ship and Port Facility Security Code. PSA SG has also renewed Statements of Compliance for our various port facilities. In 2024, we achieved the highest level of security - Secure Trade Partnership Plus certification awarded to companies that have attained the “Premium” band under the TradeFIRST assessment, which comprises five levels of facilitation and

audited for compliance directly by Singapore Customs officers. Secure Trade Partnership Plus certification which is only awarded to companies who have attained the “Premium” band under the TradeFirst Assessment. PSA SG also obtained a Free Trade Zone Operator License, ensuring compliance with the revised Free Trade Zone regime.

## Training and Awareness

PSA SG recognises that effective port security requires a multi-layered approach that involves the active engagement of both staff and port users.



Our Threat-Oriented Person Screening Integrated System (TOPSIS) programme empowers everyone working in the port, from security personnel to cleaners, to identify tell-tale indicators and report suspicious behaviour. This fosters a culture of security awareness throughout the entire port community, extending vigilance beyond traditional security measures. TOPSIS helps everyone recognise, report, and mitigate potential threats. At Tuas Port, we have enhanced access control with facial recognition technology alongside existing fingerprint biometric verification. Our efforts with the TOPSIS programme were recognised with the TOPSIS Outstanding Award, presented by the Centre for Protective Security.

In addition to TOPSIS, other key efforts include the launch of our Total Security Convergence e-learning programme, emergency response and security awareness training, stakeholders’ involvement in fire safety, first aid knowledge and safety security engagement with AETOS, our security provider.



Mr Cheang Chee Kit (left), Head of Health, Safety and Security receives the TOPSIS Outstanding Award



## Awards and Recognition

On 2 August, PSA SG was honoured with the Minister for Home Affairs National Day Award - Organisation (Excellence Award) at the Home Team National Day Observance Ceremony 2024. This prestigious accolade recognises organisations such as PSA SG for outstanding teamwork, innovation and dedication in partnering with the Home Team partners to achieve shared safety objectives for a safe and secure Singapore. This award bears testimony to PSA SG's continued commitment to a secure and sustainable free trade zone in Singapore.



PSA SG receives the Minister for Home Affairs National Day Award - Organisation (Excellence Award)



# Regional Development

PSA is committed to environmental sustainability across our global terminal network. This section highlights the environmental performance of our terminals in Southeast Asia (excluding Singapore), showcasing the initiatives undertaken to uphold PSA's sustainability vision and goals.

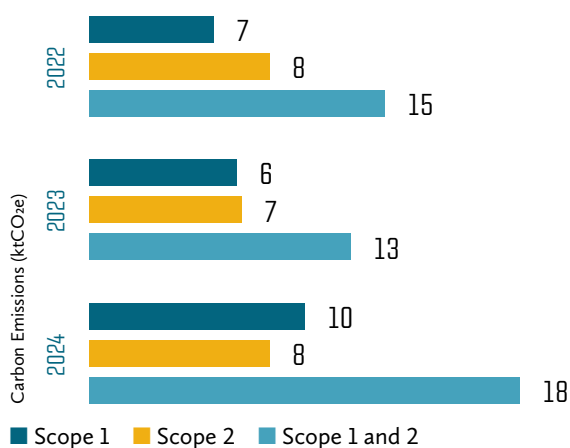
The SEA business units (excluding PSA SG) are:

COUNTRY	NAME	SHORT NAME
INDONESIA	PT New Priok Container Terminal One	NPCT1
THAILAND	Eastern Sea Laem Chabang Terminal Co., Ltd.	ESCO
	LCB Container Terminal 1 Ltd.	LCB1
	Thai Connectivity Terminal Co., Ltd.	TCT
VIETNAM	SP-PSA International Port Co., Ltd.	SP-PSA
	South Logistics Joint Stock Company	SOTRANS

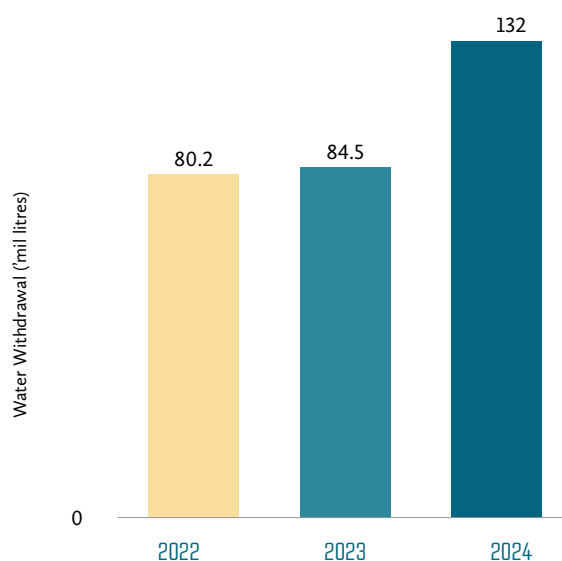
## ESG performance

The SEA Terminals (excluding PSA SG) Scope 1 emissions is 10 ktCO<sub>2</sub>e and Scope 2 emissions is 8 ktCO<sub>2</sub>e, bringing the total Scope 1 and 2 emissions to 18 ktCO<sub>2</sub>e.

### Carbon Emissions of PSA's Southeast Asia Terminals<sup>23</sup>



### Water Withdrawal (excluding PSA SG)

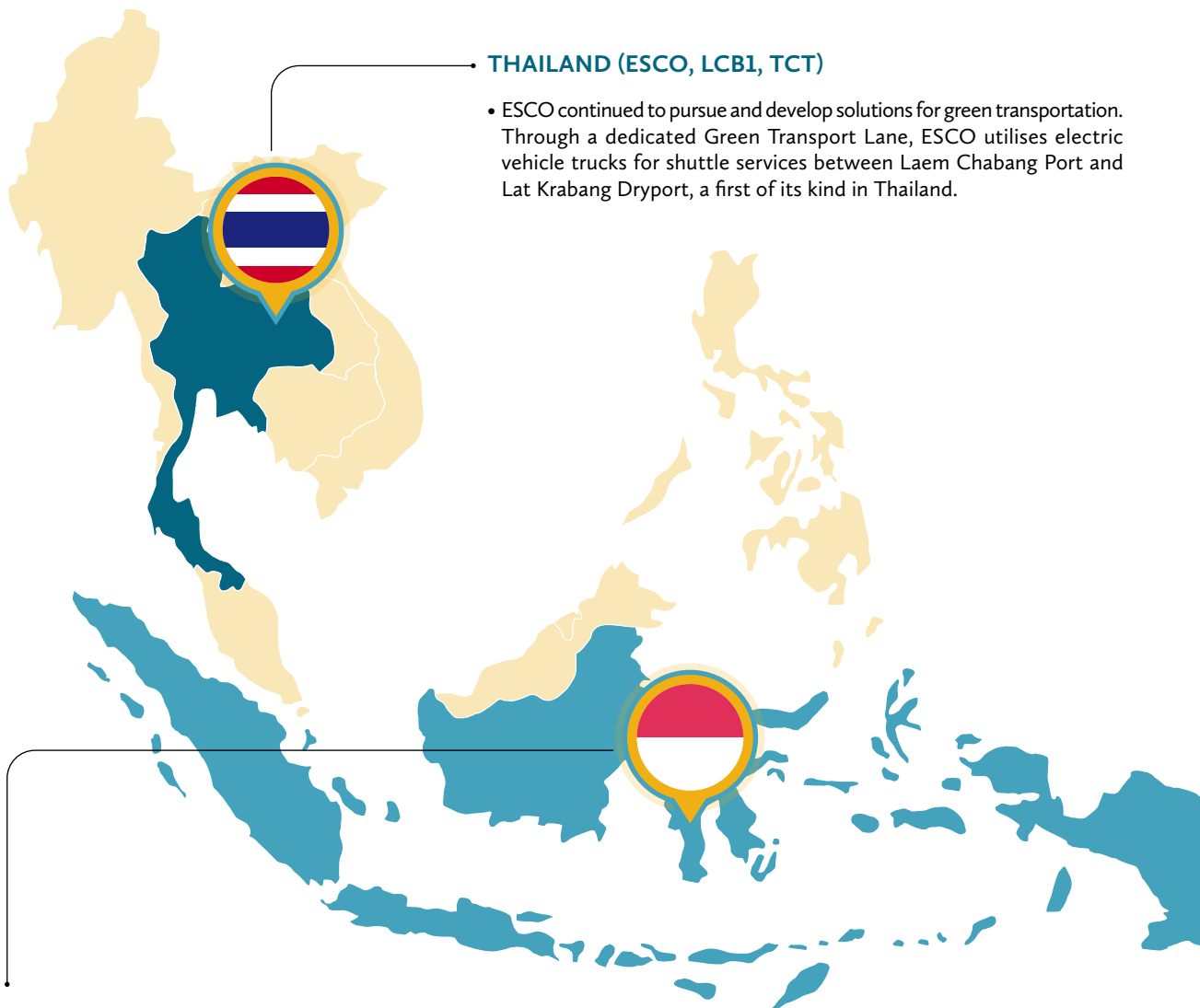


<sup>23</sup> Scope 1 and 2 GHG emissions in the above table are computed based on an equity share consolidation approach, representing current SEA terminals (excluding PSA SG)

At PSA, ensuring the safety and well-being of our employees and the environment is our top priority. To enhance Health, Safety, and Security (HSS) and strengthen risk resilience across our Southeast Asia Business Units (SEA BUs), a dedicated team of four HSS officers based in PSA SG, led by the Head of HSS Southeast Asia conducted in-depth audits throughout 2024. These audits took a comprehensive, multi-faceted approach to assess HSS practices within each BU. The process involved

detailed document reviews (including HSS programmes, incident reports, and action plans), interviews with staff and on-site inspections to identify potential safety and security risks. The findings were then reviewed in collaboration with the respective Terminals to determine the necessary steps for addressing any identified concerns. At the end of every audit, the Audit Team conducted safety training sessions designed to enhance the capabilities of the staff of SEA BUs.

## Promoting Environmental Sustainability in Southeast Asia



### THAILAND (ESCO, LCB1, TCT)

- ESCO continued to pursue and develop solutions for green transportation. Through a dedicated Green Transport Lane, ESCO utilises electric vehicle trucks for shuttle services between Laem Chabang Port and Lat Krabang Dryport, a first of its kind in Thailand.

### INDONESIA (NPCT1)

- NPCT1 clinches Green and Smart Port Award conferred by Indonesia's Coordinating Ministry for Maritime and Investment Affairs, signifying the terminal's exemplary standards in green and smart port practices in three key areas: Digitalisation, Port Management, and Environment and Safety Management.
- NPCT1 operates a fully electrified fleet of yard cranes, installed rooftop solar photovoltaics and implemented cold-ironing facility to provide shoreside electrical power. It has also introduced a web-based system to reduce empty trips, increase efficiency, and eliminate physical gate pass copies for hauliers.
- Screening of suppliers in key tenders to promote sustainability across our supply chain.
- Renewable Energy Transition – NPCT1 was established as the first terminal in Jakarta with a major solar power installation. The solar power system consists of 1,052 solar panels which cover 50% of power consumption of NPCT1 office buildings, reducing about 584 tons of carbon emissions annually.



# ESG DATA SUMMARY

ENVIRONMENT						
		GRI Indicator	Units	2022	2023	2024
Direct (Scope 1) Greenhouse Gas Emissions	Scope 1 GHG emissions	305 – 1	kTCO <sub>2</sub> e	193	178	189
Energy Indirect (Scope 2) Greenhouse Gas Emissions	Scope 2 GHG emissions – Market-based	305 – 2	kTCO <sub>2</sub> e	149	130	157
	Scope 2 GHG emissions – Location-based			169	148	176
Total Scope 1 and Scope 2	Total Scope 1 + Scope 2 (Market-based) GHG emissions		kTCO <sub>2</sub> e	342	308	346
Other Indirect (Scope 3) Greenhouse Gas Emissions <sup>(1)</sup>	Total Scope 3 GHG emissions	305 – 3	kTCO <sub>2</sub> e		569	687
	Cat 2 – Capital goods				105	158
	Cat 3 – Fuel and energy-related activities				66	69
	Cat 9 – Downstream transportation and distribution				300	337
	Other Categories				99	124
Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	Nitrogen Dioxide (NO <sub>2</sub> )	305 – 7	µg/m <sup>3</sup>	< 20	< 20	47 – 113
	Carbon Monoxide (CO)		mg/ m <sup>3</sup>	1.2 – 2.4	1.0 – 2.0	0.4 - 0.8
	PM 10		µg/m <sup>3</sup>	4.0 – 18.0	5.0 – 15.0	20.7 - 43.7
	PM 2.5		µg/m <sup>3</sup>	3.0 – 15.0	4.0 – 14.0	8.3 - 22.0
Carbon Emissions Savings from Truck Trips eliminated by Barging Solution (applicable to JIT only)	Carbon Emissions Savings		tCO <sub>2</sub> e	1,900	2,200	2,163
Energy Consumption <sup>(2)</sup>	Fuel consumption from non-renewable sources	302-1	TJ	3,819	3,550	3,653
	Purchased grid and self-generated electricity		TJ	2,013	1,904	2,199
Water Withdrawal	Total water withdrawal <sup>(3)</sup>	303-3		839,000	799,640	876,635

<sup>1</sup> All Scope 3 categories were calculated using equity-based approach.

<sup>2</sup> Energy consumption data is on 100% equity basis.

<sup>3</sup> Our operations primarily rely on water sourced from third-party providers.

## ENVIRONMENT

		GRI Indicator	Units	2022	2023	2024
Water Collected or Harvested	Total rainwater collected/harvested	303-3	m3		8,000	8,000
	Total harvested condensate water from air-conditioning system	303-3	m3		2,800	2,800
Waste Generated	Total generated waste	306-3	kg	15,413,338	24,072,200	12,445,714
	Industrial waste			4,306,844	4,514,917	5,031,471
	Construction waste			8,950,000	17,414,000	5,457,000
	General waste			2,125,666	2,109,390	1,913,871
	Packaging waste			8,497	8,642	8,437
	Office waste			21,339	24,118	34,316
	Electronic waste			992	1,133	619
	Effluents (discharged into the environment from our operations)		megalitres		0	0
Reclaimed/ recovered Refrigerants	Total reclaimed/ recovered Refrigerants		Kg	1,713	3,801	3,332
	Avoided Emissions		tCO <sub>2</sub> e	2,277	5,465	5,000

## SOCIAL

		GRI Indicator	Units	2022	2023	2024
Total Workforce <sup>(4)</sup>	Total workforce	2-7	No. of employees	9,670	9,695	10130
By Employment Contract	Permanent			9600	9680	10120
	Male			8800	8890	9290
	Female			800	790	830
	Temporary			70	15	10
	Male			50	10	5
	Female			20	5	5
By Employment Type	Full Time			9595	9675	10128
	Male			8798	8890	9294
	Female			797	785	834
	Part Time			5	5	2
	Male			2	0	1
	Female			3	5	1
	Non-guaranteed Hours			0	0	0
	Male			0	0	0
	Female			0	0	0

<sup>4</sup>The numbers represented headcount at the end of each reporting period, 31 December of each year.

## SOCIAL

		GRI Indicator	Units	2022	2023	2024
<b>Collective Bargaining Agreement Coverage</b>	Percentage of total employees covered by collective bargaining agreements	2-30	%	77.0	74.3	68.3
<b>New Employees Hires and Employees Turnover<sup>(5)</sup></b>	Total number of new employee hires	401-1	No. of employees	1180	960	1330
	Total number of employee turnover (voluntary and non-voluntary)	401-1		980	800	880
<b>Average Hours of Training Per Year Per Employee</b>	<b>Average training hours per employee</b>	404-1	Hours	46	34	45
	Average training hours per non-executive employee			45	30	43
	Average training hours per executive employee			54	52	50
<b>Performance and career development review</b>	Percentage of Employees who received performance and career development review	404-3	%	100	100	100
<b>Work-Related Injuries</b>	<b>Fatalities</b>	403-9	No. of Incidents	0	2	0
	Employees			0	0	0
	Contractors (includes third-party workers )			0	2	0
	<b>Safety incidents resulting in permanent disability</b>	403-9	No. of Incidents	0	0	0
	Employees			0	0	0
	Contractors (includes third-party workers )			0	0	0
	<b>Recordable work-related injuries</b>	403-9	No. of Incidents	36	43	31
	Employees			17	22	19
	Contractors (includes third-party workers )			19	21	12
	<b>Lost Time Injuries Frequency Rate (LTIFR)</b>		-	0.8	0.9	0.6
	<b>Lost Time Injury (LTI)</b>		No. of Incidents	36	43	31
<b>Work-related Ill-health</b>	<b>Fatalities</b>	403-10	No. of Incidents	0	0	0
	Employees			0	0	0
	Contractors (includes third-party workers )			0	0	0
	<b>Recordable work-related ill-health</b>	403-10	No. of Incidents	0	0	0
	Employees			0	0	0
	Contractors (includes third-party workers )			0	0	0
<b>Diversity of Employees - By Gender</b>	<b>Percentage of executive employees</b>	405-1		1,550	1,660	1,785
	Male			1,150	1,250	1,335
	Female			400	410	450
	<b>Percentage of non-executive employees</b>	405-1		8,050	8,020	8,345
	Male			7,650	7,640	7,960
	Female			400	380	385

<sup>5</sup>This only includes direct hires.



## SOCIAL

		GRI Indicator	Units	2022	2023	2024
Diversity of Employees - By Age Group	Percentage of executive employees	405-1		1,550	1,660	1,785
	Under 30 years old			300	315	370
	30 - 50 years old			1000	1095	1140
	Over 50 years old			250	250	275
	Percentage of non-executive employees	405-1		8,050	8,020	8,345
	Under 30 years old			2000	2165	2345
	30 - 50 years old			4650	4450	4575
	Over 50 years old			1400	1405	1425
Incidents of Discrimination Recorded	Total number of incidents of discrimination	406-1	No. of Incidents	0	0	0

## GOVERNANCE

		GRI Indicator	Units	2022	2023	2024
Communication and Training about Anti-Corruption Policies and Procedures <sup>(6)</sup>	Percentage of employees who received anti-corruption training	205-2	%		99.8	No anti-corruption training was conducted in 2024 as we are launching an updated version with new content in 2025.
Incidents of Corruption Recorded	Total number of confirmed incidents of corruption	205-3	No. of Incidents	0	0	0
	(a) which employees were dismissed or disciplined for corruption.			0	0	0
	(b) when contracts with business partners were terminated or not renewed due to violations related to corruption.			0	0	0
Compliance with Laws and Regulations	No. of significant instances of non-compliance	2-27	No. of Incidents			0
	(a) which resulted in a fine					0
	(b) which resulted in non-monetary sanctions					0
	Total monetary value of significant fines for non-compliance	2-27	SGD			0

## GOVERNANCE

		GRI Indicator	Units	2022	2023	2024
Substantiated Complaints Concerning Breaches of Customer Privacy	Substantiated complaints received from outside parties	418-1	No. of complaints	0	0	0
	Substantiated complaints received from regulatory bodies	418-2	No. of Incidents	0	0	0
IT Systems Breaches Leading to Leaks, Theft or Loss of Customer Data	Breach of IT or OT Systems	418-3	No. of Incidents	0	0	0
New suppliers that were screened using environmental criteria	Percentage of new suppliers onboarded during the reporting period and screened using environmental criteria	308-1	%		100	100
New suppliers that were screened using social criteria	Percentage of new suppliers onboarded during the reporting period and screened using social criteria	414-1	%		100	100

## REGIONAL DEVELOPMENT

		GRI Indicator	Units	2022	2023	2024
Direct (Scope 1) Greenhouse Gas Emissions	Scope 1 GHG emissions of PSA's SEA Terminal	305-1	KTCO <sub>2</sub> e	7	6	10
Energy Indirect (Scope 2) Greenhouse Gas Emissions	Scope 2 GHG emissions of PSA's SEA Terminal	305-2		8	7	8
Total Scope 1 and Scope 2	Scope 1 + Scope 2 GHG emissions of PSA's SEA Terminal			15	13	18

# GRI CONTENT INDEX

## Statement of use

PSA SG has reported the information cited in this GRI content index for the period, 1 January 2024 to 31 December 2024, in accordance with the GRI Standards.

## GRI 1 used

GRI 1: Foundation 2021

GRI Standard	Disclosure Number	Disclosure Title	Page Number and Reasons for Omissions, if applicable
<b>General Disclosures</b>			
<b>GRI 2: General Disclosures 2021</b>	2-1	<b>Organisational details</b>	About The Company, Pg 6
	2-2	<b>Entities included in the Organisation's Sustainability Reporting</b>	About This Report, Pg 3 About The Company, Pg 6
	2-3	<b>Reporting Period, Frequency and Contact Point</b>	About This Report, Pg 3
	2-4	<b>Restatements of Information</b>	About This Report, Pg 3
	2-5	<b>External Assurance</b>	About This Report, Pg 3
	2-6	<b>Activities, Value-Chain and Other Business Relationships</b>	About The Company, Pg 6-8
	2-7	<b>Employees</b>	Protecting our People > Employee Diversity and Inclusion, Pg 54-55
	2-8	<b>Workers who are not employees</b>	Information unavailable. PSA SG currently does not track the number of workers who are not employees but we work closely with agencies to ensure that the wellbeing of the workers contracted are cared for and in line with our principles and labour standards.
	2-9	<b>Governance Structure and composition</b>	Our Approach to Sustainability > Our Sustainability Governance, Pg 17  Refer to PSA Annual & Sustainability Report 2024, Pg 10-15
	2-10	<b>Nomination and selection of the highest governance body</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-11	<b>Chair of the highest governance body</b>	Refer to PSA Annual & Sustainability Report 2024, Pg 11
	2-12	<b>Role of the highest governance body in overseeing the management of impacts</b>	Our Approach to Sustainability > Our Sustainability Governance, Pg 17  Refer to PSA Annual & Sustainability Report 2024, Pg 41
	2-13	<b>Delegation of responsibility for managing impacts</b>	Our Approach to Sustainability > Our Sustainability Governance, Pg 17
	2-14	<b>Role of the highest governance body in sustainability reporting</b>	Our Approach to Sustainability > Material Sustainability Topics, Pg 14  Refer to PSA Annual & Sustainability Report 2024, Pg 41



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<b>General Disclosures</b>			
<b>GRI 2: General Disclosures 2021</b>	2-15	<b>Conflicts of interest</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-16	<b>Communication of critical concerns</b>	Acting with Integrity > Ethical Business Conduct, Pg 75
	2-17	<b>Collective knowledge of the highest governance body</b>	Refer to PSA Annual & Sustainability Report 2024, Pg 41
	2-18	<b>Evaluation of the performance of the highest governance body</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-19	<b>Remuneration policies</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-20	<b>Process to determine remuneration</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-21	<b>Annual total compensation ratio</b>	Confidentiality constraints: PSA is a private entity and does not currently disclose the following information.
	2-22	<b>Statement on sustainable development strategy</b>	Regional CEO, Southeast Asia, Message, Pg 4
	2-23	<b>Policy Commitments</b>	Acting with Integrity > Ethical Business Conduct, Pg 75-76
	2-24	<b>Embedding policy commitments</b>	Acting with Integrity > Ethical Business Conduct, Pg 75-76  Acting with Integrity > Sustainable Procurement, Pg 77-78
	2-25	<b>Processes to remediate negative impacts</b>	Acting with Integrity > Ethical Business Conduct, Pg 76
	2-26	<b>Mechanisms for seeking advice and raising concerns</b>	Acting with Integrity > Ethical Business Conduct, Pg 76
	2-27	<b>Compliance with laws and regulations</b>	Acting with Integrity > Ethical Business Conduct, Pg 76  Keeping our Operations Safe and Secure > Port Security, Pg 85
	2-28	<b>Membership associations</b>	Taking Climate Action > Emissions and Energy, Pg 25
	2-29	<b>Approach to stakeholder engagement</b>	Our Approach to Sustainability > Stakeholder Engagement, Pg 16
	2-30	<b>Collective bargaining agreements</b>	Protecting our People > Labour Relations and Worker Wellbeing, Pg 57
<b>Topic Specific Disclosures</b>			
<b>GRI 3: Material Topics 2021</b>	3-1	<b>Process to determine material topics</b>	Our Approach to Sustainability > Material Sustainability Topics, Pg 14  Our Approach to Sustainability > Stakeholder Engagement, Pg 16
	3-2	<b>List of material topics</b>	Our Approach to Sustainability > Material Sustainability Topics, Pg 14-15

## Environmental

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### Climate Change Adaptation

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### Emissions and Energy

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GRI 302: Energy 2016	302-1	Energy consumption within the organisation	Taking Climate Action > Emissions and Energy, Pg 23
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	Taking Climate Action > Emissions and Energy, Pg 23-24
	305-2	Energy indirect (Scope 2) GHG emissions	Taking Climate Action > Emissions and Energy, Pg 23-24
	305-3	Other indirect (Scope 3) GHG emissions	Taking Climate Action > Emissions and Energy, Pg 23-24

### Environmental Protection

GRI 3: Material Topics 2021	3-3	Management of material topics	Protecting our People > Environmental Protection, Pg 62-63
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### Green Port Culture

GRI 3: Material Topics 2021	3-3	Management of material topics	Nurturing Future-ready Workforce > Green Port Culture, Pg 44-51
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### Waste Management and Recycling

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GRI 306: Waste 2020	306-3	Waste generated	Ensuring Responsible Operations > Waste Management and Recycling, Pg 26
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### Water Use and Pollution

GRI 3: Material Topics 2021	3-3	Management of material topics	Ensuring Responsible Operations > Water Use and Pollution, Pg 28
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**SOCIAL**

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**Occupational Health and Safety**

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GRI 403: Occupational Health and Safety 2018	403-2	Hazard identification, risk assessment, and incident investigation	Nurturing Future-ready Workforce, Safety, Pg 36-40
GRI 403: Occupational Health and Safety 2018	403-5	Worker training on occupational health and safety	Nurturing Future-ready Workforce, Safety, Pg 36-40
GRI 403: Occupational Health and Safety 2018	403-6	Promotion of worker health	Nurturing Future-ready Workforce, Occupational Health, Pg 35
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GRI 403: Occupational Health and Safety 2018	403-10	Work-related ill health	Nurturing Future-ready Workforce > Safety, Pg 37

**People Development**

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GRI 404: Training and Education 2016	404-1	Average hours of trainings per year per employee	Nurturing Future-ready Workforce > People Development, Pg 31
GRI 404: Training and Education 2016	404-2	Programmes for upgrading employee skills and transition assistance programmes	Nurturing Future-ready Workforce > People Development, Pg 30-33
GRI 404: Training and Education 2016	404-3	Percentage of employees receiving regular performance and career development reviews	Nurturing Future-ready Workforce > People Development, Pg 32

**Community Relations**

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**Employee Diversity and Inclusion**

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GRI 401: Employment 2016	401-1	New employee hires and employee turnover	Protecting our People > Employee Diversity and Inclusion, Pg 56

**Labour Relations and Worker Well-being**

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**Ethical Business Conduct**

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**Innovation and Technology**

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**Cyber Security and Data Protection**

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**Sustainable Procurement**

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GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	Acting with Integrity > Sustainable Procurement, Pg 78
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GRI 414: Supplier Social Assessment disclosure number	414-1	New suppliers that were screened using social criteria	Acting with Integrity > Sustainable Procurement, Pg 78
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**Optimisation of Global Supply Chain**

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**Sustainable Port Development**

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**Port Security**

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