



TRANSFORMING FOR THE FUTURE

SUSTAINABILITY/INTEGRATED REPORT 2021

ABOUT THIS REPORT

This is the eighth edition of the Maritime and Port Authority of Singapore's (MPA) Sustainability/Integrated Report.

The report is divided into four sections. Section One "Resilience and Recovery" details MPA's efforts against COVID-19, safeguarding the lives of our port and maritime community, and enhancing the resilience of the Port of Singapore. Section Two "Reliability" reports MPA's efforts in enhancing efficiency and safety of our ports, developing Singapore as a leading international maritime centre and advancing our strategic maritime interests. Section Three "Ready for the Future" outlines MPA's impetus in driving digitalisation, building a culture of innovation as well as addressing the looming threat of climate change through leading and supporting the various decarbonisation efforts in the maritime sector. The report concludes with Section Four "Organisational Excellence" which focuses on the work to build a culture of excellence in MPA.

This report has been prepared in accordance with the GRI Standards: Comprehensive option. It is also aligned with the United Nations Sustainable Development Goals (UN SDGs) and the principle-based Integrated Reporting Framework issued by the Value Reporting Foundation.

MPA's Sustainability Report and its Financial Report are published separately. They cover the material information on MPA's operations in the financial year between 1 January 2021 and 31 December 2021. Together, the two reports constitute the 2021 edition of MPA's Sustainability/Integrated Report.

For feedback and enquiries on this report, please reach out to Mr Tang Kin Ho at Tang_Kin_Ho@mpa.gov.sg

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CHAIRMAN'S MESSAGE



Niam Chiang Meng
Chairman
Maritime and Port Authority of Singapore

After a challenging 2020, the global economy bounced back strongly in 2021 at the fastest pace in nearly 50 years. Overall, earnings in the shipping sector rose sharply driven partly by the trade rebound.

Amid the global supply chain disruptions caused by the global pandemic, the Port of Singapore remained resilient and continued to serve as a one stop, catch up port.

In 2021, we maintained top rankings among our peers around the region and the world. Singapore retained its position as the world's busiest container transshipment hub, logging in a record high container throughput volume of 37.5 million 20-foot equivalent units (TEUs). We were also the top bunkering port, registering a total sales volume of both conventional fuels and liquefied natural gas (LNG) of about 50 million tonnes.

The Port of Singapore was awarded the title "Best Global Seaport" at the 2021 Asia Freight, Logistics and Supply Chain Awards for the first time. We were also named the "Best Seaport in Asia" for the 33rd time. We have also retained the position as the world's top maritime centre in the Xinhua-Baltic International Shipping Centre Development Index for the eighth consecutive year. 2021 was also another year in the growth of our international maritime centre, with nine companies establishing their presence here and 14 more expanding their operations. Classification society DNV, in collaboration with Menon Economics, also gave Singapore the top maritime city in their 2022 report on Leading Maritime Cities.

However, we must not rest on our laurels. The global supply chain remains vulnerable, as demonstrated by how a single container ship blocking the narrow Suez Canal can cause a multi-fold impact on the continuity in global trade flows and of course, the sustained ripples we continue to experience from disruptions to port operations and shipment delays triggered by a health pandemic. Our status and resilience

as a global hub port and international maritime centre will ultimately depend on how we transform ourselves and work together with our partners to respond to these challenges.

To stay ahead, MPA continues its push for greater collaboration to make shipping more sustainable, efficient and transparent. The completion of Tuas Port Phase 1 marks a step closer to actualising green and sustainable port operations. Our work to bring together numerous paper submissions through multiple agencies into our one-stop portal digitalPORT@SG™ will bring about greater efficiencies for the ships and port operators. We are also taking steady steps towards decarbonisation through our work to advance a multi-fuel transition towards sustainable shipping. We are already operationally ready for LNG ship-to-ship bunkering and have conducted four biofuel deliveries of ocean-going vessels. Moving forward, we welcome the industry to partner MPA in the pilot and use of future marine fuels such as methanol, ammonia and hydrogen. Within the port, we are also pushing on with the electrification of our harbour craft with the award of three industry consortiums.

MPA also remains committed to the enhancement of maritime safety and the prevention of pollution from ships, as well as improving the well-being of seafarers. This was recognised at the international front when Singapore was re-elected for the 15th consecutive term to the Council of the International Maritime Organization (IMO). As Singapore's national representative, MPA will continue to play an active role to work with the IMO and its member States to advance safe and sustainable shipping.

I am glad that MPA has taken the challenges head on as we have done so for the past 25 years, and am confident that we will continue to remain as the premier global hub port and as an international maritime centre for the world.

CHIEF EXECUTIVE'S MESSAGE

We celebrated the 25th Anniversary of the Maritime and Port Authority of Singapore in 2021. Since our inception in February 1996, MPA has grown from strength to strength, helping to transform Singapore into a pivotal node in the global maritime trade, connected to 600 ports in over 120 countries, and a leading international maritime centre.

2021 also marked the 55th anniversary of the Singapore Registry of Ships (SRS). As one of the top five largest ship registries in the world, SRS remains a quality flag with an eye on the future in sustainable shipping. To further our green aspirations, MPA launched the SRS Notation, a voluntary scheme aimed to drive the transformation of SRS through digitalisation and sustainable shipping, to encourage SRS shipowners, operators and managers to adopt solutions to enhance Singapore ships' safety, crew wellbeing, operational efficiency, and environmental protection.

Despite the uncertainties and challenges in 2021, we have done well, working with our partners in the maritime industry, to keep focus on our mission and prioritising our people's safety and wellbeing, while seizing the opportunity to transform. To keep the Port of Singapore open, we have placed the health and safety of our frontline workers as our top priority. Starting with resident foreign sea crew under the Sea-Air Vaccination Exercise (SAVE) in April 2021, we continued and expanded the vaccination in August 2021 to non-resident foreign sea crew under the Sea Crew Vaccination (SEAVAX). Under SAVE, approximately 99.6 per cent of eligible personnel have received two doses with more than 85 per cent receiving their booster shot. For the next phase of SEAVAX till June 2022, at least 12,000 vaccine doses will be made available to sea crew onboard ocean-going vessels calling at Singapore and sea crew signing on to ships in Singapore. We will also continue to work with the shipping community to facilitate safe crew changes.

I was heartened to see that companies have remained steadfast and took the opportunity to utilise the Maritime Cluster Fund to transform themselves and adapt to the new normal. We also extended our MaritimeSG Together Package in 2021 to position our companies to be ready to seize new opportunities in a post pandemic world.

There are larger challenges ahead. The need to address climate change and decarbonisation in the maritime sector

is growing. International shipping currently accounts about three per cent of global greenhouse gas (GHG) emissions. Left unchecked, the level of GHG emissions will only increase. We thank the International Advisory Panel on Maritime Decarbonisation on their recommendations to adopt new technologies, harmonise standards, and develop new green mechanisms. In parallel, MPA has taken active steps with the establishment of the Global Centre for Maritime Decarbonisation (GCMD) in August 2021. The GCMD is a collaboration between MPA and the industry and will be developed into a centre of excellence and collaborative platform for a low-carbon future.

On our digitalisation journey, we continue to work on simplifying processes and increasing efficiencies and transparency. An estimated 100,000 man-hours will be saved annually through digitalPORT@SG™. We continue to work towards greater port to ship connectivity through our digitalOCEANS™ initiative. We have started to call for electronic Bill of Lading (eBL) projects for cross-border trade through the Maritime Innovation and Technology (MINT) Fund. If eBL is realised, there could be potential savings of up to US\$4 billion annually even if only half of the container shipping industry adopt eBL solutions.

On the innovation front, our ecosystem-based approach to solicit problem statements from industry and nurturing marinetech start-ups to address the industry challenges have been encouraging. The Maritime Drone Estate (MDE) was set up in April 2021 as a sandbox for R&D and trials to support the maritime industry's eventual commercial deployment and operational adoption of maritime drones. Since the launch, nine companies have conducted more than 200 trial flights from MDE. These trials will help to make drone deliveries of essential items like medicine, marine parts, documents and fuel samples between the ship and shore much quicker and efficient.

The achievements in 2021, despite the challenges, were only possible because of the resilience and dedication of our people in weathering out the storms. The close working relationships and feedback from stakeholders such as companies, unions and international organisations also gave us the crucial support we needed to push through our many initiatives. There is much work ahead for us to ensure Maritime Singapore continues to remain strong and resilient. I have no doubt that OneMPA will continue to deliver when we have all hands on deck.



Quah Ley Hoon
Chief Executive
Maritime and Port Authority of Singapore

BOARD OF DIRECTORS



Mr Niam Chiang Meng

Chairman
Maritime and Port Authority of Singapore



Ms Quah Ley Hoon

Chief Executive
Maritime and Port Authority of Singapore



Mr Jermaine Loy

Principal Private Secretary to Prime Minister



Mr Kevin Shum

Deputy Secretary
(Strategy, Sustainability & Technology)
Ministry of Transport



Ms Mary Liew

President
NTUC Central Committee and General Secretary,
Singapore Maritime Officers' Union



**RADM Aaron
Beng Yao Cheng**

Chief of Navy
Republic of Singapore Navy



**Mr Abu Bakar
Bin Mohd Nor**

Group Chairman
Infofabrica Holdings Pte Ltd



Ms Caroline Yang

Chief Executive
Hong Lam Marine Pte Ltd



Ms Patricia Yim

General Manager
Technology Group, IBM APAC



Mr Sng Seow Wah

Corporate Advisor to Temasek International



Mr Chan Cheow Hoe

Deputy Chief Executive
Government Technology Agency of Singapore
and Government Chief Digital Technology Officer,
Smart Nation and Digital Government Office



**Mr Chris Ong
Leng Yeow**

Chief Executive Officer &
Managing Director (Offshore)
Keppel Offshore & Marine



Mr Esben Poulsen

Executive Chairman,
Enesel Pte Ltd



Mr Teo Choo Wee

Executive Director, Fleet Division
Pacific International Lines (Pte) Ltd



Dr Vincent Lien

Director
Wah Hin & Company Pte Ltd

SENIOR MANAGEMENT

01 **Captain Chong Jia Chyuan**
Port Master (wef 1 Jan 2022)

02 **Mr Tan Cheng Peng**
Director, Special Projects
(until 31 Jul 2021)

03 **Ms Tan Woei Tyng**
Director, International Maritime Centre

04 **Mr Cheah Aun Aun**
Director, Shipping / Director, Marine

05 **Captain Daknashamoorthy Ganasen**
Senior Director, Operations & Marine Services

06 **Mr Kenneth Lim**
Assistant Chief Executive (Industry)

07 **Mr Benjamin Wong**
Director, International

08 **Ms Angela Png**
General Counsel
Corporate Secretary

09 **Captain M Segar**
Assistant Chief Executive (Operations)

10 **Er Tham Wai Wah**
Chief Engineer/Senior Director Engineering and
Space Management
Chief Sustainability Officer, Sustainability Office

11 **Ms Caroline Goh**
Director, Business Capability Development

12 **Ms Quah Ley Hoon**
Chief Executive

13 **Mr Dennis Khoo**
Director, Port Systems
(wef 1 Apr 2022)

14 **Ms Cindy Sim**
Director, Finance, Procurement & Admin

15 **Mr Thai Low Ying-Huang**
Chief Hydrographer

16 **Mr Tan Hoe Soon**
Assistant Chief Executive (Corporate)
(wef 1 Nov 2021)

17 **Ms Caitlin Fua**
Director, Communications & Community
(until 1 Feb 2022)

18 **Mr Tan Suan Jow**
Dean, MPA Academy
Director, Operations Planning (until 27 Mar 2022)

19 **Ms Ong Seok Bin**
Senior Director, Human Resource (until 31 Dec 2021)

20 **Mr David Foo**
Assistant Chief Executive (Operations Technology)

21 **Mr George Goh**
Director, Communications & Community
(wef 14 Feb 2022)

22 **Mr Ng Yi Han**
Director, Innovation, Technology & Talent Development

23 **Mr Goh Chung Hun**
Director, Shipping/ Director, Marine (Until 31 Jan 2021)

24 **Ms Bernice Yeoh**
Senior Director, Strategy & Policy

25 **Mr Thomas Ting**
Deputy Director, Innovation, Technology & Talent Development/
Chief Technology Officer

26 **Mr Koh Chin Yong**
Director, Information Technology/
Chief Information Officer

27 **Ms Yeo Suat Lay**
Acting Director, Human Resource
(wef 1 Feb 2022)

28 **Captain Kevin Wong**
Port Master (until 31 Dec 2021)

29 **Mr Vince Tan**
Director, Operations Planning
(wef 28 Mar 2022)



CORPORATE GOVERNANCE

ORGANISATION AND STRUCTURE

MPA is a statutory board established and incorporated under the Maritime and Port Authority of Singapore Act. The MPA Board, headed by a non-executive Chairman, sets strategic directions for MPA to achieve its mission and fulfil its roles. Appointed by the Minister for Transport for a three-year term, Board Members include MPA's Chief Executive, senior officials from the public sector and industry representatives.

Board Meetings are held on a bi-monthly basis to deliberate and approve important matters on governance, operations, policy and sustainability. These matters reflect the key material issues addressed in this report.



AUDIT REVIEW COMMITTEE

Chairman
Dr Vincent Lien

Members
RADM Aaron Beng
Ms Caroline Yang
Mr Sng Seow Wah
Mr Jermaine Loy

Secretary
Head (Internal Audit)



MINT FUND STEERING COMMITTEE

Chairman
Prof Lui Pao Chuen

Members
Ms Quah Ley Hoon
Mr Esben Poulsson
RADM Aaron Beng
Ms Patricia Yim

Industry representative
Prof Lui Pao Chuen
Advisor
National Research Foundation

Secretary
Director (Innovation, Technology and Talent Development)



DATA AND CYBERSECURITY COMMITTEE

Chairman
Mr Niam Chiang Meng

Members
Ms Quah Ley Hoon
Mr Chan Cheow Hoe
Mr Chris Ong
Mr Teo Choo Wee

IMDA
Ms Aileen Chia

Secretary
Chief Information Officer



REGISTRATION COMMITTEE

Chairman
Mr Teo Choo Wee

Members
Ms Caroline Yang
Ms Mary Liew
Mr Jermaine Loy

Secretary
Director (Shipping)



INVESTMENT COMMITTEE

Chairman
Mr Niam Chiang Meng

Members
Ms Quah Ley Hoon
Dr Vincent Lien
Mr Chris Ong
Mr Sng Seow Wah
Mr Abu Bakar

Secretary
Director (Finance, Procurement & Admin)



SENIOR PERSONNEL BOARD

Chairman
Mr Niam Chiang Meng

Members
Ms Quah Ley Hoon
Mr Abu Bakar
Ms Patricia Yim

Secretary
Senior Director (Human Resource)



WELFARE COMMITTEE FOR SEAFARERS

Chairman
Ms Mary Liew

Members
Mr Esben Poulsson
Mr Teo Choo Wee

Singapore Shipping Association

Mr Deepak Arora
Deputy General Manager
Maritime Human Resources
NYK Shipmanagement Pte Ltd

PSA Corporation

Mr Goh Teck Chin
Assistant Vice President
(Safety and Health)
PSA SG HSSE Division

Jurong Port Pte Ltd

Mr Mohanaveel S/O Veerappa
Senior Manager
Cement Division

Seafarers' Missions

Mr Toh Soon Kok
Port Chaplain
Mission to Seafarers Singapore

Rev Carl Bjarkam
Port Chaplain
Danish Seamen Church

MPA

Senior Director (Engineering & Project Management)
Director (Shipping)

Secretary

Assistant Director (Seafarer Management)

MPA's 18 divisions are headed by divisional Directors or Senior Directors, who are responsible for managing the day-to-day operations of their divisions. The MPA Senior Management Team, comprising the Chief Executive, Assistant Chief Executives as well as divisional Directors and Senior Directors, is accountable to the Chairman of the MPA Board and to the Permanent Secretary of the Ministry of Transport.

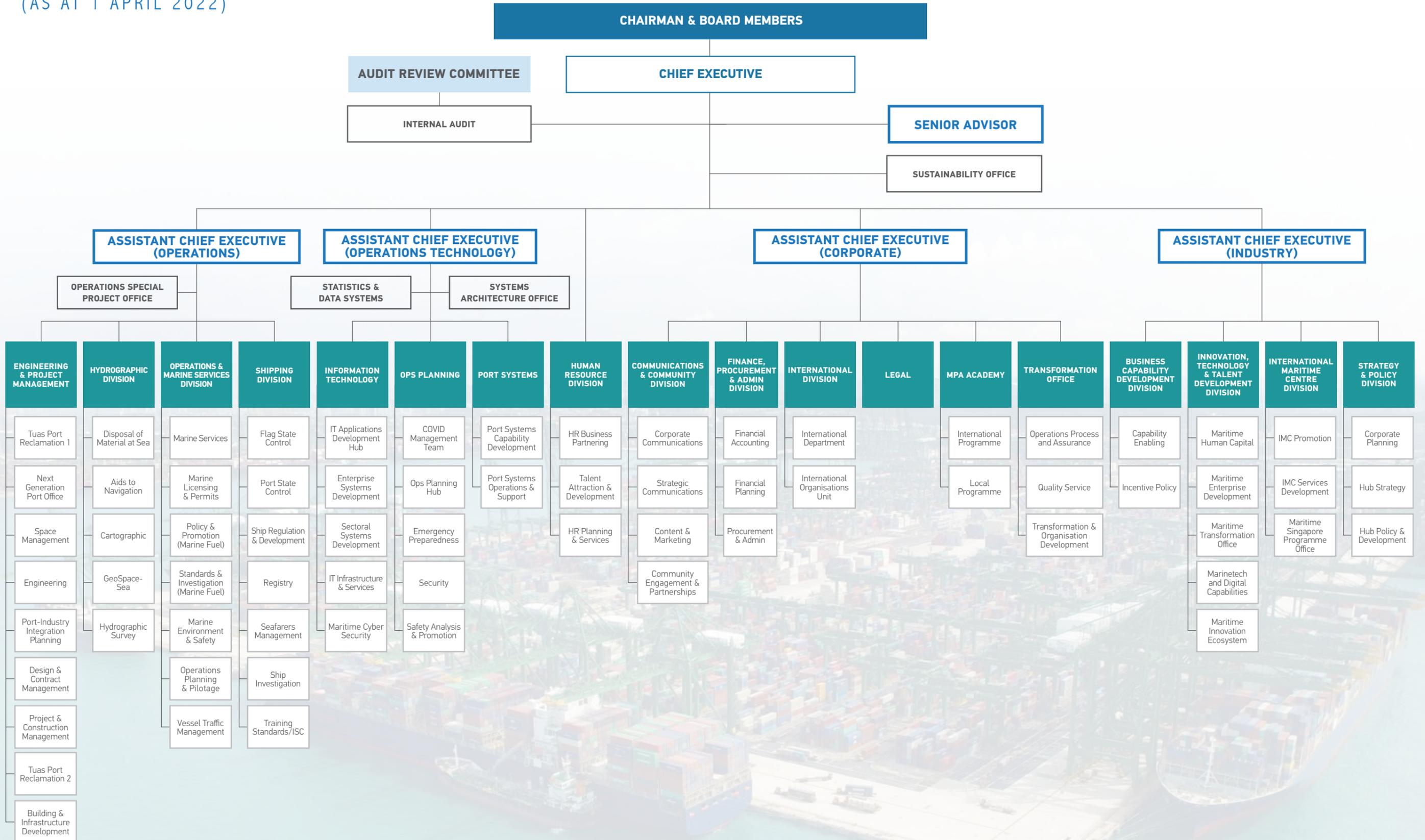
The Sustainability Office, which reports directly to MPA's Chief Executive, champions sound governance and practices in resource management and environmental sustainability within MPA and the maritime community. It tracks MPA's sustainability performance and provides regular updates to the Board on the progress of sustainability initiatives. In addition to managing and coordinating MPA's programmes on maritime sustainability, the Sustainability Office promotes awareness and champions collaborations amongst maritime stakeholders on sustainability issues.

DISCLOSURE OF COMPENSATION

The remunerations for the Chairperson, members of the Board and the Senior Management Team are pegged to the guidelines of the Public Service Division.

ORGANISATIONAL CHART

(AS AT 1 APRIL 2022)



ABOUT MPA



MPA was established on 2 February 1996 as a statutory board under the Ministry of Transport.

OUR VISION

A leading maritime agency driving Singapore's global maritime aspirations.

OUR MISSION

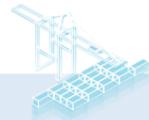
To develop and promote Singapore as a global hub port and an international maritime centre, and to advance and safeguard Singapore's strategic maritime interests.

MPA works closely with industry partners and public agencies to enhance the safety, security and environmental protection of Singapore's port waters. In addition to facilitating port operations, MPA drives the expansion of Singapore's maritime ancillary services cluster while promoting maritime R&D and manpower development.

MPA undertakes the roles of a Port Authority, a Port Regulator, a Port Planner, an IMC Champion and a National Maritime Representative.



Port Authority
MPA promotes safety, efficiency and sustainability in the Port of Singapore.



Port Regulator
MPA regulates and licenses port facilities and marine services. It ensures quality pilotage, towage and bunkering services for the smooth running of port operations.



Port Planner
MPA is responsible for the optimal use of sea space and waterfront land to meet the needs of Singapore's future. It is developing the next-generation port at Tuas.



IMC Champion
MPA grows a vibrant ecosystem of maritime services by maintaining a competitive and pro-business environment. It promotes maritime R&D and drives the manpower development of Singapore's maritime workforce.



National Maritime Representative
MPA advances Singapore's maritime interests by building strong relations with the international maritime community. It ensures that critical sea lines of communication remain open and secure.

ABOUT MARITIME SINGAPORE



**MARITIME
SINGAPORE**

The Maritime Singapore logo is a symbolic representation of the local maritime ecosystem and an identity that unifies Singapore's maritime industry. It embodies the vital, versatile and resilient character of Maritime Singapore.

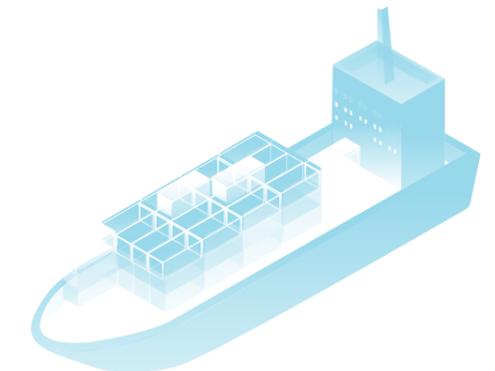
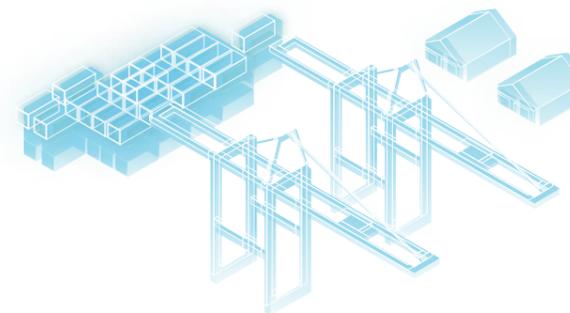
The Port of Singapore is a key transport node in the global supply chain and a vital gateway for essential supplies. Singapore is well-connected to 600 ports in over 120 countries.

In 2021, Singapore remained the top shipping hub for the eighth year running in the Xinhua-Baltic International Shipping Centre Development Index.



Singapore was crowned the 'Best Global Seaport' for the first time and 'Best Seaport in Asia' for the 33rd time at the 2021 Asian Freight, Logistics and Supply Chain Awards.

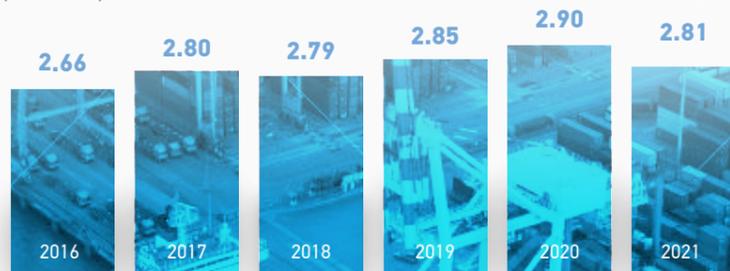
Today, the Singapore Registry of Ships is among the top 5 largest ship registries in the world, with over 4,200 Singapore-registered vessels.



For additional information, please visit MPA's corporate website at www.mpa.gov.sg.

2021 PERFORMANCE SUMMARY

VESSEL ARRIVAL TONNAGE (billion GT)



CONTAINER THROUGHPUT (million TEUs)



BUNKER SALES VOLUME (million tonnes)



CARGO THROUGHPUT (million tonnes)



SINGAPORE REGISTRY OF SHIPS (million GT)



KEY MATERIAL ISSUES

MPA applies the AA1000 Account Ability Principles Standard, GRI Standards and the IR Framework to identify and prioritise the key sustainability issues that impact MPA and its stakeholders. In support of the United Nations' 2030 Agenda for Sustainable Development, MPA aligns its efforts to address key material issues with the UN SDGs.



SAFE, EFFICIENT AND SUSTAINABLE GLOBAL HUB PORT

This material issue addresses the importance and impact of MPA's role as the driving force behind Singapore's maritime aspirations and developments. MPA works closely with diverse stakeholders to enhance safety, sustainability and operational efficiency in the Port of Singapore. It spearheads maritime digitalisation and technological innovation to drive safe, efficient and sustainable shipping. A digitally enabled and technology-driven maritime sector enhances Singapore's competitiveness as a global hub port and reinforces the vital role that Singapore plays in international trade as a key transport node in the global supply chain.



ECONOMIC CONTRIBUTION

This material issue addresses the importance and impact of MPA's contributions to Singapore's economy. MPA fosters a pro-business environment to grow the attractiveness of Singapore as an international maritime centre. It supports maritime companies to establish their businesses in Singapore and expand their operations from the city-state. MPA also grows the capabilities of the maritime workforce in Singapore to strengthen industry resilience and seize opportunities as the maritime sector evolves.



ENVIRONMENTAL SUSTAINABILITY

This material issue addresses the importance and impact of MPA's role in driving environmental sustainability in Singapore's maritime industry. Spearheading the decarbonisation efforts in Maritime Singapore, MPA supports the research, trials and adoption of clean marine fuels and low-carbon technologies to reduce emissions. It also seeks public feedback and reviews new innovations rigorously against scientific evidence to prioritise the best solutions as implemented for environmental protection.



INTERNATIONAL SUPPORT AND COMMUNITY ENGAGEMENT

This material issue addresses the importance and impact of building strong local and international partnerships. MPA advances Singapore's maritime interests on the global stage and contributes to international efforts at promoting safe, efficient and sustainable shipping. MPA also engages local communities in a meaningful way to grow public awareness of Maritime Singapore and inspire talents to join the maritime sector.



FINANCIAL SUSTAINABILITY

This material issue addresses the importance and impact of MPA's financial performance. MPA is a self-funded statutory board. Critical to its long-term financial viability, MPA maintains a competitive business and sustainable revenue streams.



OUR PEOPLE AND CULTURE

This material issue addresses the importance and impact of maintaining a skilled and productive MPA workforce. MPA develops its officers professionally and grows their careers in MPA while building a rewarding and engaging work environment. It also adopts technology and digitalises its work processes to foster collaboration, support job functions and drive efficiency at work.

MPA'S BUSINESS MODEL

A MATERIAL ISSUES

- Safe, efficient and sustainable global hub port
- Economic contribution
- Environmental sustainability
- International support and community engagement
- Financial sustainability
- Our people and culture

B INPUT

- Financial capital: Ensure that MPA remains financially sustainable
- Manufactured capital: Provide customer-centric services, and deliver operational and technological solutions
- Intellectual capital: Drive thought leadership in the maritime space
- Human capital: Become a choice employer and build a pipeline of talents for the maritime industry
- Social and relationship capital: Build strong partnerships with stakeholders
- Natural capital: Optimise scarce resources

C INITIATIVES

STRENGTHEN SINGAPORE'S POSITION AS A GLOBAL HUB PORT

- Develop technological innovations to enhance port safety and efficiency
- Champion maritime safety and strengthen emergency preparedness
- Promote the digitalisation of shipping documents and payment transactions
- Support R&D in low-carbon technologies and solutions in shipping
- Champion LNG bunkering and explore clean marine fuels
- Conduct public outreach to raise awareness of marine environmental protection
- Develop the next-generation port at Tuas and its capabilities

BUILD AN ATTRACTIVE INTERNATIONAL MARITIME CENTRE

- Offer strong business support
- Attract new maritime players and grow existing maritime companies in Singapore
- Foster strong connections with complementary international maritime clusters
- Strengthen interlinkages within the maritime ecosystem and with adjacent sectors

SAFEGUARD SINGAPORE'S MARITIME INTERESTS ON THE GLOBAL STAGE

- Maintain a leading and active presence at international and regional maritime platforms
- Promote Singapore's thought leadership on maritime affairs
- Support global maritime leadership development and the training needs of the international maritime community

GROW SINGAPORE AS A MARITIME INNOVATION HUB

- Accelerate maritime digitalisation
- Strengthen public-private sector and cross-industry collaboration on maritime R&D
- Provide support for maritime technology start-ups
- Support the development and testing of maritime technologies and innovative solutions
- Develop capabilities in early detection and response to cybersecurity threats

BUILD A FUTURE-READY MARITIME WORKFORCE

- Cooperate with institutes of higher learning, industry associations and seafaring unions to support training and reskilling of maritime employees
- Build a steady pipeline of local maritime talents
- Facilitate the entry of mid-career professionals into growth areas of the maritime sector

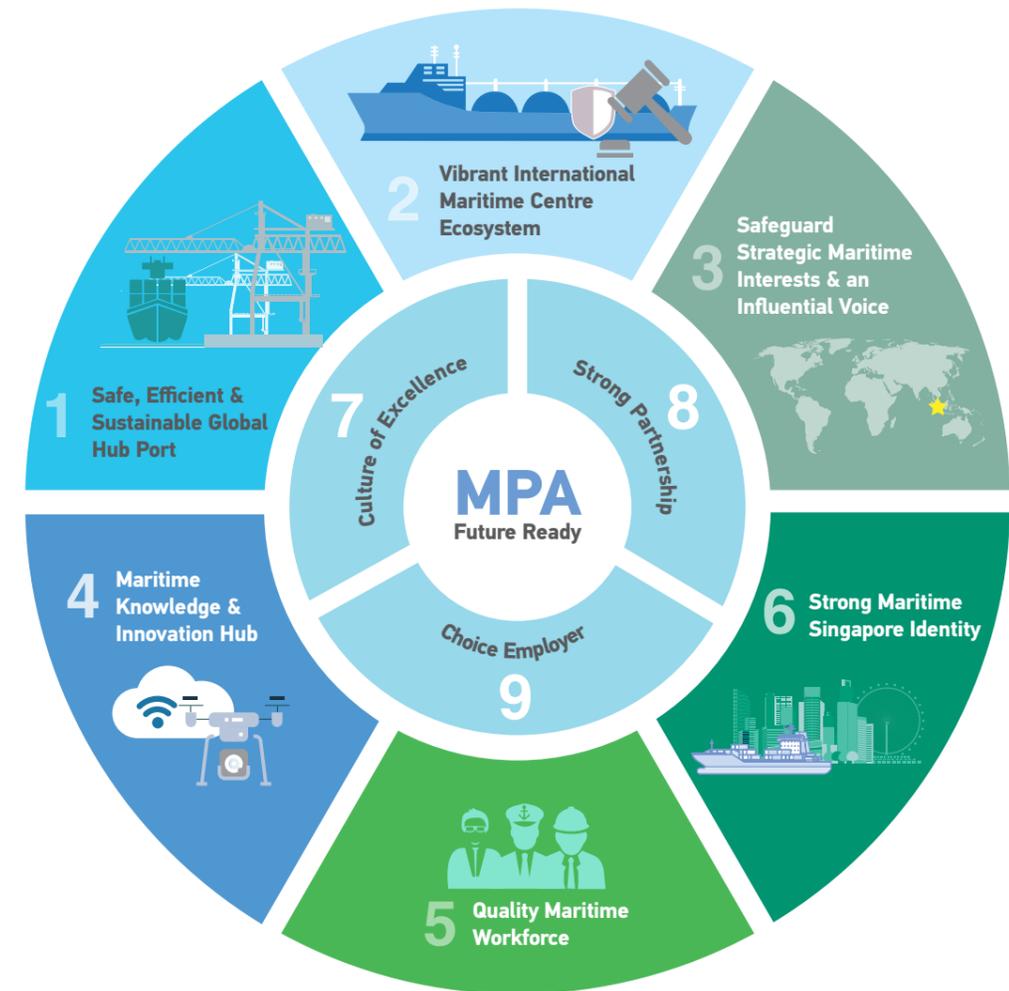
BUILD A STRONG MARITIME SINGAPORE IDENTITY

- Strengthen media engagement and publicity to grow awareness of Singapore's maritime industry
- Conduct public engagement programmes to raise the profile of Maritime Singapore and enhance the public image of the industry

DEVELOP INTERNAL CAPABILITIES

- Develop a digital MPA workforce
- Support the professional growth of employees
- Institute staff engagement as a regular exercise
- Enhance workplace safety and health

D OUTCOMES



E KEY PERFORMANCE AREAS

- Improve safety and risk management practices
- Enhance operational resilience and productivity in the Port of Singapore
- Drive environmental sustainability in the Port of Singapore
- Lead in setting industry standards
- Digitalise and improve port infrastructure
- Develop the next-generation port at Tuas
- Anchor and grow key players in Singapore's maritime ecosystem
- Promote a pro-business and conducive environment for maritime businesses
- Be an active voice on regional and international maritime platforms
- Strengthen relationships with international counterparts and the maritime community
- Implement all ratified international regulations and conventions effectively
- Promote maritime thought leadership
- Support maritime R&D and nurture a culture of innovation
- Drive sectoral manpower strategies
- Promote maritime careers by raising the profile of the industry and its careers
- Enhance public outreach and engagement to grow awareness of the maritime sector
- Reinforce Singapore's position as a choice venue for maritime events



SECTION 01
RESILIENCE &
RECOVERY

CHAPTER 1: KEEPING OUR PORT OPEN 24/7

As countries worldwide tackle the COVID-19 pandemic, the global maritime industry continues to ensure essential goods, including food and medical supplies, reach consumers across the world. Being a major transshipment hub and international maritime centre, the Maritime and Port Authority of Singapore (MPA) is committed to ensure the Port of Singapore remains open to support global trade and supply chains.

To do so, MPA has put in place the necessary measures to reduce the risk of imported cases of COVID-19 from vessels calling at our port, as well as safeguard the lives and livelihoods of local maritime personnel. These include facilitating vaccinations for our staff, contractors, frontline personnel and seafarers, facilitating safe crew changes in Singapore, and extending financial support to maritime personnel and sub-sectors hard hit by the pandemic. Safe management guidelines and testing requirements were also adjusted regularly to keep everyone safe from infection. MPA also worked closely with its partners to ease the supply chain disruptions caused by the pandemic. The Port of Singapore was able to play the role of a catch-up port and mitigate some shipping delays by ramping up more resources to ease the congestion, allowing essential goods and supplies to reach people and countries around the world.

SEA-AIR VACCINATION EXERCISE (SAVE)

Singapore was one of the first countries to recognise and prioritise COVID-19 vaccination for frontline maritime personnel.

As part of our national vaccination strategy to protect our frontline personnel as well as resident foreign seafarers in Singapore, the Sea-Air Vaccination Exercise (SAVE) was launched in January 2021 to vaccinate over 10,000 eligible personnel. An online vaccination booking system and a daily vaccination dashboard to prioritise frontline personnel and manage the booking of appointments were put in place swiftly by MPA to support the efficient operation of the exercise. These frontline personnel include port workers, harbour pilots, cargo officers, marine surveyors and marine superintendents who are required to work onboard ships within our port waters. They carry out essential works including navigation, refuelling, ship repair and maintenance, as well as port operations. Harbourcraft and ocean-going crew who are Singaporeans and long-term residents living in the community are prioritised for vaccination. Together, these personnel play a major role in keeping the Port of Singapore open and ensuring the uninterrupted flow of goods.

As of March 2022, the vaccination drive has made significant progress, with approximately 99.6 per cent of eligible personnel fully vaccinated and with more than 85 per cent having received their booster jabs.



Frontline personnel and seafarers getting vaccinated under the SEAVAX and SAVE exercises.

SEA CREW VACCINATION INITIATIVE (SEAVAX)

With some 1.65 million seafarers forming the backbone of the global supply chain, it was imperative that Singapore plays its part to vaccinate them to reduce the risk of harm caused by COVID-19.

MPA, with other government agencies like the Singapore Economic Development Board (EDB), the Singapore Food Agency (SFA), Singapore Tourism Board (STB) and industry partners, rolled out the Sea Crew Vaccination Initiative (SEAVAX) on 30 August 2021 to allow eligible groups of non-resident foreign sea crew to be vaccinated. These included sea crew in Singapore with stays of more than 30 days, who work onboard homeported cruise ships, ships under repair in shipyards, and yachts at marinas used for events, cruises and private charter, and sea crew who work on board fishing vessels, ship supply vessels and regional ferries which enter and leave our waters at least once a month. The latter provides essential services such as provision of ship supplies, transportation of food and raw materials, as well as ferrying passengers.

SEAVAX was also part of our overall plan to strengthen the resilience of the community against COVID-19 and ensure that activities in our port waters proceed safely. Vaccinating sea crew will provide an additional layer of protection for onshore workers and passengers who may interact with them. SEAVAX also enhances our supply chain resilience as

it lowers the risk of ships being delayed or detoured, which could happen if there is a major outbreak or case of severe illness onboard.

MPA was cognisant of the public health risk that are inherent to SEAVAX, and worked closely with government agencies such as the Ministry of Health (MOH) and external partners – the Singapore Shipping Tripartite Alliance Resilience (SG-STAR) Fund Taskforce to develop a bubble-wrap protocol to minimise public health risks.

On 30 September 2021, the Singapore Shipping Association (SSA), as lead of the SG-STAR Fund, worked on an industry proposal and launched the next phase of SEAVAX to vaccinate ocean-going seafarers when they sign-on to their vessels in Singapore, as part of the crew change process.

FACILITATING SAFE CREW CHANGE

MPA recognises the importance of crew change to safeguard the health and safety of seafarers sailing onboard ships, and in the process, do its part to alleviate a global humanitarian crisis. We have remained responsive and adaptive to the evolving situation of the pandemic. We have been facilitating crew change in Singapore in a manner that protects the health of both the ships' crew and our local community. This has been a collaborative effort among all the relevant stakeholders, including industry, unions and government agencies. The safe movement of seafarers to-and-from ships without burdening medical infrastructure and resources in Singapore was achieved. The number of imported positive COVID-19 cases arising from seafarer crew change in Singapore had been kept to a minimum, even with the high number of seafarers passing through Singapore for crew change. An online crew change application system to enhance the process was rolled out in 2021. As of 31 December 2021, Singapore facilitated more than 124,000 crew change from more than 7,500 ships. MPA continues to work closely with stakeholders to conduct periodic reviews and appropriate testing regimes for our port and maritime workers.

West Coast Pier was also designated as a landing point for crew who require medical and dental attention ashore. Crew who were suspected or tested to be COVID-19 positive would be conveyed via ambulance from West Coast Pier to Singapore General Hospital or a Government Quarantine Facility after disembarkation. All personnel involved in the conveyance dons full Personal Protective Equipment (PPE). The launch boats and West Coast Pier would be disinfected after each conveyance.

As conveyance required transit entry into Singapore, ICA officers would need to process the immigration clearance

¹ As of 1 March 2022

for these individuals prior to their departure.

MPA urgently installed a video intercom system at the berth area of West Coast Pier to reduce the physical exposure of ICA officers to these individuals via the conduct of remote immigration checks.



Remote immigration checks were conducted through a video intercom system at West Coast Pier.

CREWSAFE AUDIT PROGRAMME

The SG-STAR Fund Taskforce (SFTF) led by the SSA, with members from MPA, Singapore Maritime Officers' Union and Singapore Organisation of Seamen, developed a CrewSafe audit programme based on Singapore's crew change model, to establish safe and scalable 'corridors' for crew change. It ensures quality checks on quarantine/holding, medical and swabbing facilities in crew-supplying countries.

Through the programme, auditors appointed by SFTF ensured that safe quarantine processes and facilities fulfill the CrewSafe criteria and comply with safe management measures. These endorsements have allowed MPA to streamline application procedures for sign-on crew from accredited facilities boarding ships in Singapore, facilitating crew change in a safe and responsible manner. There is room for further enhancements of the programme, such as the use of electronic tamper-proof smart wearable devices while the crew are in quarantine, as well as secure document processing for onboarding crew. To date, there are a total of 49 accredited facilities in six countries.¹



TEMPERATURE SCREENING SYSTEMS

Prior to 19 August 2021, temperature screening was deployed as a COVID-19 screening measure for ship crew and migrant workers temporarily housed in floating accommodation. Since then, the thermal-based temperature screening systems were redeployed to support the gradual opening up of MPA's sea checkpoints (i.e. Marina South Pier and West Coast Pier). It was also adapted for deployment at Tanah Merah Ferry Terminal to monitor COVID-19 positive personnel. This allowed terminal staff to minimise contact with infected cases.

MPA also rolled-out self-check temperature measurement kiosks at various locations to facilitate convenient temperature monitoring for the general public as well as staff. This added another layer of protection for workers at our facilities as well as staff returning to the workplace. A technology refresh was also carried out. A more user-friendly model with improved aesthetics was introduced based on user feedback.

These thermal scanner systems and temperature measurement kiosks had served MPA well, until the nationwide cessation of temperature screening in public places announced in August 2021, which led to the standing down of both systems.



SMARTENTRY@SEA

SmartEntry@Sea, a contact tracing app by MPA, was officially launched in January 2021 to specifically support COVID-19 operations for the Singapore maritime sector. Conceived, developed and deployed in only three weeks, the app had several functionalities to facilitate the contact tracing of our frontline personnel, like a check-in/out QR code for contact tracing, as well as information of the ships that they boarded. It also validated the health status of shore-based personnel through real-time integration with systems from other government agencies on information such as vaccination status. Since its implementation, there has been approximately more than 750,000 check-in transactions. The project has won a Merit Award in the Ministry of Transport's Minister Innovation Award 2021.

SmartEntry@Sea has since been extended to all marinas for shored-based personnel embarking and disembarking all pleasure crafts and yachts. Together with PSA Singapore, MPA also launched SmartEntry@Port in July 2021 to facilitate the exchange of health status of all port workers and COVID-19 test results.

ENHANCING OPERATIONAL READINESS

Operational readiness is also key to effectively respond to the evolving nature of the pandemic. To do so, MPA developed four early detection capabilities to align with Safe Management Measures guidelines. Automated scripts were developed to poll for vaccination status, next expected dose and compliance to the various COVID-19 test regimes for over 70,000 maritime workers. In July 2021, an app to obtain real-time test results was developed to provide a comprehensive view of maritime personnel vaccination and compliance status to testing regimes thereby enabling more efficient COVID-19 operations. The app has been used by over 30,000 maritime workers.

MPA also had to ensure that our resources were prepared for all contingencies and established contracts with various vendors to readily provide PPE for MPA staff such as disposable gowns, ART test kits for maritime workers and Polymerase Chain Reaction (PCR) tests for crews in the marinas.

CONTACTLESS PROTOCOLS

To prevent the spread of COVID-19 and its variants, MPA implemented on 28 May 2021, requirements for owners, agents and masters of vessels to ensure that all port operations such as cargo operations, bunkering, ship's supplies and stores, and other marine services, were carried out contactless or contactless with segregation protocols, to ensure that ship operations were carried out in a safe manner, minimising cross infection.

In contactless operations, boarding the vessel was disallowed, except for approved workers and government officials. Communications and sending of documents must be done via telephone text message or email. If items must be transferred from one vessel to another, such as securing of mooring, ship supplies or certain documents like bunker delivery note, these items and equipment need to be disinfected thoroughly before and after the transfer. If it was necessary for shore-based personnel to board the vessel, segregation protocol must be in place to minimise interactions between the vessel's crew and shore-based personnel. Examples of contactless operations with segregation protocols include bunkering, cargo operations and tank cleaning. Owners, agents and masters of vessels were required to work with the destination terminals to agree on the segregation protocol before operations could commence.

REMOTE INSPECTIONS FOR PORT STATE AND FLAG STATE CONTROL

New processes and guidelines were created and implemented for conducting remote Flag State Control (FSC) and Port State Control (PSC) inspections. MPA worked with multiple classification societies and co-performed inspections with them. A joint inspection was also conducted with Tokyo MOU and we sponsored a joint paper with other States that shared the process involved in conducting remote inspection.

MPA awarded a one-year licence to librestream, a software application that enhances remote inspections by allowing better compatibility on mobile phones, tablets and personal computers; usage of very low bandwidth to maintain connection of video calls at majority of ships' areas; and active language translations during such inspections.



MPA worked with multiple classification societies and co-performed remote inspections with them.

CONTINUED SUPPORT FOR THE MARITIME COMMUNITY IN MARITIMESG TOGETHER PACKAGE

To support businesses in these challenging times, relief measures introduced in May 2020 were reviewed and extended progressively till 30 June 2022. MPA extended and topped up the MaritimeSG Together package by \$3.5 million to more than \$36 million in 30 June 2021. A new 50 per cent office rental rebate and recovery grant was introduced for the regional ferry services sector to build resilience in their operating model. More than 1,000 companies were supported under the package since its introduction. In line with the WOG initiatives, MPA continued to grant further rental waivers as part of the Heightened Alert and Stabilisation phases. Port due

concessions were also granted for passenger-carrying vessels in view of prolonged travel restrictions, which translated to cost savings for the industry.

With some 500 Singaporean seafarers facing uncertainties in securing shipboard employment during the period as border control measures and crew changes restrictions were not easing up, MPA, together with the Singapore Maritime Officers' Union (SMOU) and Singapore Organisation of Seamen (SOS), extended the Seafarers Relief Package for eligible Singaporean seafarers.

MaritimeSG Together Package

Updated 29 Dec 2021

REGIONAL FERRY SERVICES



100% WAIVER OF PUBLIC LICENCE FEES FOR PASSENGER TERMINAL OPERATORS

- For FY 2019, FY 2020 and FY 2021



REBATES ON COUNTER RENTAL AND OVERNIGHT BERTHING FOR REGIONAL FERRY SERVICE OPERATORS

- 50% rebate for 1 May 2020 – 31 Dec 2021
- 30% rebate for 1 Jan – 30 Jun 2022*

*Coverage extended to Regional Ferry Terminal at HarbourFront Centre, in addition to Tanah Merah Ferry Terminal.



OFFICE RENTAL REBATE FOR REGIONAL FERRY SERVICE AND REGIONAL FERRY TERMINAL OPERATORS

- 50% rebate for 1 Jul – 31 Dec 2021
- 30% rebate for 1 Jan – 30 Jun 2022



\$3 MILLION RECOVERY GRANT FOR REGIONAL FERRY SERVICE AND REGIONAL FERRY TERMINAL OPERATORS

- For qualifying projects that commence between 1 Jul 2021 – 30 Jun 2022

FOR SEAFARERS



SINGAPOREAN SEAFARERS RELIEF PACKAGE

- MPA, Singapore Maritime Officers' Union (SMOU) and Singapore Organisation of Seamen (SOS) will provide financial support for eligible seafarers as follows:
 - Co-fund up to \$800 per month for eligible seafarers who are unable to secure shipboard employment between 1 May – 31 Dec 2020 (maximum support capped at 6 months in 2020)
 - Co-fund up to \$700 per month for eligible seafarers who are unable to secure shipboard employment between 1 Jan 2021 – 30 Jun 2022 (maximum support capped at 9 months)



JOB-MATCHING FOR SINGAPOREAN SEAFARERS WITH SHIPPING COMPANIES

- For Singaporean seafarers unable to secure shipboard employment, MPA will work with SMOU, SOS and the Singapore Shipping Association (SSA) to match them with shipping companies



ASSISTANCE TO SEAFARERS HOLDING STANDARDS OF TRAINING, CERTIFICATION, AND WATCHKEEPING (STCW) CERTIFICATES ISSUED BY SINGAPORE

- MPA continues to facilitate the extension of the validity of Singapore issued STCW certificates for seafarers who are still facing challenges in revalidating their STCW certificates due to the COVID-19 pandemic.
- MPA has formalised oral assessment of Certificate of Competencies (CoC) via video-conferencing as an alternative mode of assessment.



RETURN OF SINGAPOREAN SEAFARERS

- MPA continues to facilitate the return of Singaporean seafarers who wish to sign off when their ships call at Singapore
- MPA is also working with Singapore Maritime Academy (SMA) to facilitate the safe return of all SMA cadets

KEEPING SPIRITS HIGH

Through art, MPA sought to promote awareness of Singapore's maritime sector and at the same time show appreciation and recognition to the seafarers, port workers, harbour craft community and maritime frontline personnel.

In collaboration with our partners PSA Corporation and Jurong Port, MPA commissioned art wall murals at the port and at Marina South Pier. The murals showcased Maritime Singapore's COVID-19 efforts, with seafarers, harbour craft community and maritime frontline playing a vital role in keeping the flow of supply chains.



Senior Minister of State (Transport) Chee Hong Tat puts the finishing touches on the mural at Jurong Port. (Photo courtesy of Ministry of Transport)



SMS Chee together with mural artist (right), maritime union leaders and senior leaders from MPA and PSA at Pasir Panjang terminal. (Photo courtesy of Ministry of Transport)

MPA also supported Senior Minister of State for Transport, Mr Chee Hong Tat, in the end-to-end process of designing, producing and distributing the MaritimeSG face mask, as a show of appreciation to members of the maritime community for their hard work in keeping the port running and staying safe during the COVID-19 pandemic. The masks were distributed within MPA and to our maritime partners – SSA, ASMI, SMF, SMI, SMOU, SOS and close to 500 companies. The mask was also produced with a sustainability pledge. Each mask

would have a portion of its proceeds funding community beach clean-ups by Seven Clean Seas, an ocean clean-up organisation dedicated to removing plastic pollution in the marine environment.

THE INAUGURAL MARITIMESG CARE AWARDS

The MaritimeSG Care Awards was developed by MPA, with the support of the Singapore Shipping Association (SSA), SMOU, and SOS, to recognise maritime personnel and organisations for rising to the challenges and demonstrating excellence in care and support for their peers and customers during the COVID-19 pandemic. Nominated by their employers and peers, the exceptional acts of the award recipients have enabled the maritime sector to continue operations despite the pandemic to support global trade and supply chains. A total of 10 maritime personnel received the MaritimeSG Care Excellence Award, 40 received the MaritimeSG Care Commendation Award, and five organisations, namely SSA, SMOU, SOS, Singapore Maritime Academy and the Mission to Seafarers Singapore, received the MaritimeSG Care Partner Award. SMS Chee presented the MaritimeSG Care Excellence Award, on 30 November 2021.



Senior Minister of State (Transport) Chee Hong Tat (third from left) with five of the awardees of the MaritimeSG Care Excellence Award.



MPA Director (Shipping), Cheah Aun Aun, and representatives from Singapore Organisation of Seamen and The Mission to Seafarers Singapore commemorated the Day of the Seafarer on 25 June 2021.

GRI 102-43, GRI 102-44



SECTION 02 RELIABILITY

CHAPTER 2: STRENGTHENING PORT OPERATIONS, ENHANCING SAFETY

Given that the Port of Singapore is one of the busiest ports in the world, the safety of navigation, efficiency of its operations and sustainability remains the top priorities in MPA. It upholds high operational standards and is a strong advocate of the Safety@Sea culture underpinned by a robust regulatory and licensing framework. MPA invests heavily in technology to improve efficiency and safety standards, and enhance the resilience of port systems that serve our maritime community and stakeholders in a cost-effective manner.

ENHANCED NEXT GENERATION PATROL CRAFT (PCE)

The Next Generation Patrol Craft Enhanced (PCE) is developed to strengthen the operational capabilities and readiness to support MPA's enforcement duties and response to marine incidents. Measuring 34 metres, the hybrid diesel-electric aluminium catamaran is equipped with a comprehensive suite of capabilities for specialised operations. It has a shallow water craft and unmanned drones to carry out search and rescue operations and surveillance of port waters. It can support underwater surveys and diving operations and is equipped with industrial gas detectors for chemical incidents and oil spill control equipment. The vessel can also be used as a platform for test bedding new technologies and equipment for marine operations.

The PCE will supplement the existing fleet of six Next-Generation Patrol Craft (NGPC) and will be the command-and-control vessel during operations such as search and rescue, salvage, ferry incidents, spill response and inter-agency exercises. The PCE is larger than the NGPCs and has enhanced capabilities to respond to marine incidents outside the port limits.



MPA's new hybrid diesel-electric enhanced patrol craft was commissioned on 8 April 2022.

REPLACEMENT OF MULTIBEAM SURVEY SYSTEM FOR 3 HYDROGRAPHIC SURVEY VESSELS (PHASE 1)

To leverage technology to enhance navigational safety in our waters, MPA awarded a tender to replace the Multibeam Survey System (MSS) for its Hydrographic Survey Vessels "Discovery", "Investigator" and our Next Generation Hydrographic Vessel (NGHV). The MSS is deployed for bathymetry surveys to update nautical charts used by vessels in the Port of Singapore, thereby enhancing safe navigation. Beyond utilising it for surveys, the MSS is also used to search and locate underwater objects such as sunken vessels. The MSS on *Discovery* and *Investigator* are already operational while the last MSS will be installed in the NGHV, which will be commissioned in 2022.

Data obtained from the MSS will also be used to monitor coastal development works. In addition, it will support interagency and academic efforts in projects related to climate change data analysis, coastal protection studies, National Sea-Level Programme and marine environment modelling through GeoSpace-Sea.



Joint innovation between MPA and contractor to design a streamline bracket on the sonar transducer pole that increases the streamline factor and reduces the vibration.

With upgraded equipment, our hydrographic survey vessels can provide better quality survey data, improve survey productivity and enhance our operational readiness. One of the notable new features installed onboard was the streamline bracket jointly designed by MPA's hydrographic surveyors and the appointed contractors. The design stabilises the sonar transducer enabling MPA to conduct survey at higher speed and minimise data noise surrounding the sonar transducer during data acquisition.

DEPLOYMENT OF NEW GARBAGE COLLECTION AND FLOTSAM RETRIEVAL CRAFT

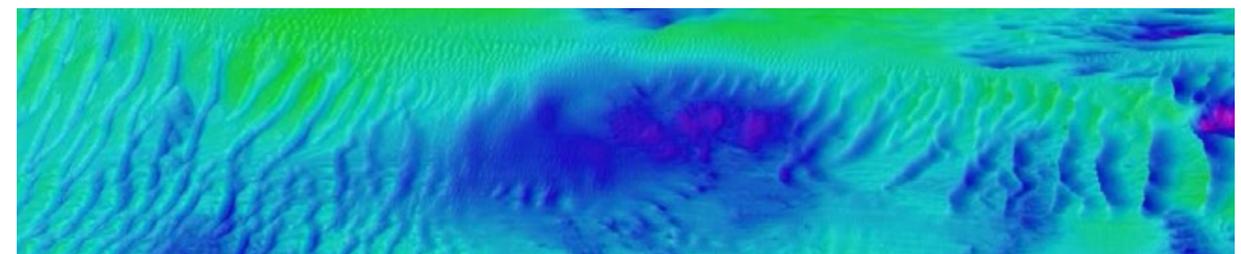
MPA provides complimentary daily garbage collection service to all vessels at designated anchorages and flotsam retrieval in the Port of Singapore, along common channels, fairways, and anchorages to ensure navigational safety, prevent marine pollution, and protect the marine environment.

Demand for garbage collection services have been growing. In 2021, MPA increased the overall fleet size from 11 to 14. The fleet is also now better equipped with

separated bins and new weighing equipment to track waste data more accurately. During monsoon season when larger surges of flotsam occur, MPA deploys larger retrieval craft which are better equipped to retrieve larger flotsam like bulky tree trunks.

ENHANCING PASSENGER FERRY SAFETY

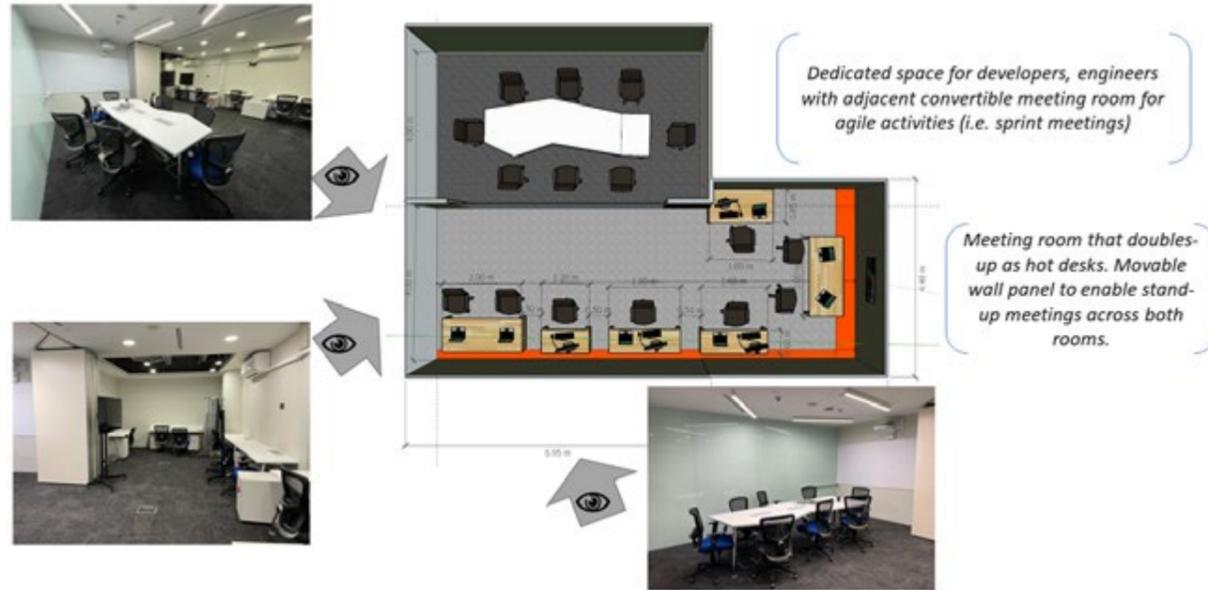
Inspections on Singapore-registered ferries were increased to strengthen the safety culture, effective safety management system and emergency preparedness in the ferry sector. A total of 107 inspections and audits were conducted on port-limit and regional passenger ferries in 2021. The results and lessons learnt, including enhancing operators' awareness and management of the common deficiencies, were shared in a virtual dialogue session. Attendees included 30 senior staff members from 11 regional and port-limit ferry operators involved in the daily safe operation and maintenance of their ferries. There were active discussions at the dialogue on ways to reduce recurring deficiencies, challenges faced by ferry operators amid the pandemic and preparation for resumption of regional ferry services as restrictions on international travel were gradually lifted in Singapore.



High resolution bathymetric data at Tuas View Extension, with clearly defined sand waves, surveyed using the latest MSS.

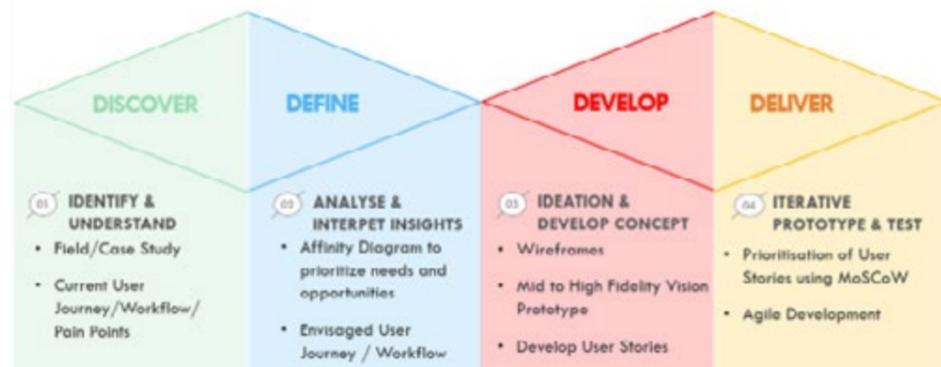
INTEGRATED PORT OPERATIONS C3 SYSTEM

In March 2021, the Integrated Port Operations C3 (IPOC) Development Lab was established at the Port Operations Control Centre. A joint collaboration with the Defence Science and Technology Agency (DSTA), IPOC strengthens MPA's maritime enforcement duties and incident management through advanced sense-making capabilities, anomaly detection and smart decision-support tools across the full spectrum of daily operations to marine emergencies.



Integrated Port Operations C3 (IPOC) Development Lab at MPA's Port Operations Control Centre.

To help stakeholders better understand the IPOC system, user journey workshops were conducted in June 2021. The workshops adopted a "4D" approach and enabled IPOC users to effectively formulate key problem statements and share their pain points which helped to provide insights into their concept of operations and allowed them to contribute to the solutioning of future workflows.



User journey workshops adopting "4D" approach to formulate key problem statements and provide solutions for future workflows.

Completed in August 2021, the workshops showcased the functionalities and features such as detecting maritime safety infringements and anomalies with sense making and analytics-based decision-support tools, improving situational awareness of vessel activities within port waters and forging closer collaboration with government agencies.



Since the release of the IPOC software vision prototype in August 2021, the platform has been continually updated every fortnight with new features added based on user feedback. Software release 1, which commenced in September 2021 is on track to be completed in August 2022.

ADVANCE MARITIME CONNECTIVITY & COMMUNICATIONS

MPA has also embarked on several trials and studies in collaboration with government and industry partners aimed at advancing maritime connectivity and communications.

In May 2021, MPA collaborated with the Infocomm Media Development Authority (IMDA) to perform a comprehensive mapping of 4G coverage in our port waters. This was important because, for the first time, MPA has access to an independent baseline reference of the 4G coverage that can be used to better plan and facilitate rolling out maritime use cases in our port waters.

In addition, MPA, together with IMDA, supported M1/Airbus to conduct 4G/5G network mobility trials using drones at our Maritime Drone Estate (MDE). This project aimed to assess the suitability of using maritime mobile networks

for urban air mobility applications. Phase 1, which involved collecting and analysing 4G network measurements and performance test results, was completed in August 2021. Phase 2, which covers the 5G network measurements and performance tests, is currently on-going at the MDE.

MPA also embarked on its own private LTE/5G seaward coverage trials to further assess the performance of private cellular networks to support high bandwidth and low latency maritime use cases such as remote pilotage and autonomous vessels. The trials were completed in December 2021.

MIGRATION OF VHF RADIO CHANNELS

On 1 March 2021, MPA completed the seamless migration of VHF radio channels for Keppel Control, Pasir Panjang Control and Port Security Unit to meet the requirements stipulated by the International Telecommunication Union. MPA also conducted communications coverage tests using the new VHF radio channels and sought feedback from operator and pilot. To address the line-of-sight blockages caused by the growth in height of coastal crane structures over the years, antennas located at two radio sites (Asia Cement and POCC-Vista) were relocated resulting in improved performance of the new channels.

SINGAPORE REGISTRY OF SHIPS 55TH ANNIVERSARY



Director of Shipping Division, Cheah Aun Aun, addressing audience at SRS Forum.

The Singapore Registry of Ships (SRS) celebrated its 55th anniversary in 2021. It also maintained its position as one of the top five largest ship registries in the world.

On 8 October 2021, the SRS marked this milestone with the SRS Forum themed “Your Partner in Quality and Sustainable Shipping”. More than 320 industry stakeholders ranging from ship owners, managers, operators and charterers to training institutions and classification societies attended the event. At the Forum, MPA launched the SRS Notations, a voluntary scheme for shipowners to drive sustainable shipping, digital transformation, cyber security and seafarers’ overall well-being.

Speakers from the Global Centre for Maritime Decarbonisation, GARD (Singapore), PACC Ship Managers and MPA’s own Shipping Division shared their expertise and insights on working together to decarbonise the industry, mitigate container fires onboard ships as well as ways to improve the port state control performance of vessels.

At the Forum, Wan Hai Lines was presented the Top Net Tonnage Contributor Award for outstanding contributions to the SRS’s tonnage over the past year. MPA also presented



Senior Minister of State (Transport), Chee Hong Tat, awarding Wan Hai Lines the SRS Top Net Tonnage Contributor Award at the SRS Forum, 8 October 2021.

Green Ship Certificates to 15 companies under the Green Ship Programme (GSP) for reducing the environmental impact of their fleet. Since the GSP’s inception in 2011, 645 Singapore-flagged ships have joined the programme.

INTERNATIONAL SAFETY@SEA WEEK 2021



The International Safety@Sea Week took place from 30 August to 1 September 2021. Themed “The Human and Technology Crossroads for Maritime Safety”, it attracted over 1,000 attendees, with industry leaders from Singapore, Hong Kong, United Kingdom and Norway. Organised for the eighth time, MPA’s flagship event for the international maritime community kept the industry updated on issues pertaining to safety at sea, actively shared best practices and experiences on maritime safety, as well as discussed issues of concern and offer problem-solving ideas.

Attendees from more than 70 countries participated in five sessions, including those under the biennial International Chemical and Oil Pollution Conference and Exhibition (ICOPCE). On the agenda were topics related to maritime safety such as safety in cargo transportation, future of crew training, marine environmental protection as well as incident management. A total of 10 organisations were



Capt. Yves Vandenberg, Honorary President, The Nautical Institute (Singapore) (left) with Mr Steen Lund, Chief Executive Officer of RightShip at the Opening Session of International Safety@Sea Week 2021.

recognised with the International Safety@Sea Awards this year for their outstanding contributions in search and rescue efforts, and innovation in technology, systems and training.

MPA also held its third Community of Practice Forum for Maritime Safety – a biennial closed-door event chaired by Mr Ishak Ismail, Chairman of the National Maritime Safety at Sea Council. Maritime administrations and port authorities from China, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Thailand and Vietnam spoke on the topic of “Keeping Maritime Workers Safe Onboard Ships” and exchanged best practices on port safety regulations, safe management measures and sea crew vaccinations.



Mr Ishak Ismail, Chairman of the National Maritime Safety at Sea Council facilitated the Community of Practice Forum for Maritime Safety.

28TH TOKYO MOU PORT STATE CONTROL SEMINAR

MPA virtually hosted the 28th seminar for Port State Control (PSC) Officers from 6 to 8 July 2021. The seminar aimed to build competencies and promote closer cooperation between member PSC authorities in the Asia-Pacific region. More than 70 participants from the Tokyo MOU member authorities and observers from other PSC regimes attended the seminar.

One of the key topics discussed was the Concentrated Inspection Campaign on Stability in General which started in September and concluded in November 2021. MPA also shared its experience on remote PSC inspections and the enforcement of IMO 2020 sulphur limit regulations.

CONTINGENCY PLANNING AND ENSURING BUSINESS CONTINUITY

Critical infrastructure is vital for the provision of essential services which Singapore relies upon. MPA works closely with stakeholders such as our security agencies to identify and enhance port and maritime security for key infrastructure in Singapore and develop contingency and business continuity plans to ensure the provision of essential services during incidents or emergencies.

The following exercises were conducted by MPA in 2021 to verify and validate agencies' responses to the various scenarios:



In the Ferex exercise, ferry operator deployed emergency life raft to simulate the transfer of passengers.

- **Ex BorderHealth:** The exercise was conducted on 30 July 2021 to test the deployment and workflow on the use of new COVID-19 detection technology e.g. breathalysers at Marina South Pier for early detection of frontline maritime workers who interact with foreign travellers or sea crew.
- **FEREX GDx:** The exercise involving 50 personnel from Singapore Civil Defence Force, Singapore Police Force, Republic of Singapore Air Force, Singapore Cruise Centre Pte Ltd and a regional ferry operator was conducted on 23 August 2021 to test the readiness of various agencies in response to ferry mishaps in the Port of Singapore.



An RSF AS332 Super Puma helicopter was deployed for the medical evacuation of a critically injured passenger, simulated by a dummy, from SCDF's Heavy Rescue Vessel.

GRI 102-43, GRI 102-44

CHAPTER 3: SINGAPORE AS A LEADING INTERNATIONAL MARITIME CENTRE

As a major global hub port and home to over 5,000 maritime establishments, MPA works closely with the industry to build a vibrant and attractive maritime ecosystem. Despite the ongoing pandemic, MPA has remained agile and responsive to industry needs by adopting new ways to promote Singapore as an International Maritime Centre (IMC) and a gateway to the Asia-Pacific, complemented by a transparent and well-respected legal system, political and economic stability and a highly skilled and adaptive workforce.

MPA encourages enterprises to grow their businesses in Singapore and strengthen the country's maritime core. Guided by the recommendations from the IMC 2030 Strategic Review in 2017, our efforts are focused to enhance connectivity, innovation and talent in the maritime industry. To this end, MPA employs a range of incentives and grants to further entrench companies in Singapore and to grow the IMC.

MARITIME SECTOR INITIATIVE

The Maritime Sector Incentive (MSI) is a scheme aimed to help shipping businesses grow their business in Singapore. It grants tax concessions to qualifying companies that build and expand their maritime operations in Singapore. In addition, qualifying shipping companies also enjoy withholding tax exemption on qualifying payments for ship and container financing.

The MSI has three categories:

1 **MSI - Approved International Shipping Enterprise (MSI-AIS):** The MSI-AIS award aims to encourage international ship owners and ship operators to establish their commercial operations in Singapore.

2 **MSI - Maritime Leasing (MSI-ML):** The MSI-ML encourage entities to use Singapore as their capital and funding base to finance their vessels or sea containers.

Under MSI-AIS award, Singapore welcomed the entry of COSCO Specialised Shipping, Sinmal Shipping, Jierui Shipping, Eastern Pacific Shipping, Evergreen Marine (Asia), Singapore Bora Shipping and through the MSI-SSS award, companies such as Jarsin Shipbrokers set up their corporate services functions in Singapore.

Companies which are already in operation in Singapore were also encouraged to expand their operations here. Klaveness Asia set up both ZeroLab and Market Manager units to develop zero or low emission freight solution and to provide digital freight, tonnage and bunker solution that empower shipowners and charterers to make better decisions. Companies such as DP World, G2 Ocean and Lightship Chartering were also drawn to base their regional headquarters in Singapore.

3 **MSI - Shipping-related Support Services (MSI-SSS):** The MSI-SSS award seeks to promote the growth of ancillary shipping service providers and to encourage shipping conglomerates to set up their corporate service functions in Singapore.

GRI 102-43, GRI 102-44

MEASURES TO SUPPORT NEW AND GROWING MARITIME COMPANIES

The Maritime Cluster Fund (MCF) supports the growth of Singapore's maritime cluster through facilitating upskilling, reskilling and transformation efforts via targeted support measures:



MCF – Manpower Development (MCF-MD): The MCF-MD co-funds courses as well as structured on-the-job training and experiential learning programmes for local employees and interns of maritime companies. In 2021, more than 4,300 locals benefitted from MCF-MD co-funding.



MCF – Productivity Development (MCF-PD): The MCF-PD supports maritime companies in streamlining business processes and adopting technology solutions for productivity improvements. The MCF-PD has supported about 70 digitalisation projects since 2013.



MCF – Business Development (MCF-BD): The MCF-BD supports maritime companies, organisations and industry associations in projects that bring strategic value or will benefit the industry and companies. The aim of MCF-BD is to attract new and targeted maritime businesses and grow Singapore as an international maritime centre, as well as support companies that internationalise their businesses.

ENGAGING THE BUSINESS COMMUNITY

MPA seeks to foster synergies and encourages engagements across various sectors. MPA has been actively engaging international/industry organisations such as Asian Shipowners' Association and International Chamber of Shipping to better understand their key concerns and needs, and also was provided opportunities to share our views on topics such as decarbonisation and digitalisation in maritime. MPA also played a role to buttress the maritime business community, such as strengthening the adoption and promotion of both the Singapore War Risk Mutual and Singapore Chamber of Maritime Arbitration.

SINGAPORE MARITIME WEEK



The Singapore Maritime Week (SMW) is a one of MPA's key events for Maritime Singapore and shines a spotlight on critical issues facing the maritime sector. With the theme "New Frontiers shifting Paradigms" for 2021, this was the first time SMW was held in a hybrid format. Over 470 onsite and 10,600 online participants from the maritime industry, R&D and tech community, start-up ecosystem and venture capitalists participated across 20 events organised throughout the week.

INTERNATIONAL MARITIME AWARDS

To recognise companies' outstanding contributions to Singapore as a premier global hub port and a leading IMC, 10 International Maritime Awards (IMA) awards were given out to individuals and maritime companies during Singapore Maritime Week which took place from 19 to 23 April 2021.

The biennial awards ceremony also introduced new categories: the Sustainability Award which honoured Sembcorp Marine Ltd for their significant contributions in sustainability, the SRS Green Ship of the Year Award to Saga LNG Shipping in recognition of a quality, green Singapore-registered ship, and the SRS Green Ship Owner Award to BW Group for the largest proportion of ships participating in the Green Ship Programme. Congratulations to all winners!



10 companies and an individual were recognised for their significant contributions to Maritime Singapore at the International Maritime Awards.

CHAPTER 4: SAFEGUARDING STRATEGIC MARITIME INTERESTS AND BEING AN INFLUENTIAL VOICE

Singapore lies at the heart of the global supply chain with one-third of world trade volumes funnelled through the Straits of Malacca and Singapore. Recognising the global nature of shipping, MPA is an active contributor and works closely with regional and international stakeholders to advance and safeguard common maritime interests and goals. These include the promotion of maritime and port connectivity, navigational safety and the protection of the marine environment.

As Singapore's national maritime representative, MPA participates actively and assumes leadership positions in key international bodies such as the International Maritime Organization (IMO), the International Hydrographic Organization (IHO), the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), and the Port Authorities Roundtable (PAR), among others.

ACTIVE CONTRIBUTIONS TO THE INTERNATIONAL MARITIME ORGANIZATION (IMO)

Singapore actively supports the IMO's commitment to ensure that shipping continues its critical role in supporting global trade sustainably, including in our capacity as an IMO Council Member. On 10 December 2021, Singapore received a resounding vote of confidence when it was re-elected to the IMO Council for the 15th consecutive term.

In advocating sustainability and innovation in the maritime industry amidst key disruptive forces such as decarbonisation and digitalisation, Singapore and the IMO co-organised the Future of Shipping Conference on 23 April 2021.

Held virtually, a total of 520 delegates representing maritime and port authorities, international organisations, industry and academia from 41 countries across Asia, Africa, Americas, Europe and Oceania attended the conference.

Participants at the conference explored the opportunities created by digitalisation to enhance maritime safety and facilitate trade, and how these opportunities could be made available to the wider IMO membership. Participants also underscored the importance of a

globally coordinated and cooperative approach to achieving the IMO's ambitions for reducing greenhouse gas (GHG) emissions from international shipping. Key conclusions from the conference were distilled into a paper that Singapore submitted to the 125th Session of the IMO Council in June 2021, which saw broad support from IMO Member States on the concrete and inclusive steps that the IMO could take to respond to the challenges and opportunities of maritime decarbonisation and digitalisation.



Members of the Singapore delegation at the 32nd Regular Session of the IMO Assembly in December 2021.



Minister for Transport, S Iswaran and MPA, Chief Executive, Quah Ley Hoon in the plenary hall at the IMO Headquarters.



Speakers and panellists at the IMO-Singapore Future of Shipping Conference in April 2021.

ASSUMING KEY LEADERSHIP POSITIONS IN INTERNATIONAL FORA

Singapore strongly supports the IMO's work by taking on leadership positions in various IMO bodies and working groups. We served as the Vice-Chair for the Sub-Committee on Human Element, Training and Watchkeeping (HTW) and Chair of the IMO HTW Working Group on the Review of the 1995 International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel which, amongst others, will introduce sustainability and environmental awareness to fishing practices. In addition, we currently serve as Coordinator of the IMO Correspondence Group on Developing Guidelines on Electronic Signature Systems and Operational Port Data for the Purpose of Digital Information Exchange; as well

as serving as Chair of the Informal Group on Short-Term Measures to Reduce GHG Emissions from Ships.

Beyond the IMO, MPA participates actively in the international and regional fora of the International Hydrographic Organization (IHO), East Asia Hydrographic Commission (EAHC), International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), United Nations on Global Geospatial Information Management (UN-GGIM) and the Open Geospatial Consortium (OGC). MPA's participation in these fora is to advance Singapore's maritime interest and promote thought leadership in hydrography and marine spatial information.



MPA Adviser (Hydrography), Dr Parry Oei (right) leads the day-to-day operations of the Joint IHO-Singapore Innovation and Technology Laboratory.

MPA holds key positions in these organisations such as Vice-Chair of the IHO Council, General Manager of the Joint IHO-Singapore Innovation and Technology Laboratory, Co-Chair of the UN-GGIM Working Group on Marine Geospatial Information and Vice-Chair of the IHO Marine Spatial Data Infrastructures Working Group, Governing Board of the Joint IHO-Singapore Innovation and Technology Laboratory and Associate Member of the OGC.

BUILDING CAPACITY AND SHARING BEST PRACTICES

Singapore strongly advocates the sharing of best practices. Through MPA's training arm, MPA Academy (MPAA), global maritime leadership training continues to be the focus with the aim to share knowledge and experience with our international partners for the benefit and in the interest of the international community. Since 1998, MPA has been working with IMO under the Singapore-IMO Third Country Training Programme to actively support IMO's work in providing capacity-building assistance to IMO Member States.

In 2021, MPA continued to sponsor the scholarships to both World Maritime University (WMU) and IMO International Maritime Law Institute (IMLI) under the US\$5 million Enhanced Technical Cooperation and Training Package for the IMO and its Member States launched in April 2018. A total of three scholarships were awarded in 2021.

Although many in-person activities such as study visits were not conducted for the past two years, MPA was able to continue to sponsor scholarships and support WMU and IMLI online training courses in lieu of study visits. This is in line with Singapore's belief in helping other States achieve their development goals, especially having benefitted from such technical assistance in the past. Singapore remains committed to providing technical co-operation to the IMO and its Member States until 2023, under the Enhanced Technical Cooperation and Training Package to provide fellowships, scholarships and workshops to support the development of the international maritime community.

FIRST COUNTRY TO RATIFY IALA CONVENTION

As a major hub port and coastal State situated along one of the world's busiest waterways for international shipping, Singapore is a firm supporter of IALA's work in establishing common technical standards for vessel traffic services and e-Navigation to advance the safe, economic, and efficient movement of vessels around the world.

On 9 March 2021, Singapore became the first country to ratify the IALA Convention, shortly after signing the Convention on 1 March 2021. This ratification will support IALA in its journey to becoming an effective intergovernmental organisation and grow its mandate to improve navigational safety and efficiency of maritime traffic for the global shipping community. Singapore will continue to work with IALA's World-Wide Academy to support the capacity-building and human resource development of IALA's national members.



Mr Zainal Arif Mantaha, former ambassador of the Republic of Singapore to France, signing the IALA Convention on 1 March 2021.

ENHANCING SAFETY OF NAVIGATION AND ENVIRONMENTAL PROTECTION IN THE STRAITS OF MALACCA AND SINGAPORE (SOMS)

The Co-operative Mechanism on Safety of Navigation and Environmental Protection in the SOMS, launched in 2007, is the key platform for the littoral States to engage user States and the shipping industry on issues relating to the SOMS. It was established within the framework of the Tripartite Technical Experts Group on the Safety of Navigation in the SOMS, and consists of three interconnected and complementary components, namely, the (i) Co-operation Forum; (ii) Project Co-ordination Committee; and (iii) Aids to Navigation Fund (ANF).

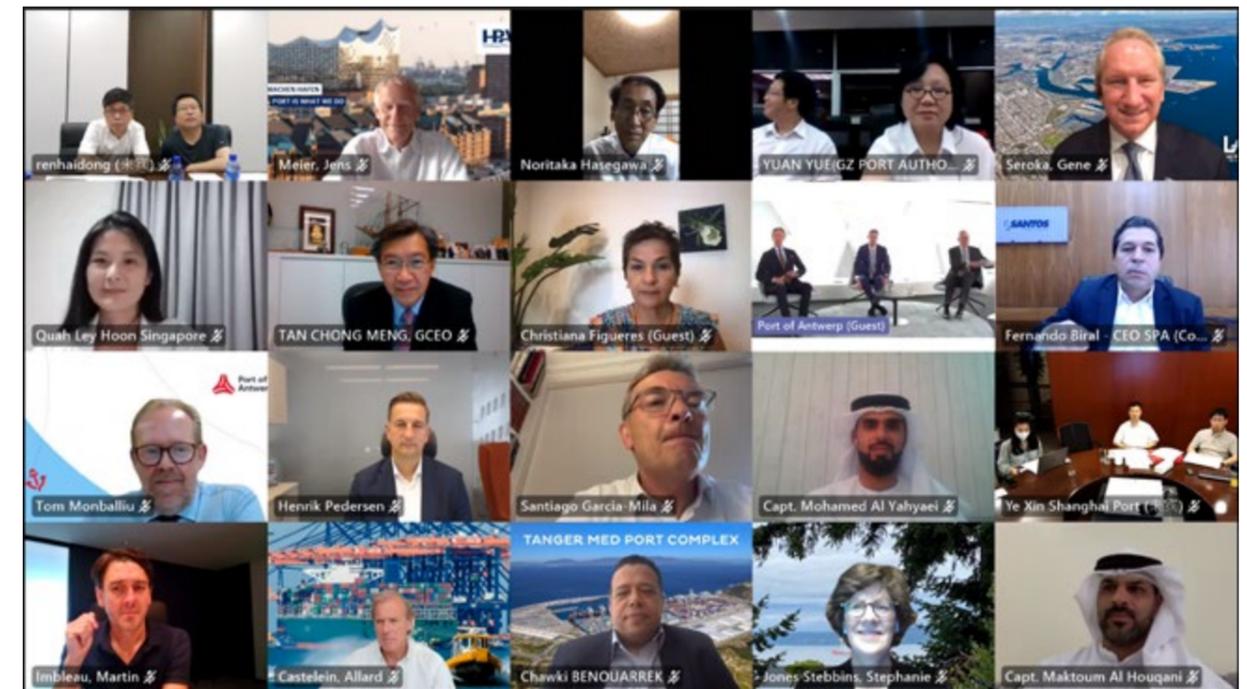
In 2021, MPA participated in the 25th ANF Committee virtual meeting where stakeholders discussed, amongst others, the work programmes for the provision and maintenance of marine navigational aids in the SOMS for 2021 and 2022.

REGIONAL CO-OPERATION AGREEMENT ON COMBATING PIRACY AND ARMED ROBBERY AGAINST SHIPS

Singapore remains strongly committed to promoting and enhancing cooperation on the issue of piracy and armed robbery against ships. Singapore is a founding member and one of the 21 Contracting Parties of the Regional Co-operation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP). The ReCAAP Information Sharing Centre (ISC) is based in Singapore.

In 2021, the ReCAAP ISC celebrated its 15th anniversary, and welcomed the accession of the Federal Republic of Germany on 1 August 2021. Germany's accession to ReCAAP is testament to the shared commitment to address piracy and sea robbery in Asia through the ReCAAP platform by Contracting Parties from Asia and beyond.

STEERING THE PORT AUTHORITIES ROUNDTABLE



Heads of delegations at PAR2021@Antwerp.

MPA initiated the Port Authorities Roundtable (PAR) in 2015 and serves as its Secretariat. PAR aims to be the platform of choice for port authorities to exchange best practices, discuss issues of common interest and build mutually beneficial collaborations amongst stakeholders.

In 2021, the theme of the 6th Port Authorities Roundtable was "Ports as Levers of Change". The discussions focused on how port authorities should remain agile, adaptable and innovative amidst an evolving maritime landscape. At the meeting, 19 port authorities from Africa, Asia, Europe, the Middle East, and the USA signed a declaration on their collective response to the trends of disruption, digitalisation, and decarbonisation.

The declaration recognised efforts by the Shipping Tripartite Alliance Resilience (STAR) Fund, which is the first global tripartite initiative to establish safe and quality crew change processes. The declaration also reflected PAR participants' agreement to consider joining the Port Authorities CIO Cybersecurity Network (PACC-Net), that was established by MPA, to foster collaboration on maritime cybersecurity. PAR participants also agreed to consider collaborating on maritime decarbonisation solutions through the newly established Global Centre for Maritime Decarbonisation in Singapore.

ADVANCING THE INTERNATIONAL MARITIME DECARBONISATION AGENDA

As a global hub port, bunkering hub and shipping registry, Singapore is committed to strong, credible, and inclusive climate action overall and at the IMO.

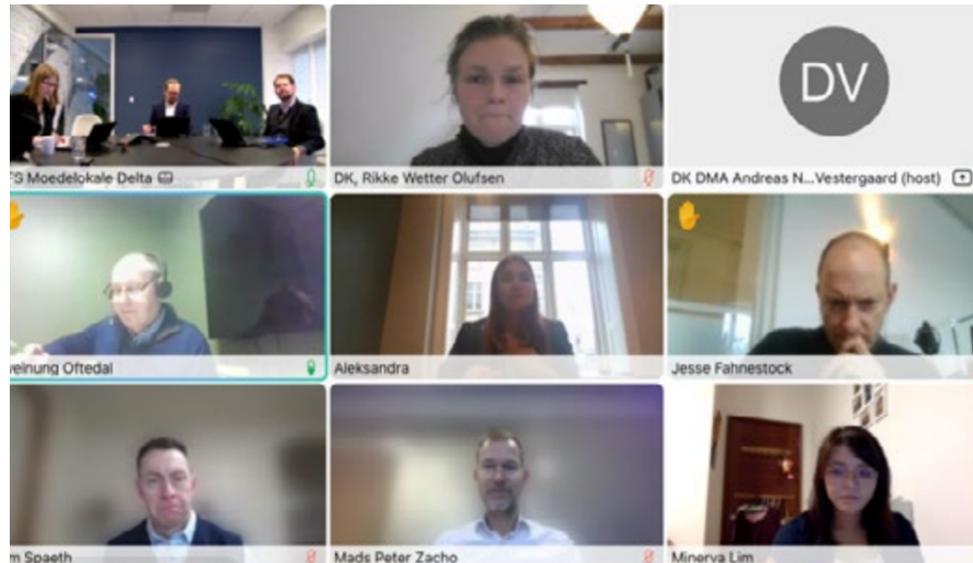
At the IMO, Singapore actively contributes to discussions with fellow member States and Observer Organisations to develop short, mid and long-term measures for the reduction of GHG emissions from ships. Singapore played a key facilitative role in 2021 in securing consensus to a package of short-term measures that included the development of an Energy Efficiency Index for Existing Ships (EEXI) and Carbon Intensity Indicator (CII) with an associated rating system. When taken together with existing technical measures, the EEXI and CII guidelines will ensure that international shipping achieves the target of reducing carbon intensity by 40 per cent compared to 2008 levels, by 2030.

For mid and long-term measures for GHG emissions reduction from ship, Singapore has announced our support for a global carbon price mechanism, such as a bunker levy, that would send the right price signals to encourage the uptake of low and zero-carbon solutions and move international shipping decisively towards decarbonisation

as aligned with the levels of ambition in the Initial IMO Strategy. We remain committed to engaging constructively with fellow member States and international stakeholders in this exercise.

Secondly, Singapore is a strong advocate for an inclusive approach to maritime decarbonisation, underpinned by stakeholder collaboration, technical cooperation, and capacity-building. To support IMO's goal that no country is left behind in their decarbonisation journey, Singapore has pledged to contribute USD\$100,000 to the IMO Greenhouse Gases (GHG) Technical Co-operation (TC) Trust Fund to support technical co-operation to implement the Initial IMO Strategy on reduction of GHG emissions.

In 2021, MPA joined Denmark, Ghana, France, India, Morocco, Norway, the Republic of Korea, the United Kingdom, and the United States as a "Core Member" in the Zero-Emission Shipping Mission. Leveraging on Singapore's experience, MPA will work closely with fellow Mission members to develop the port infrastructure and regulatory standards for future fuels such as hydrogen, ammonia, and biofuels.



MPA participated in the Zero-Emission Shipping Mission "Kick-Off Workshops" in October 2021.

ADVANCING THE INTERNATIONAL MARITIME DIGITALISATION AGENDA

Digitalisation supports greater efficiency which benefits ships, ports, and the wider global supply chain. At the IMO and other international platforms, Singapore is an advocate for global, inclusive maritime digitalisation that will allow States to unlock the full potential of digital transformation in shipping.

Together with the IMO, MPA conceptualised and launched the Single Window for Facilitation of Trade (Project SWiFT), to help developing countries streamline port clearance processes and improve efficiency through implementing an efficient digitalised system for electronic exchange of information in ports for ship clearance, known as a "Maritime Single Window" (MSW). Having benefitted

from our own national MSW system, digitalPORT@SG™, Singapore recognises how an MSW could be a game-changer for other maritime nations and hopes to lend our expertise in this regard.

Following overwhelming response from applicant countries, Project SWiFT commenced its pilot phase in the Port of Lobito, Angola, in November 2021. The pilot project was also intended to serve as a model for IMO to match donors with member States for future partnerships, and Singapore will continue to work with the IMO to see how the project could support more countries on their digitalisation journeys moving forward.

MARITIME BILATERAL RELATIONS



Signing of the MOU between MPA and Direction des Affaires Maritimes on 19 April 2021.

Beyond the IMO, Singapore is also leveraging bilateral platforms to catalyse partnerships that will drive the global digitalisation agenda. In 2021, MPA and the China Maritime Safety Administration signed an MOU on Maritime Digitalisation at the 17th China-Singapore Joint Council for Bilateral Cooperation (JCBC). The MOU seeks to strengthen global maritime supply connectivity between both countries through the usage of electronic certificates for ships and seafarers, which enhances the efficiency of the port clearance process for ships flagged with Singapore and China.

MPA has also embarked on a partnership with the Direction des Affaires Maritimes of France and French stakeholders, through an MOU and Steering Committee for Maritime Cooperation. The Steering Committee, jointly chaired by MPA and the Embassy of France in Singapore, brings together over 17 stakeholders from 13 organisations and examines focus areas such as autonomous vessels, strategic management of maritime space and traffic, and digitalisation.



MPA and China Maritime Safety Administration signing the MOU on electronic certificates for ships and seafarers



SECTION 03
READY FOR
THE FUTURE

CHAPTER 5: TUAS PORT: ANCHORING SINGAPORE'S POSITION AS A GLOBAL HUB PORT

MPA continually invests in our infrastructure to build capacity for future growth in container-handling demand. Our key development, Tuas Port, will enhance our port's capacity and competitiveness and secure Singapore's cargo connectivity to the world.

Designed to be future-ready, smart and sustainable, Tuas Port will incorporate automation, intelligent control systems, and tap on sustainable technologies and processes to enhance efficiency and productivity. Plans are also underway to combine port activities and lifestyle spaces to add life and vibrancy to the terminal. All port operations located at Tanjong Pagar, Pasir Panjang, Keppel and Brani would be moved to Tuas.

To be developed in four phases, the modular design of Tuas Port allows flexibility in staging its construction in response to changes in demand. When fully operational in the 2040s, Tuas Port will be the world's largest container port capable of handling up to 65 million twenty-foot equivalent units (TEUs) a year in a single location. This would be 50 per cent more than the current container handling capacity of Singapore.

COMPLETION OF RECLAMATION WORK FOR PHASE 1



Commemorating the completion of Tuas Port Phase 1 reclamation.

2021 marks the completion of reclamation works for the first phase of Tuas Port. This major milestone was a result of a six-year journey for MPA, involving over 450 companies and totalling 34 million man-hours. Soil improvement works were completed for 414 hectares of land, of which 294 hectares, measuring 412 football fields, were newly

reclaimed under Phase 1. In its reclamation, 221 caissons, with a height of a 10-storey building and each weighing about 15,000 tons, were fabricated and installed to form 8.6 km of seawall. The seabed was also deepened to cater for modern and larger container ships in the long term. Phase 1 has a handling capacity of about 20 million TEUs.

NEXT STEPS: PHASE 2 IN PROGRESS

Reclamation works for Tuas Port Phase 2 are still ongoing as scheduled despite the challenges posed by the COVID-19 pandemic. To protect the health and well-being of workers, strict safe management measures have been implemented in accordance with national guidelines. Construction workers have also been relocated to five different dormitories according to work trades/segregation guidelines to reduce the risks of cross infection.

PLANNING IN PROGRESS FOR PHASE 3

With the successful completion of Phase 1 and with Phase 2 reclamation works in full swing, planning for Phase 3 has commenced, with an even larger focus on sustainable development and waste circularity.

A tender was called for a joint study with the National Environment Agency to explore the feasibility of using mixed materials from Semakau Landfill for Phase 3 reclamation. This year-long study will assess the physical, chemical and biological characteristics of the disposed materials like metal objects, wood waste, incinerated ash, etc. and capping earth at Semakau Landfill. Concept designs to contain the mixed materials within the reclamation area will be developed. Suitable safe environmental mitigation measures and technical solutions during reclamation, terminal construction and terminal operations stages will also be studied.

BUILDING THE TUAS ECOSYSTEM

The Tuas Ecosystem, with Tuas Port at its nucleus, is envisaged to be well integrated with the vibrant business and industrial districts in the western part of Singapore. Integration of port and industry will synergise business opportunities, multiply economic benefits and enhance connectivity of high-value sectors like advanced manufacturing, cold chain, e-commerce and logistics, and energy and chemicals by locating such companies close to the port. This will safeguard inflow of essential supplies, such as food, pharmaceuticals and energy, and increase our resilience as well as reduce overall traffic load on our road networks.

Leveraging on our strength as an air and sea hub, more detailed plans to expand the suite of connectivity options



VIPs standing against the outline of Tuas Port Phase 1.

for cargo owners, including multi-modal options are being studied. Such air-sea cargo solutions provide additional efficiency and resilience and support just-in-time manufacturing and distribution for regional supply chains.

MPA is working together with agencies to develop a long-term plan that includes consolidating and optimising the existing industries, recycling land for higher intensity industrial use, safeguarding land for growth, improving road infrastructure and creating an attractive and environmentally sustainable working environment for the Tuas Ecosystem.

A new building for the Port Operations Control Centre, POCC@Tuas, will also be established, housing MPA's next generation Vessel Traffic Information System. The centre will be located and integrated into the Tuas Ecosystem. The preliminary design of the building was completed in September 2021, and tender for construction works will be called in second quarter of 2022 with completion targeted for end 2024.



Minister for Transport, S Iswaran officially announced the completion of works for Tuas Port Phase 1.

CHAPTER 6: HARNESS INNOVATION AS A NEW WAVE OF GROWTH

In maintaining Singapore's status as an international hub port and international maritime centre (IMC), MPA invests in innovation as a means to improving the safety of navigation, and enhancing productivity and efficiency. We collaborate with like-minded partners to develop a vibrant maritime innovation ecosystem, as well as play the role of facilitator to catalyse innovation in the maritime sector.

MPA works closely with stakeholder such as the Singapore Maritime Institute (SMI) to develop strategic research programmes such as the Maritime Transformation Programme, supporting key capabilities in areas such as automating operations at wharf side, developing a decentralised vehicle fleet management system and leveraging on digitalisation for efficient navigation of vessels.

To build up a sustainable pool of specialist research manpower for Maritime Singapore, MPA and SMI have supported four maritime research centres of excellence (CoEs). The CoEs have deepened their domain expertise in ports modelling and simulation, maritime navigation and operational safety, maritime energy and sustainability and MASS capabilities, and developed a wide range of

technologies to support the maritime sector.

LAUNCH OF THE MARITIME DRONE ESTATE

MPA officially launched Singapore's first Maritime Drone Estate (MDE) on 20 April at the 15th Singapore Maritime Week. The MDE, which is located near Marina South Pier, provides a space for test-bedding and developing drone technologies for maritime applications such as shore-to-ship deliveries and remote ship inspections.

During the launch, 11 industry players - Airbus, Avetics Global, F-drones, Garuda Robotics, M1, Nova Systems Asia, Skyports, ST Engineering, thyssenkrupp, Wilhelmsen Ships Service, and Volocopter conducted trials at MDE which included shore-to-ship use-cases, drones for surveillance and remote ship inspections. With an available 5G network at the MDE, there were also trials on potential 5G applications on such drones to enable safe and robust maritime operations. Slots for the MDE are available online to facilitate seamless bookings.



Senior Minister of State (Transport), Chee Hong Tat at the launch of the Maritime Drone Estate.

DRONE DETECTION CAPABILITIES – PILOT TRIALS



Test bedding drone technology at the Maritime Drone Estate

With the proliferation of drone activities, the threat of rogue drones operating over port waters has also become a potential threat to the safety and security of our waters. In this regard, MPA has identified the detection of drones over port waters to be a key capability development to support maritime safety enforcement effort.

In 2021, MPA successfully conducted a proof-of-concept comprising two Aeroscope¹ systems set up at a high vantage point and onboard a MPA patrol craft. MPA has also developed a new concept of operations in response to drones detected flying above restricted areas, in support of flight safety operations undertaken by the Civil Aviation Authority of Singapore.

Moving ahead MPA will be putting in place plans to operationalise more detection and monitoring systems. MPA will also continue to build up detection capabilities for a more comprehensive drone situation picture.



Drone detection system onboard a vessel

¹ Aeroscope is a comprehensive drone detection platform for DJI drones that rapidly identifies communication links, gathering information such as flight details, flight paths, pilot locations and other information in real-time.

INTERNATIONAL HYDROGRAPHIC ORGANIZATION-SINGAPORE INNOVATION AND TECHNOLOGY LABORATORY

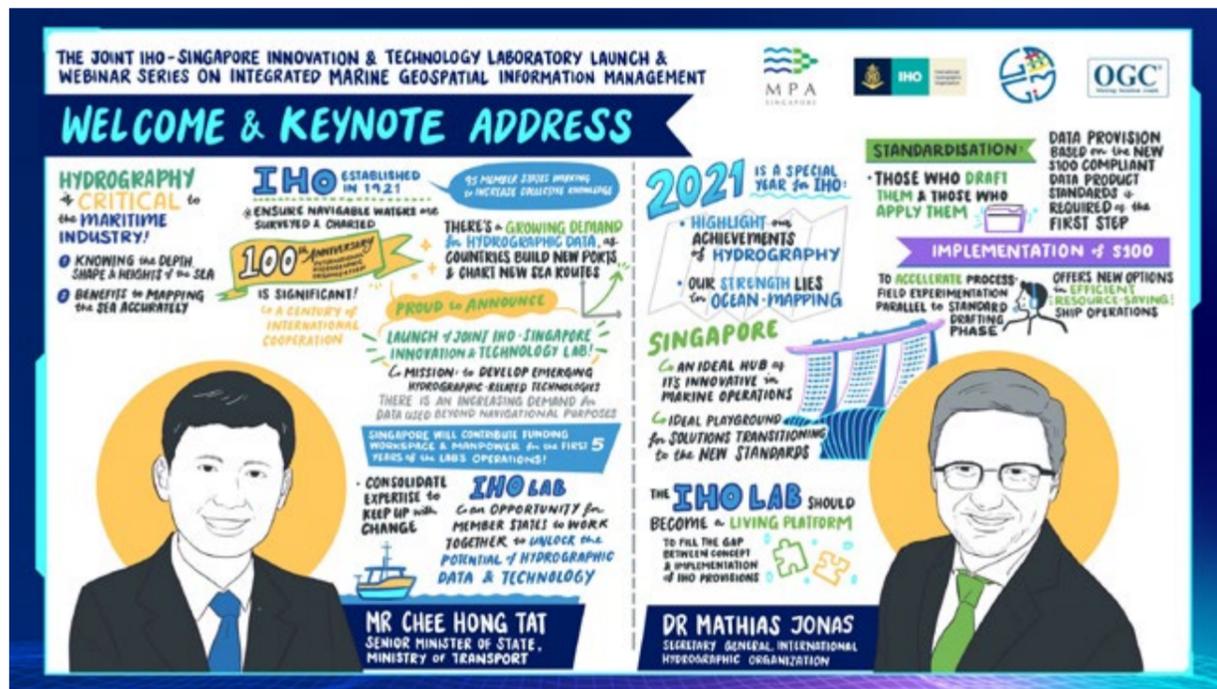
The International Hydrographic Organization (IHO) and MPA jointly launched the Joint IHO-Singapore Innovation and Technology Laboratory on 26 October 2021. The



collaboration aimed to facilitate collaboration on maritime innovation and promote faster transition, application and development of technologies to enhance safety at sea.

In conjunction with the launch, MPA hosted a webinar series on integrated marine geospatial information, jointly organised by the United Nations Global Geospatial Information Management (UN-GGIM), the IHO Marine Spatial Data Infrastructures Working Group and the Open Geospatial Consortium (OGC). Held over three days, the webinars provided a forum for dialogue and engagement to address effective and integrated marine geospatial information, its challenges and opportunities. Key issues touched on included operational framework practices, standards for useful information search as well as what the future had in store.

The presentations and panel discussions generated new insights and underscored the importance of marine geospatial information and explored potential applications for the development of better resource management and environmental modelling.



MPA hosted a four-part webinar series on integrated marine geospatial information management.

SINGAPORE MARITIME TECHNOLOGY CONFERENCE

The Singapore Maritime Technology Conference continues to be an important platform for industry leaders to discuss key trends in innovation and technology. Its 5th edition was held during the Singapore Maritime Week in April 2021. Organised in a hybrid format and held over four days, 106 key industry speakers shared their insights and views over 38 engaging discussions. The event was well-received, with an increase in participation by 50 per cent compared to 2019, and increase in the number of participating countries from 21 to 61.



MPA Chief Executive, Quah Ley Hoon, moderated a panel discussion on Singapore's vision for digital transformation.



PIER 71™

The Port Innovation Ecosystem Reimagined at BLOCK71 (PIER71™) is a joint collaboration between MPA and NUS Enterprise. It is MPA's platform to spur innovation in the maritime industry.

One of its key mechanisms is the PIER71™ Smart Port Challenge, an annual start-up incubation programme. Since 2018, it has attracted more than 500 applications from tech start-ups around the world. Close to 60 start-ups have benefitted from its programmes, mentorship and network access, and 32 received MPA grants of about S\$2 million for prototype development and pilot projects with their maritime corporate partners. In 2021, the PIER71™ Smart Port Challenge has awarded \$50,000 to each of the seven start-ups to conduct prototype development and test-bed their solutions.

In April 2021, MPA introduced the MINT Start-Up grant, a scheme that supports tech start-ups under PIER71™ or partner maritime programmes to collaborate with the maritime industry to pilot innovative solutions. To help maritime start-ups better navigate the ecosystem, the Marineteck Start-up Playbook, a guide on key resources such as schemes and support programmes, was also published.



SMS Chee Hong Tat announced various maritime digitalisation and innovation initiatives, as well as support for start-ups working in the maritime sector at the 5th Singapore Maritime Technology Conference.



CHAPTER 7: GROW OPPORTUNITIES IN DECARBONISATION AND SUSTAINABLE SHIPPING

Climate change is a complex global challenge that calls for concerted global action. As part of Singapore's pledge under the Paris Agreement to reduce national domestic emissions, Singapore had announced its enhanced National Determined Contribution and its Long-Term Low-Emission Development Strategy to the United Nations Framework Convention on Climate Change in 2020¹. More recently, Singapore also launched the Singapore Green Plan 2030, a whole-of-nation effort to advance Singapore's national agenda on sustainable development and climate action.

MARITIME SINGAPORE DECARBONISATION BLUEPRINT 2050



MPA has developed the Maritime Singapore Decarbonisation Blueprint 2050, which charts ambitious and concrete long-term strategies to build a sustainable Maritime Singapore.

This Blueprint was developed in consultation with industry stakeholders, taking on board the recommendations made by the International Advisory Panel on Maritime

Decarbonisation (IAP) in April 2021, and the consolidated inputs during a two-month long public consultation (April – June 2021), and sector-specific consultations with the Singapore Shipping Association (SSA) and the Association of Singapore Marine Industries (ASMI). MPA will commit additional funds of at least \$300 million beyond existing commitments, to support initiatives outlined in the Blueprint.

The exercise identified seven areas of focus:

- i. Port terminals
- ii. Domestic harbour craft
- iii. Future marine fuels, bunkering standards and infrastructure
- iv. Singapore Registry of Ships
- v. Efforts at the International Maritime Organization and international platforms
- vi. Research and development and talent
- vii. Carbon accounting, awareness, and green finance

RECOMMENDATIONS FROM THE INTERNATIONAL ADVISORY PANEL ON MARITIME DECARBONISATION

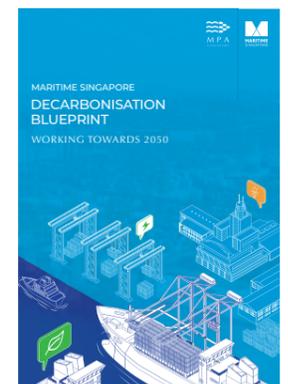
In April 2021, the International Advisory Panel on Maritime Decarbonisation (IAP) unveiled its recommendations for a concerted industry effort towards a low-carbon future. The IAP, which was formed in 2020, consists of 30 leaders from maritime and related organisations, and is co-chaired by Mr Andreas Sohlen-Pao, Chairman of BW Group and former Chairman of the Singapore Maritime Foundation, and Mr Wong Weng Sun, President and CEO of Sembcorp Marine and Chairman of the Board and Governing Council of the Singapore Maritime Institute.



IAP co-chairs, Mr Andreas Sohlen-Pao and Mr Wong Weng Sun, shared the panel's recommendation to maritime decarbonisation and ways in which Maritime Singapore can support the industry's transformation.

These recommendations have been categorised into four strategic objectives and nine pathways, with various collaborative projects being identified:

HARMONISE Standards	IMPLEMENT New Solutions	FINANCE Projects
<ol style="list-style-type: none"> 1. Shape common metrics for carbon accounting 2. Set standards for new technologies and solutions 	<ol style="list-style-type: none"> 3. Pilot trials and deploy solutions 4. Build flexible ship capabilities and relevant infrastructure 	<ol style="list-style-type: none"> 5. Develop green financing mechanisms 6. Develop mechanisms that could support carbon pricing 7. Act as custodian for and deploy R&D funds and grants
COLLABORATE with Partners <ol style="list-style-type: none"> 8. Multiply local, regional and global collaboration across stakeholders 9. Set up a decarbonisation centre 		



ESTABLISHMENT OF THE GLOBAL CENTRE FOR MARITIME DECARBONISATION

The Global Centre for Maritime Decarbonisation (GCMD) was formed on 1 August 2021 with a S\$120 million fund from MPA and six other founding partners, namely BHP, BW Group, Eastern Pacific Shipping, Foundation Det Norske Veritas, Ocean Network Express and Sembcorp Marine.

GCMD's leadership team is supported by a Governing Board, which works with the team to shape the strategic direction of GCMD. Led by Mr Andreas Sohlen-Pao, Chairman of the BW Group and former Chairman of Singapore Maritime Foundation, the Governing Board's 10 other members possess deep industry and research networks, to help grow GCMD into a leading centre of excellence for maritime decarbonisation.

GCMD aims to help the maritime industry eliminate GHG emissions by shaping standards, deploying solutions, financing projects, and fostering collaborations across sectors. To this end, MPA facilitated the signing of Expression of Interest (EOI) between 31 companies and GCMD to explore joint industry projects that advance the deployment of low and zero-carbon maritime solutions. These companies include Cargill, PIL, K Line, Rio Tinto, DBS, Standard Chartered and Trafigura, among others. MPA also facilitated partnerships between companies such as NYK and Cargill with GCMD.

GCMD will facilitate decarbonisation technology development and test-bedding, including future marine fuel trials with the industry and research communities in Singapore. MPA is looking at developing suitable facilities to support these activities.

¹ Singapore submitted an enhanced 2030 Nationally Determined Contribution (NDC) to peak emissions at 65MtCO₂e around 2030, and a Long-Term Low Emissions Development Strategy to halve emissions from its peak to 33MtCO₂e by 2050.



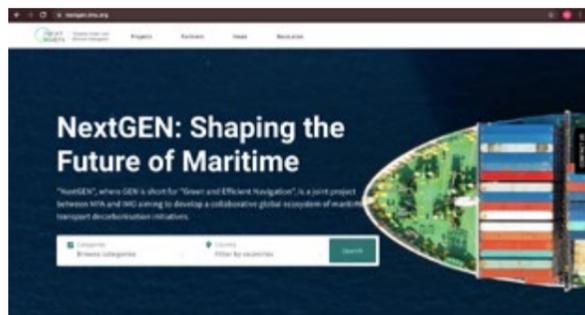
Artist's impression of the Global Centre for Maritime Decarbonisation.

NEXTGEN INITIATIVE

NextGEN (where "GEN" stands for "Green and Efficient Navigation") is a joint initiative to support the maritime sector's push towards the "next generation" of low and zero-carbon fuels and technologies. With ambitious targets to reduce greenhouse gas (GHG) emissions from international shipping by at least 50 per cent by 2050, the maritime sector is set to face challenges, which makes information and knowledge-sharing a critical first step towards this goal.

In September 2021, MPA and the International Maritime Organization (IMO) launched the NextGEN virtual ecosystem.

The portal serves as a single point of contact for public and private stakeholders such as ports, governments, companies and research institutes, to share knowledge on low and zero-carbon fuels, as well as create networks and opportunities for collaboration on maritime decarbonisation projects.



To date, the NextGEN database encompasses over 150 maritime decarbonisation projects, spanning over 500 partners and 13 fuel types.

Singapore also co-organised the NextGEN Inaugural Meeting with the IMO on 23 April 2021, as part of the Future of Shipping Conference (FOSC) during Singapore Maritime Week 2021. At the meeting, over 70 participants from governments, industry, international organisations,

and academia all over the world came together to discuss some of the challenges countries are facing in their decarbonisation journeys, and brainstorm possible solutions and avenues for cooperation.

JOINT MOU WITH GLOBAL COMPACT NETWORK SINGAPORE AND SINGAPORE SHIPPING ASSOCIATION



On 24 September 2021, MPA, Singapore Shipping Association (SSA) and Global Compact Network Singapore (GCNS) signed a joint Memorandum of Understanding (MOU) to support the development of capabilities in carbon accounting among maritime companies.

Under the MOU, the three parties will cooperate in conducting training courses on carbon reporting, monitoring and management for local maritime companies affiliated with SSA; support local maritime companies in their journey to track and monitor their carbon emissions, and recognise companies in their emissions reduction; and share best practices by developing a guide on maritime sector carbon reporting.

The first run of the training courses began in the first week of October 2021. In addition to learning best practices in emissions management and reduction, trainees from participating companies experienced using the Carbon and Emissions Reporting Tool (CERT) as a starting point to measure and monitor their emissions. The workshops received full house participation from 26 different companies. Developed by GCNS with input from the National Environment Agency, CERT is designed to simplify the process of recording emissions data.

COMMENCEMENT OF LIQUEFIED NATURAL GAS BUNKERING OPERATIONS

Singapore is the world's largest bunkering port, with a total of 50.04 million tonnes of bunker supplied in 2021. This comprised 49.99 million tonnes in conventional bunkers sales and 0.05 million tonnes of LNG bunker sales.

To move towards decarbonisation of international shipping, steps are underway for the Port of Singapore to transit to a multi-fuel bunkering scenario in support of the IMO Initial Strategy. MPA, together with its partners in the bunkering value chain, is looking at setting bunkering and safety standards for future fuels and creating an enabling environment for pilot trials and infrastructure development.

In the meantime, LNG is an immediately available fuel solution that can reduce the environmental impact of maritime transport. LNG is a clean marine fuel and can potentially reduce greenhouse gas emissions by up to 23 per cent on a well-to-wake basis. Vessels that use LNG also emit significantly less of the three main pollutants compared to oil-based marine fuels. Currently, Singapore has an LNG bunker supply capacity of up to one million tonnes per annum.

On 24 March 2021, the first ship-to-containership LNG bunkering operation in Asia was undertaken by CMA-CGM, FuelLNG and MPA. The container ship, CMA-CGM SCANDOLA, was fuelled with 7,100 m³ of LNG from FuelLNG Bellina, Singapore's first LNG bunkering vessel. It was also the first vessel in Asia to conduct simultaneous container loading and discharging operations alongside LNG bunkering operations, increasing port efficiency.

Separately, FuelLNG, together with MPA, completed Singapore's first bunkering of an LNG-fuelled oil tanker on 7 May 2021. FuelLNG successfully completed the gas-up



Photo courtesy of CMA CGM

First ship-to-containership LNG bunkering operation in Asia. CMA-CGM SCANDOLA was fuelled with LNG from FuelLNG Bellina.

and cool down operation for the LNG-powered oil tanker "PACIFIC EMERALD", including the transfer of 3,000 m³ of LNG from FuelLNG Bellina.

NEW HARBOUR CRAFT PORT DUES CONCESSION TO SUPPORT LNG BUNKERING

To support our goal to become a cleaner and greener port, MPA introduced a new harbourcraft port dues concession for LNG Floating Storage Units/Floating Storage Regassification Units (FSU/FSRU) supporting LNG bunkering and breakbulk activities in port. Qualifying vessels will enjoy a 50 per cent harbour craft port dues concession, up to S\$0.6 million annually per craft for a period of five consecutive years within the qualifying period from 1 July 2021 to 31 December 2024.

THE CASTOR INITIATIVE

MPA joined the Castor Initiative in February 2021 to develop an ammonia-fuelled tanker. The consortium will be able to tap onto MPA's experience as a bunkering hub and flag state to gather insights on safety issues, bunkering procedures, and gain access to research capabilities in Singapore.

MARITIME ENERGY AND SUSTAINABLE DEVELOPMENT WEBINAR: BIOFUEL FOR THE MARITIME INDUSTRY, NEAR-TERM AND LONG-TERM PERSPECTIVE

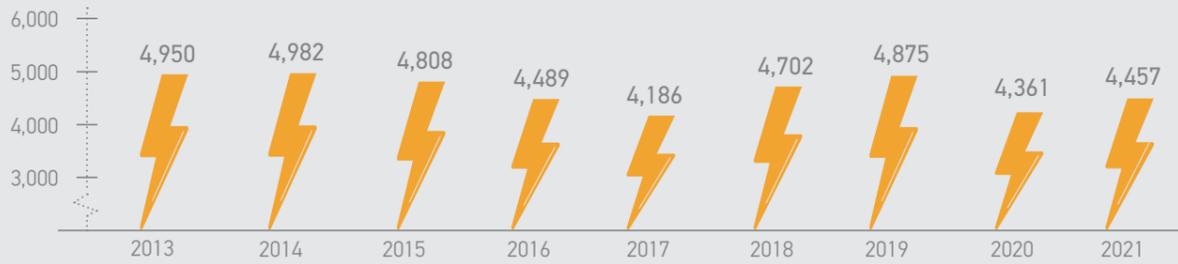
MPA participated in the annual Maritime Energy and Sustainable Development Webinar 2021. The webinar saw good participation from academia and industry and provided good opportunity for MPA to reinforce its commitments to Maritime Singapore's decarbonisation.

AWARD FOR HARBOUR CRAFT ELECTRIFICATION CALL FOR PROPOSAL

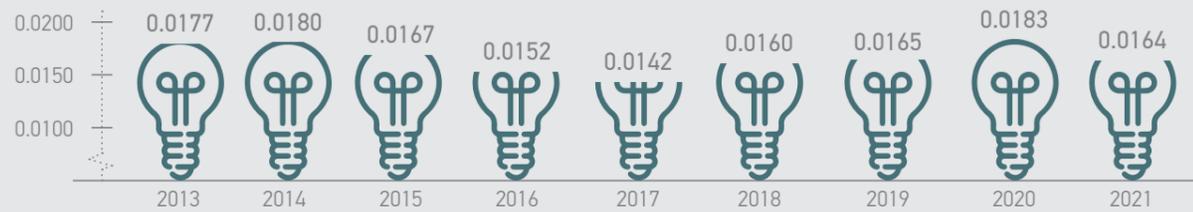
MPA moved closer to a low carbon future when it awarded a Call for Proposal (CFP) for the electrification of harbour craft. Three consortiums led by Keppel FELS Limited, SeaTech Solutions and Sembcorp Marine were awarded to research, design, build and operate a fully electric harbour craft by 2026. A total of S\$9 million was set aside to co-fund these projects. These electrification pilot projects will demonstrate both commercial and technical viability of three specific use cases for full electric harbour craft and support Singapore's broader decarbonisation efforts to help reduce GHG emissions by the maritime transport sector.

ENERGY AND EMISSIONS

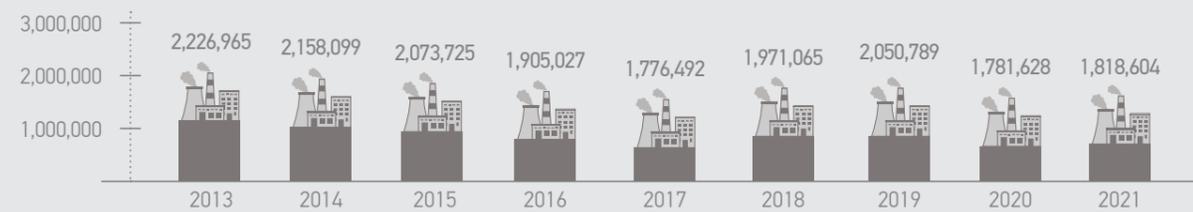
Electricity Consumption ('000 kWh)



Energy Intensity (kWh/\$)

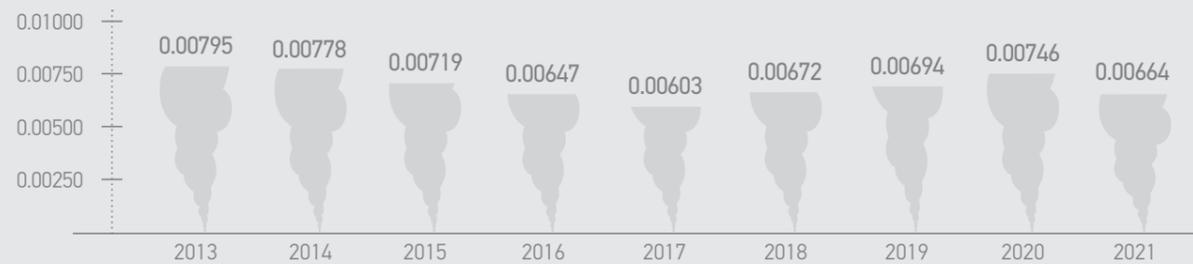


GHG Emissions* (kgCO₂)



*For scope 2 only. Scope 1 emissions are not included.
Calculated based on Yearly Electricity Grid Emission Factor published by the Energy Market Authority

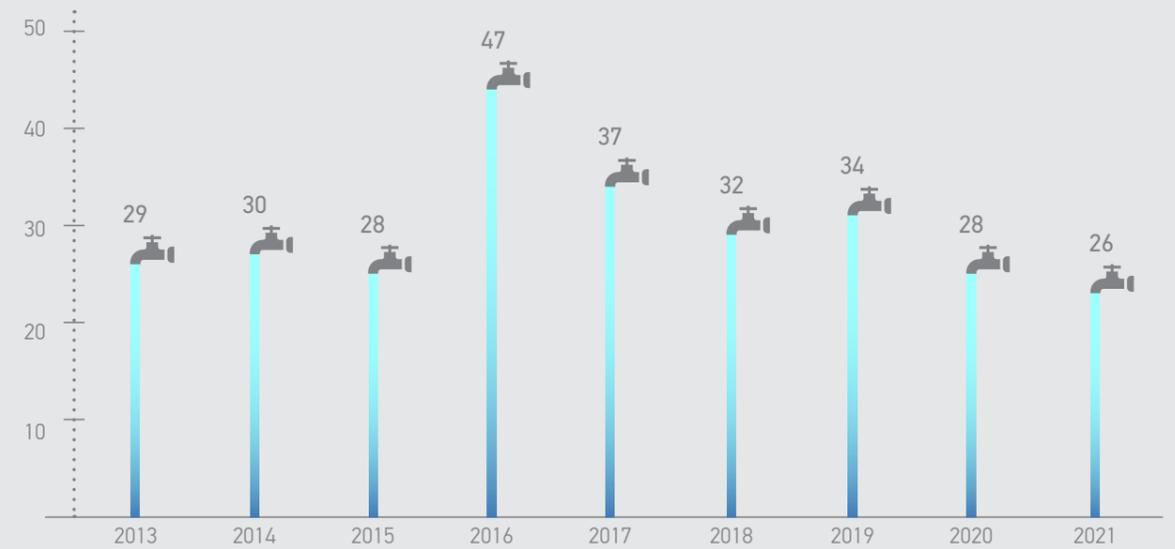
GHG Emissions Intensity* (kgCO₂/\$)



*For scope 2 only. Scope 1 emissions are not included.

WATER CONSUMPTION

Water Consumption ('000 m³)

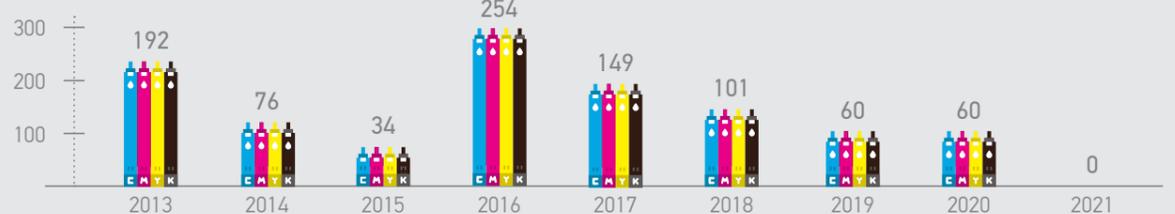


RECYCLING

Weight of Paper Collected (kg)



Ink Cartridges Recycled (units)



CHAPTER 8: AN EXCITING AND REWARDING MARITIME CAREER FOR ALL

The key to building a vibrant and resilient maritime community is a steady pipeline of future-ready workforce that could support the growth and transformation of the maritime community. The MPA conducted several support schemes to upskill and attract workers of all levels. MPA's outreach programmes also helped to raise awareness and make Maritime Singapore an attractive and appealing workplace where talent can thrive.

STRENGTHEN WORKFORCE CAPABILITIES AND RESILIENCE THROUGH INDUSTRY COLLABORATIONS & TRAINING

To support the growth and transformation of the harbour craft industry, MPA has introduced several programmes over the years to build a pipeline of future-ready local seafarers.

MPA works closely with the Employment and Employability Institute (e2i), Workforce Singapore (WSG) and SkillsFuture Singapore (SSG) to attract and upskill mid-career workers in the harbour craft sector. A Class 5 Special Limit training programme was developed to train Singaporeans to become qualified deck officers and marine engineers for the harbour craft sector.

Officers who have attained their Class 5 qualification would be able to participate in the Class 4 Special Limit (Class 4 SL) training programme to upgrade their skills and be promoted to become Special Limit Masters and Chief Engineers. Since the commencement of the Class 4 SL training programme in 2014, a total of 50 officers comprising 27 Masters and 23 Chief Engineers have completed their respective training with the Singapore Maritime Academy.

MPA also collaborated with Yellow Ribbon Singapore (YRSG) to place suitable inmates as trainees with participating harbour craft operators. Through the traineeship, the inmates were equipped with the necessary skills to carry out the role as Port Limit Steersmen or Port Limit Engine Driver (Third Class) to operate smaller harbour craft such as launches and supply boats plying within Port Limits. Eight ex-offenders have benefitted from this so far and MPA will continue to work with YRSG to increase the number of trainees over time.



MPA collaborated with Yellow Ribbon Singapore to train suitable inmates to carry out the role as Port Limit Steersmen or Port Limit Engine Driver (Third Class) to operate smaller harbour craft.

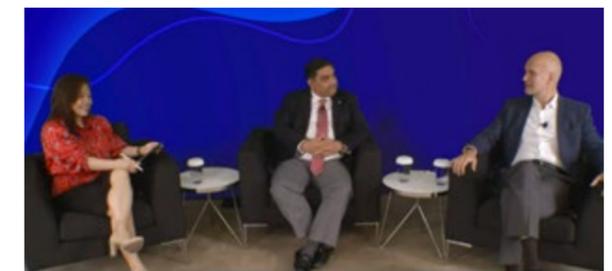
Casting a wider net, MPA conducts regular job fairs to grow the pool of Singaporean core for the harbour craft sector. Due to COVID-19 restrictions, most of the exercises were conducted virtually. In March 2021, MINDEF and MHA co-organised a Virtual Enhanced Career and Education Fair online. MPA and the Maritime Singapore Connect Office participated in this fair to continue the outreach efforts to promote a Singaporean core for the harbour craft sector.

MARITIME MANPOWER STUDIES

As part of the efforts to drive workforce transformation, MPA carried out various manpower studies throughout 2021, including the Disruption Impact Framework report, and also focus group discussions on job redesign in the maritime sector. MPA also carried out the Maritime Pulse Survey 2021 to better understand the business landscape. Over 200 companies responded to the survey. The results and insights gleaned from the survey were shared with the industry.

MARITIME MANPOWER FORUM

The Maritime Manpower Forum (MMF) 2021, co-organised by MPA and SMF, was held during the Singapore Maritime Week. The MMF addressed trends and issues that would affect talent in the maritime industry, ways to future-proof the workforce in new skill areas, and job redesign. More than 400 virtual attendees participated in the event.



Industry experts convene at the Maritime Manpower Forum to discuss the future of the maritime workforce, its key aspirations, and challenges.

TRAINING AND TRANSFORMATION

MPA supports companies to invest in their training and transformation efforts to build longer-term capabilities and become more resilient. MPA increased its co-funding support to up to 90 per cent under the Maritime Cluster Fund in Certifiable Courses, Short Courses and Productivity Schemes to defray the cost of companies' upskilling and digital transformation.

LAUNCH OF THE MARITIME LEADERSHIP PROGRAMME

MPA launched the Maritime Leadership Programme (MLP) in partnership with Singapore Management University to help middle to senior management leaders in the industry gain a firm foundation on leadership in the maritime sector and fresh perspectives on global maritime trends. Designed for industry leaders responsible for the future business growth of their organisations, MLP provides an invaluable networking platform with renowned maritime leaders and peer-to-peer learning.



All ready for the next level of leadership at the Maritime Leadership Programme.

BUILDING WORKFORCE CAPABILITIES AND SUPPORTING MID-CAREER TRANSITION

MPA and Workforce Singapore (WSG) rolled out an enhanced Career Conversion Programme for Sea Transport Professionals and Associates, which was launched in November 2021. The enhanced CCP is targeted to benefit

up to 300 individuals over two years. The enhancements include a new Job Redesign and Reskilling pathway, specialist "Maritime Superintendency Track", and the expansion of the programme to cater for associates.

RAISING AWARENESS OF A SEAFARER'S CAREER

To create awareness and enhance attractiveness of a seafaring career, a comprehensive study was jointly conducted with the Department of Statistics to better understand the industry and labour needs. MPA worked with its stakeholders, including the Singapore Maritime Academy, Wavelink Maritime Institute, related agencies and unions to review and discuss the various schemes to attract, develop and retain our local seafarers. These schemes will be reviewed in 2022, guided by the study's findings.

TUGMASTER TRAINING PROGRAMME TO ATTRACT MID-CAREER SWITCHERS

The Integrated Tugmaster and Helmsman Training Programme allows mid-career switchers an opportunity to join the harbour craft sector. The programme provides wage support and course fees co-funding to help companies defray the cost of grooming tugmasters. Through a blend of structured classroom and on-job-training, the 16-month

programme has attracted younger locals to embark on a career in the harbour craft sector. Since the commencement of the programme in 2016, a total of 48 Tugmasters have graduated.

FUNDING FOR CERTIFICATE OF COMPETENCY SPECIAL LIMIT TRAINING PROGRAMMES

The Special Limit Training Programmes aims to prepare seafarers to serve onboard ships operating within "Special Limits" near Singapore. The training curriculum and allowances for the various programmes are reviewed periodically to ensure that they remain relevant and competitive. As a requirement under the International Convention on Standards of Training, Certification and Watchkeeping for seafarers, additional mandatory short courses such as Ship Security Officer were included in the training syllabus for Certificate of Competency Class 4 SL training programme. While these additions have led to longer training hours and contributed to an increase in course fee, MPA continued to support these additional costs under the Maritime Cluster Fund.

CHAPTER 9: GROW SINGAPOREANS' AFFINITY FOR THE SEA

MAKING WAVES WITH OUR MARITIME STORY

The COVID-19 pandemic presented a window of opportunity to profile the maritime sector as a resilient and vital "node" of the Singapore's economy and to global supply chains.

To showcase Maritime Singapore (MaritimeSG) as a thriving and innovative ecosystem and to encourage more talents to join the sector, the MPA launched a campaign on multiple platforms with the tagline "Make Maritime Your Port of Call". It also continued to raise public awareness of Maritime Singapore by engaging stakeholders through various activities such as virtual tours, a new exhibit on maritime innovation, outreach efforts, call for ideas and more.



MAKE MARITIME YOUR PORT OF CALL

This campaign coincided with the launch of 1,000 SGUnited traineeships in the sector. With mid-career PMETs and graduating students as our target audience, MPA created a catchy tagline, "Make Maritime Your Port of Call" (MMYPOC) and produced a series of content for posting on MPA's YouTube, Facebook, LinkedIn, Instagram, and Twitter as well as traditional broadcast media platforms. MPA also worked closely with Singapore Maritime Foundation (SMF) to widen the reach of the campaign.

At the heart of the campaign, MPA showcased the experiences and stories of exciting shore and sea-based jobs in the sector. Apart from profiling individuals and companies such as mentors and their trainees through videos, MPA also commissioned a 30-minute documentary with Channel NewsAsia. Titled "Colours of the Sea", the visually rich documentary centred around four young individuals pursuing their dream jobs in maritime and

focused on the next-generation of workers, innovation, and sustainability. To complement the documentary and increase mindshare, MPA also ran a series of pitched editorials and paid advertorials with MediCorp. MPA also rolled out a comprehensive overview of jobs and training opportunities in maritime in TODAY's "Where The Jobs Are" series, and featured inspiring maritime personnel in "Gen Y Speaks" column and CNA online.

In addition to emotive stories, MPA also worked closely with Mothership.sg to produce a light-hearted content partnership video entitled, "Is a Pier always at a Port?" The video featured Senior Minister of State for Transport, Chee Hong Tat, introducing what the maritime sector in Singapore has to offer, beyond ships and ports. It also featured Performance Rotors, a drone solutions company for ship inspection as well as highlighted PSA's innovation and sustainability efforts.

SAIL CLOSE TO HOME

INTEGRATED TUGMASTER AND HELMSMAN TRAINING PROGRAMME

Job Opportunities

Cadet officers will serve as either a qualified Tugmaster or Helmsman after attaining the Port Limit Helmsman licence. With good performance, officers may be eventually deployed as Senior Tugmasters. Alternatively, officers can embark on the Deck Officer (Special Limit) Programme which enables them to attain a Certificate of Competency and work on board larger vessels plying the Special Limit region.

"Sail close to home, Stay close to your loved ones."

The Port of Singapore is the busiest port in the world in terms of vessel arrival tonnage, and is one of the world's top bunkering hubs.

To keep up with Singapore's thriving maritime industry, the Integrated Tugmaster and Helmsman Training Programme was introduced to train seafarers to operate vessels engaged in towing, carriage of passengers and carriage of cargo. Cadet officers will be fully sponsored during the duration of training.

Vessels plying the Port Limit sail within Singapore waters. With this flexibility of shorter voyages, seafarers can look forward to staying closer to home and their loved ones.

Career Progression

```

graph TD
    CO[Cadet Officer  
Salary Min. $1,350] -- 18 months --> QTH[Qualified Tugmaster/Helmsman  
Salary Min. $2,000]
    QTH -- 24 months --> STH[Senior Tugmaster/Helmsman  
Salary Min. $2,500]
    QTH -- 24 months --> DOP[Deck Officer (Special Limit) Programme]
    DOP -- 24 months --> EOP[Executive Onshore Position]
    STH -- At least 8 years --> EOP
    
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A joint initiative by:

The 10-month campaign reached over 11.8 million views in paid and organic initiatives with generally positive sentiments and feedback.



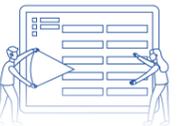
TVC and digital advertising reached over 9.7 million viewers



"Colours of the Sea" documentary and interstitials had a combined reach of over 1 million viewers



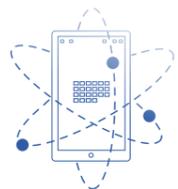
Paid and pitched editorials reached over 710,000 views



Partnership with SMF reached over 227,000 views on their platforms



"Is a Pier always at a Port?" content partnership video reached over 160,000 views



MPA social media video reached over 8,400 views



STAKEHOLDER ENGAGEMENT

With the disruption brought about by the COVID-19 pandemic, MPA pivoted to online outreach and launched a total of six virtual tours covering Singapore Maritime Gallery (SMG), Singapore River, Fort Canning, Keppel Harbour, Telok Ayer and Sea Tour. Close to 4,000 students and members of the public participated in the more than 80 public and private tours conducted in 2021.

SMG launched a new exhibit on maritime innovation to showcase Maritime Singapore digitalisation efforts to future-proof the industry. Safe management measures were put in place to ensure the gallery remains a safe environment for everyone.

MPA also reached out to the student population under the "My MaritimeSG Story" initiative. In partnership with Holy Innocents' High School, specially curated learning resources from SMG were developed. More than 300 students participated in the learning exercise. This was further extended to over 100 other secondary schools.

MPA produced a video jointly with the Republic of Singapore Navy, Police Coast Guard and Singapore Civil Defence Force as part of its outreach efforts. The theme of the video was in line with World Maritime Day 2021's key message - "Seafarers: At the Core of Shipping's Future."

In August 2021, MPA engaged key community interest groups such as the Singapore Maritime Heritage Interest Group and My Community, and maritime enthusiasts on ideas to promote maritime heritage and lighthouses.

MPA invited close to 300 public sector and industry partners to celebrate the completion of reclamation for Phase 1 of Tuas Port. The attendees included staff working from home and students from local Institutes of Higher Learning who joined in virtually from SMG.

THE EYEAH! SEA SHOW EXHIBITION

The Eyeyah! Sea Show exhibition held at SMG from 1 April to 13 July 2021 attracted 5,545 visitors. It showcased thought-provoking and eye-catching artworks created by 30 artists and illustrators from 13 countries. The artworks celebrate the wonders of travellers and explorers, ships and cargoes, while highlighting some of the threats to ocean life at the same time.



REVAMP OF MPA WEBSITE

MPA's refreshed website which will enhance the overall user experience is on track to go live in the second half of 2022. MPA's website attracts an average of 160,000 page views a month, and is an important communication platform that showcases MPA's initiatives and news, reaching out to various target segments including the maritime community, media and the general public. The refreshed website design process, including information architecture, was guided by the Digital Design Standards (DSS) to meet the Digital Government Blueprint (DGB) goal of delivering digital services that are easy, seamless and relevant for users.

SINGAPORE NAUTILUS

MPA's corporate publication, Singapore Nautilus, offers up-to-date and engaging content on the maritime sector. Available online, in print and via smartphone app, SG Nautilus reaches out to over 3,000 stakeholders including members of the local and international maritime community, port and marine officers, government agencies and academic institutions.



DOCUMENTING INSTITUTIONAL KNOWLEDGE

The MPA Academy acts as a custodian of the Maritime Singapore story, safeguarding it as an important part of the history of Singapore and its people. To ensure that this valuable institutional knowledge is documented, MPA Academy has been conducting oral history interviews with key maritime pioneers and leaders as well as rank and file officers to capture their experiences and knowledge.

In 2021, MPA Academy completed interviews with Mr Thiruchelvan Ramanathan, Senior Marine Officer, who was the first batch of Vessel Traffic Officers; Mr Sugang bin Pandi, Senior Port Inspector; and Ms Emily Sihab, Senior Manager, Ship Registry Department. This brings the total number of oral history interviews over the past six years to 20. The interview materials have been uploaded on MPA's employee portal for easy access by all staff.



SECTION 04
ORGANISATIONAL
EXCELLENCE



CHAPTER 10: CULTURE OF EXCELLENCE

The MPA champions the FIRST Values – **F**orward Thinking, **I**ntegrity, **R**espect, **S**ervice Excellence and **T**eamwork. They translate to guiding policies, expected behaviours and practices that foster the desired culture of excellence, which enables innovation, customer-centricity, learning and achievement of MPA's goals. The FIRST Values also shape MPA's belief that we become more effective when we forge close partnerships with our stakeholders, and that our processes should be based on sound and robust financial and governance principles and policies.

MPA'S FIRST VALUES

MPA's FIRST Values shape the culture of excellence, and enable MPA to deliver on its mission and goals.

MPA'S ETHICS POLICY AND WHISTLEBLOWING FRAMEWORK

MPA is committed to ensure that our dealings with external parties and with our colleagues are conducted in a professional, ethical and responsible manner consistent with our FIRST values, in order to uphold and safeguard the reputation and public image of MPA.

MPA has an established reporting channel and whistleblowing framework to address any alleged wrongdoings or ethical issues involving MPA officers.

MPA VALUES WEEK

MPA Values Week 2021 celebrated and rallied MPA officers to embrace the FIRST Values and understand how the values should shape everyone's decisions and behaviours. This annual event was successfully held from 25 to 29 January 2021. The annual event which celebrates and rallies MPA staff on FIRST values was kicked off with an opening from our Chief Executive, who shared her pride in how Team MPA had exemplified the FIRST Values, stepped up to the COVID-19 challenge decisively, and took ownership of the crisis to keep our people and the community safe, and how the FIRST Values will continue to be relevant to MPA's transformation journey. This was followed by activities for the rest of the week, such as talks by MPA's adopted charities, service excellence online workshops, and discussions on climate change and pivoting towards a low carbon future.



Sapuan Bin Said, Assistant Lightkeeper from the Hydrographic Division, was recognised as 2021's Overall FIRST Champion.



MPA Chief Executive Quah Ley Hoon giving out FIRST Champions awards at the MPA Values Week in January 2021.

MPA'S FIRST CHAMPIONS

FIRST Champions are nominated from the ground-up throughout the year when officers observe their colleagues demonstrating and exemplifying the FIRST Values in what they do in an outstanding manner. The Awards Presentation was conducted in hybrid mode during Values Week 2021, and 23 officers were recognised as FIRST Champions. Sapuan Bin Said, Assistant Lightkeeper from the Hydrographic Division, was recognised as 2021's Overall FIRST Champion for going beyond the call of duty to ensure smooth operations at our lighthouse.

STAKEHOLDER ENGAGEMENT

OUR STAKEHOLDERS



APPOINTMENT OF ADJUNCT FELLOWS

Since 2014, MPA has appointed several maritime leaders and experienced maritime professionals as adjunct fellows and trainers to lecture at the MPA Academy's programmes and to conduct training and workshops for MPA staff.

Today, we have 10 distinguished fellows on our faculty with expertise covering a wide range of issues including maritime governance, maritime services, port operations, logistics and digitalisation.



Mr Ooi Boon Hoe
Senior Adjunct Fellow,
MPA Academy
Chief Executive Officer,
Jurong Port Pte Ltd



Mr David Chin
Senior Adjunct Fellow,
MPA Academy



Mr Koji Sekimizu
RSIS-MPA Adjunct Senior
Fellow and MPA Academy
Senior Advisor
Secretary-General Emeritus,
IMO



Captain Mark Heah
Adjunct Trainer, MPA Academy
Principal Consultant, STET
Maritime Services



Mr Martin Marini
Adjunct Fellow, MPA Academy
Legal consultant at Singapore
Organisation of Seamen
Consultant lawyer at Farallon
Law Corporation, Singapore



Mr Ong Kim Pong
Senior Adjunct Fellow,
MPA Academy
Regional CEO Southeast Asia
of PSA International



Mr Punit Oza
Senior Adjunct Fellow,
MPA Academy
Former Executive Director,
Singapore Chamber of
Maritime Arbitration
Vice-Chairman,
Institute of Chartered
Shipbrokers (Singapore)



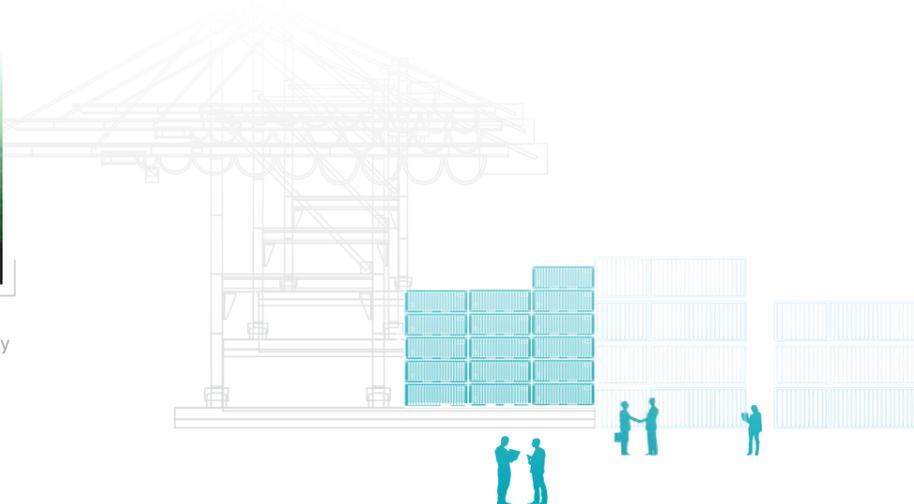
Captain Lee Cheng Wee
Adjunct Trainer, MPA Academy
Senior Consultant,
Global Maritime and
Port Services



Mr Steen Lund
Adjunct Fellow, MPA Academy
Chief Executive Officer,
RightShip



Mr Oh Bee Lock
Adjunct Fellow, MPA Academy
CEO, Singapore Logistics
Association
Managing Director, Ports &
Logistics Navigators Pte Ltd



VISIT BY THE PUBLIC SERVICE COMMISSION

MPA hosted the Public Service Commission (PSC) for a visit to its Port Operations Control Centre (POCC) on 27 October 2021. This visit is part of PSC's regular visits to various public sector agencies and ministries to better understand their key directions and initiatives.

Led by PSC Chairman Lee Tzu Yang, the delegation toured the POCC and witnessed the Vessel Traffic Management in operation. MPA also shared its plans for the future, such as the transformation of port operations and infrastructure in our Next Generation Vessel Traffic Management Systems as well as the Next Generation Port in Tuas.



Hosting participants from the Public Service Commission.

SUPPLIER MANAGEMENT

Suppliers play a key role in developing and sustaining Singapore's maritime ecosystem. All Government Procuring Entities (GPEs) purchasing goods and/or services by contractual means operate within the system of Government Procurement (GP). MPA adheres to GP's three key principles:



OPEN AND FAIR COMPETITION
An open and competitive environment will encourage suppliers to present their best offers. Suppliers are given equitable access to compete on a level playing field.



TRANSPARENCY
MPA subscribes to an open and transparent regime across all stages of the procurement cycle. MPA's procurement objectives, criteria and procedures are made known to suppliers as far as possible.



VALUE FOR MONEY
MPA procures from sources that best meet its requirements and offer the best value. Value for money is derived from the optimal balance of benefits and costs on the basis of total cost of ownership. As such, a tender does not necessarily need to be awarded to the lowest bidder.

AWARDS & RECOGNITION 2021

13 January 2021:

New Silk Road CEO of the Year Award 2020

Chief Executive Ms. Quah Ley Hoon, was honoured with the Aramco Trading New Silk Road CEO of the Year Award 2020 (Ports category) on 13 January 2021. This is an affirmation of the collective efforts of the MPA team, tripartite partners and industry partners.

The New Silk Road CEO of the Year Award recognises distinguished industry leaders for the advancement of the international energy industry's interconnectivity across Asia to the Middle East.

14 January 2021:

Eco-Office + Certification – Eco-Office Elite

MPA was awarded the Eco-Office Plus Certification – Eco-Office Elite status with a score of 90.1 per cent. This certification is awarded by the Singapore Environment Council to recognise the efforts of an organisation to cultivate eco habits in the workplace. The certification covers offices at Levels 17-21 and 25 at mTower, Levels 19-21 at Tanjong Pagar Complex, and Level 8 at POCC Vista.

3 February 2021:

Green Ports Award System (GPAS) Award

The Port of Singapore was recognised as Asia-Pacific Economic Cooperation (APEC) Port Services Network (APSN) Green Port in 2020. This is the third consecutive time that the MPA has received the accolade since it was launched in 2016.

24 June 2021:

IAPH 2021 World Ports Sustainability Awards

MPA "Digital Port Ecosystem" has been awarded the World Ports Sustainability Awards 2021 under the category Resilient Digital Infrastructure by the International Association of Ports and Harbors (IAPH). This award recognises MPA's contributions to the maritime sector and global supply chain.



12 July 2021:

Special Achievement in GIS (SAG) Award

GeoSpace-Sea has been awarded the Special Achievement in GIS (SAG) Award at the 2021 ESRI User Conference Plenary.

The award recognises outstanding work by organisations in using Geographic Information System (GIS) technology to understand complex data and meet challenges around the world. GeoSpace-Sea, Singapore's National Marine Spatial Data Infrastructure, is an initiative led by MPA in collaboration with 11 other participating government agencies (BCA, CLC, HDB, JTC, NEA, NRF, NParks, PUB, SFA, SLA, URA) and institutes of higher learning. With GeoSpace-Sea, users can today discover, access, exchange and analyse Singapore's marine and coastal spatial data and its featured applications.

30 July 2021:

Public Sector Transformation Awards: Dare To Do Award



This award recognises the spirit of risk-taking and perseverance in public sector officers or teams that were able to identify new opportunities to do things better, and had the courage to attempt new ways of doing things even when there were no precedence, took measured risks, and who had persevered even when they faced difficulties.

Capt M Segar, Assistant Chief Executive (Operations), received the Dare to Do Award in 2021 during the Public Service Week. He firmly believes that breakthrough results require ideas which may be inherently risky. When others responded with apprehension and ask "why", he would reply "why not" and seek to change others' perspectives to think about mitigating implementation risks instead. This "dare to do" spirit had helped MPA achieve breakthroughs in the port innovation ecosystem and transform the upcoming Tuas Port.

9 August 2021:

National Day Awards 2021

The Singapore National Day Awards recognise various forms of merit and service to Singapore. MPA is proud to share that 12 of our officers were honoured with the National Day Awards in recognition of their outstanding contribution and service to Singapore:

National Day Award	Recipients
Public Administration Medal (Silver)	• Tham Wai Wah
Public Administration Medal (Bronze)	• Jenny Lin Jit Lan
Commendation Medal	• Teo Tze Kern • Lim Siew Ming Regina
Efficiency Medal	• Teo Choon Yap • Iskandar Bin Akil • Tang Jwee Hoon
Long Service Medal	• Yong Kar Meng • Sayri Bin Mohamed Salleh • Mohamed Hanafie Bin Palal • Koh Boon Wee • Yeo Joon Kwang Gavin



7 October 2021:

Ministry of Transport Awards Ceremony

Minister's Innovation Award

The Minister's Innovation Award recognises innovations within the Ministry of Transport (MOT) and its statutory boards. MPA received the following awards:

Distinguished Award

- Digital Twin for Tuas Port Reclaimed Land (DigitalLand@Tuas)

Merit Award

- SmartEntry@Sea
- GeoSpace-Sea

Minister's Value-For-Money Achievement Award

The Minister's Value-For-Money Achievement Award encourages agencies in the MOT family to develop projects that achieve value for money for their organisations. MPA received the following awards:

Distinguished Award

- Master Mass Flow Meter – Enhanced Meter Verification for Bunkering

Merit Award

- SMART Security Management at Piers

Special Mention

- Enhancing Service Delivery for Maritime Cluster Fund Stakeholders

Special Appreciation Award

Tremendous efforts had been put in by agencies to build resilience in the transport sector and push for recovery despite the long-drawn COVID-19 pandemic. MPA was recognised for the following efforts:

- Facilitating more than 100,000 crew changes since March 2020
- Sea-Air Vaccination Exercise for frontline workers
- Border measures at all public terminals and sea checkpoints



11 October 2021:

President's Volunteerism & Philanthropy Awards 2021: Organisation of Good (Public Institution) Category



MPA was awarded the President's Volunteerism & Philanthropy Awards (PVPA) 2021 under the Organisations of Good - Public Institution Category and is the first institution to receive this award.

Organised by the National Volunteer & Philanthropy Centre (NVPC), the PVPA is the pinnacle award and platform to recognise individuals and leaders who have achieved excellence in giving.

7 October 2021:

OpenGov Recognition of Excellence 2021

The award recognises agencies for innovative and disruptive use of technology in the public sector through optimisation of government processes, delivering citizen-centric services and pushing new boundaries.

MPA clinched the OpenGov Recognition of Excellence Award for its use of innovative and disruptive technology in the public sector, with digitalPORT@SG™ and digitalOCEANS™.

19 October 2021:

SHARE Gold Award

MPA is honoured to receive the Community Chest Singapore "SHARE Gold" award for FY2020 for our participation in SHARE contributions to support the social service agencies and their beneficiaries during these challenging times.



21 October 2021:

Asia Freight, Logistics and Supply Chain Awards 2021



Singapore's Consul-General in Hong Kong, Ong Siew Gay, represented MPA in receiving the AFLAS 2021 award.

To mitigate port congestions and disruptions, MPA supported PSA on various measures to strengthen supply chain resilience including increase in manning. These measures have ensured that the Port of Singapore continues to stay resilient as a leading hub port as Singapore plays its part to keep global supply chains running amid the pandemic. For its contributions and strong partnership with stakeholders, the Port of Singapore won the "Best Global Seaport" award for the first time at the 2021 Asia Freight, Logistics and Supply Chain Awards (AFLAS), and was awarded the "Best Seaport in Asia" for the 33rd time.

5 November 2021:
HR Excellence Awards Singapore 2021



MPA clinched the Gold Award for “Excellence in CSR Strategy” and Silver Award for “Excellence in Leadership Development” at the HR Excellence Awards 2021 virtual award ceremony.

Organised by Human Resources Online, an established platform for HR practitioners in Asia, the awards were first established in 2012 to provide an incubator platform for HR teams to showcase their HR strategies and initiatives, and it has evolved to become the region’s HR benchmarking platform across industries.

17 November 2021:
Pro-Enterprise Survey Recognition Award

MPA received the Pro-Enterprise Survey Recognition Award at the Pro-Enterprise Panel-Singapore Business Federation (PEP-SBF) Awards Ceremony 2021. The award recognises Government agencies that have achieved good results in the biennial Pro-Enterprise Survey, and received exceptional feedback from businesses on their pro-enterprise orientation.

MPA achieved the highest overall Pro-Enterprise Index from businesses, and also scored the highest amongst all participating agencies in all five business survey components – Pro-Enterprise Orientation, Review of Rules and Regulations, Clarity of Communication, Customer Responsiveness and Compliance Costs.



Assistant Chief Executive (Corporate) Tan Hoe Soon representing MPA receiving the award.

17 November 2021:
Public Sector Transformation Awards – COVID Dedicated Cycle

The Public Sector Transformation Awards was planned for COVID-related nominations for efforts undertaken during the pandemic.

The award ceremony has been tentatively postponed to mid-2022. MPA won the following awards:

- One Public Service Award: Telemedicine COVID-19 Operations (with MOH, ESG, IMDA and MOM)
- Star Partner Award: SG-STAR Fund Taskforce (Singapore Shipping Association, Singapore Maritime Officer’s Union, Singapore Organisation of Seamen)
- Regulatory Excellence Award: Crew Change (with ICA, MOH and MOT)

MPA’S AWARDS MILESTONES



MPA'S AWARDS MILESTONES

2010

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award
- Port Authority Award (Seatrade Asia Award)
- Port of the Year Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Culture of Excellence

- Community Chest Award 

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- Honorary Member of the Minister for Defence Awards League
- Singapore Health Award 

2011

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award

Safeguard Strategic Maritime Interests & An Influential Voice

- Norwegian Business Association (Singapore) Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Culture of Excellence

- Eco-Office Certification

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- MHA Award for NSmen's Employers
- People Developer

2012

Safe, Efficient & Sustainable Global Hub Port

- Best Green Service Provider – Seaport
- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Quality Maritime Workforce

- The International Committee on Seafarers' Welfare Award – Drop-in Centre of the Year

Culture of Excellence

- Community Chest Award 
- Public Service Milestone Award

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- MHA Award for NSmen's Employers
- Singapore Health Award 

2013

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award
- Environmental Campaign of the Year Award
- Port of the Year Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Culture of Excellence

- Singapore Quality Class Star

2014

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Quality Maritime Workforce

- International Seafarers' Welfare Awards 2014 (1 of 5 finalists)
- MPA Academy achieved accredited VTS training centre status by IALA

Culture of Excellence

- Corporate ISO Certification
- International Best Practice Competition 2014 
- Restroom Association of Singapore 4-star Happy Toilet Certification
- Team Symposium 2014 

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- May Day Model Partnership Award

2015

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MTI Innovation Award
- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Strong Maritime Singapore Identity

- 29th International ARC Awards 
- Gold Tabby Award

Culture of Excellence

- Eco-Office Re-certification
- Happy Toilet Re-certification

International Convention on Quality Control Circle 2015

- PS21 ExCEL Awards – Most Innovative Project/ Policy 
- PS21 Star Service Team Award

Singapore Apex CSR Awards (Small and Medium Organisations Category)

- Singapore Innovation Class
- Singapore Service Class
- Singapore Sustainability Awards 2015 (Large Enterprise)

Singapore Environmental Achievement Award 2015

Special Events Platinum Award

- Team Excellence Symposium 2015 

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- May Day Model Partnership Award
- NS Advocate Award
- People Developer

2016

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award
- Green Ports Award System Top 50 Engineering Feats @ IES-SG50 Award

Maritime Knowledge & Innovation Hub

- CAPAM International Innovations Awards (one of the semi-finalists)
- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Strong Maritime Singapore Identity

- 2016 ARC Awards

Culture of Excellence

- 6th Asia Best CSR Practices Awards 2016
- ASEAN Corporate Sustainability Summit and Awards 2016
- Asia Responsible Entrepreneurship Award

ComChest Special Events Gold Award

- Eco-Office Re-certification
- International SeaKeepers Society Asia Achievement Award
- PS21 ExCEL Award: Most Innovative Project/Policy
- PS21 Star Service Team Award
- Singapore Quality Award

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 

2017

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Strong Maritime Singapore Identity

- 23rd Annual Communicator Awards
- 2017 Galaxy Awards

Culture of Excellence

- ComChest Corporate Gold Award 
- Eco-Office Re-certification

European Society for Quality Research Quality Achievements Awards 2017

- Golden Peacock Global Award for Sustainability
- International Best Practice Award Competition Organisation-Wide Innovation Award

MPA ISO 9001:2008 Corporate Re-certification

- PS21 Star Service Team Award
- Public Service Premier Award

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 
- Public Sector Pro-Enterprise Initiative Award

2018

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia
- Green Ports Award System
- GREEN4SEA Awards
- Maritime 2020 & LNG Asia Summits

Maritime Knowledge & Innovation Hub

- 6th International Best Practice Competition
- CAPAM International Innovations Awards
- Caterpillar and INFORMS Analytics Society Innovative Applications in Analytics Award

Strong Partnerships

- PEP-SBF Pro-Enterprise Award 
- Public Sector Pro-Enterprise Initiative Award

MOT Minister's Innovation Award

- MOT Minister's Value-For-Money Achievement Award
- New Silk Road CEO of the Year Awards 2018

Quality Maritime Workforce

- International Seafarers' Welfare Award – Port of the Year

Strong Maritime Singapore Identity

- Public Sector Transformation Awards

Culture of Excellence

- Champions of Good 2018
- Charity Bronze Award 

MPA ISO 9001:2015 Corporate Re-certification

- National Day Awards 2018

Strong Partnerships

- Honorary Fellowship by the Institute of Chartered Shipbrokers
- PEP-SBF Pro-Enterprise Award 

Choice Employer

- 15th Annual HRM Awards 2018
- NTUC May Day Awards 2018 
- Sustainable Business Awards Singapore 2018

2019

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia
- Best Green Seaport
- Exemplary Innovator Award
- ShipTek International Awards – Port Authority of the Year

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT Minister's Value-For-Money Achievement Award

Quality Maritime Workforce

- International Seafarers' Welfare Awards – Port of the Year

2020

Safe, Efficient & Sustainable Global Hub Port

- Best Seaport in Asia
- IAPH World Ports Sustainability Awards – Community Outreach and Port City Dialogue: Port Development and License to Operate

Strong Partnership

- PEP Best Suggestion (Supporting Agency) Award
- Public Sector Pro-Enterprise Initiative Award 

Choice Employer

- NTUC May Day Awards 

Culture of Excellence

- Charity Gold Award 
- Innovation Excellence Award
- MPA ISO 9001:2015 Corporate Re-certification
- National Day Awards 2019

Strong Partnership

- PEP Best Suggestion (Supporting Agency) Award
- Public Sector Pro-Enterprise Initiative Award 

Choice Employer

- NTUC May Day Awards 

2021

Safe, Efficient & Sustainable Global Hub Port

- Best Global Seaport & Best Seaport in Asia
- IAPH 2021 World Ports Sustainability Awards – Resilient Digital Infrastructure
- Green Ports Award System (GPAS)

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award 2021
- MOT Minister's Value-For-Money Achievement Award
- MOT Special Appreciation Award
- Special Achievement in GIS (SAG) Award

OpenGov Recognition of Excellence 2021

- Pro-Enterprise Survey (PES) Recognition Award
- President's Volunteerism & Philanthropy Awards 2021: Organisation of Good (Public Institution) Category
- Public Sector Transformation Awards
- National Day Awards 2021

Strong Partnership

- PEP-SBF Pro-Enterprise Award 

Choice Employer

- HR Excellence Award Singapore 2021 

Quality Maritime Workforce

- New Silk Road CEO of the Year Awards 2020

WORKPLACE SAFETY AND HEALTH

MPA prioritises workplace safety and health (WSH) to ensure that its employees are safe and healthy at work. All MPA officers are to comply with standard operating procedures where applicable and ensure that their workspaces are free from safety hazards.

MPA's WSH strategy and its key outcomes are outlined as follows:



MPA's WSH Committee drives the overall WSH strategy. Chaired by MPA's Deputy Director of Operations Planning, the WSH committee comprises representatives from MPA's Operations Cluster, Human Resource Division and Amalgamated Union of Statutory Board Employees (AUSBE).

WSH INITIATIVES

To champion a safety-first culture, MPA continues to actively disseminate information on workplace safety regularly to promote a high level of safety consciousness amongst MPA officers, particularly for those working in the field.

MPA also appointed safe management officers to monitor compliance of the latest safe management measures within MPA's premises.

In addition, MPA conducts WSH audits to identify gaps in current practices and identify areas for improvement. Corrective actions were quickly implemented to rectify the gaps and enhance safety and health in the workplace.

WSH PERFORMANCE

MPA consistently strives to improve safety and health in the workplace. Despite the fluid and evolving COVID-19 situation (e.g. emergence of new variants and measures), MPA remained vigilant and agile in promoting and enforcing WSH. MPA continued its excellent performance for 2021, with the number of work-related or workplace incidents remaining unchanged from 2020 to 2021.



CHAPTER 11: CHOICE EMPLOYER

To be an employer of choice, MPA needs to continue its transformation journey to be relevant for the present and ready for the future. DigitalMPA, TalentMPA and OneMPA will continue to guide MPA in how we improve service delivery and workplace experiences. This empowers and enables all our officers not only to deliver value through work, but also to find meaning and achieve fulfilment in the process.

DIGITALMPA

MPA aspires to achieve digital to the core technology is actively adopted to digitalise work processes to improve service experiences, foster collaborations and drive productivity. This also facilitates data-driven decision making and transforms processes.

Digital Maturity Index

MPA performed well in the 2021 Digital Maturity Index (DMI) survey which measured how government agencies were progressing towards becoming a digital organisation. Comparing against the results of the first survey that was conducted in 2019, MPA's DMI score improved by 13 points, from 44 to 57 and moved from a level 2 digital literate to a level 3 digital performer with key digital capabilities, digitalised processes, and strong digital mindset and agile culture. The result has placed MPA among the top agencies who are in the digital performer quadrant. It has also brought MPA a step closer towards the aspiration of becoming a digital leader by 2023.

Industry-Facing Touchpoints

As part of the overall customer experience, MPA aims to provide better accessibility for customers to seek assistance and information. With the push towards digitalisation, MPA continues to create intuitive and customer-centric digital options for customers, educate and nudge them towards digital options, and drive improvements to simplify customer processes.

Enhanced Customer Experience through Digitalisation

INVOICENOW

MPA enhanced the account opening process to be more seamless for new customers through integration

with Enterprise Data Hub (EDH), which enables pre-population of certain company information and reduced manual completion and submission of information by customers. MPA, together with HDB and JTC, partnered IMDA to implement InvoiceNow, which provides MPA with the capability to issue e-invoices for direct receipt into customers' accounting systems. E-invoicing enables businesses to digitalise the way they transact, reducing the amount of time and effort in re-keying in the data into their own systems and enjoying faster processing times when sending their own e-invoices. This will also enable our businesses to reduce their carbon footprint. In addition to existing electronic payment modes, MPA further encouraged digital payment through enabling PayNow via the SGQR code on MPA invoices.

Faster Payment Initiatives to Suppliers

As part of Whole-of-Government (WOG) efforts to better support SMEs through faster payment to alleviate their cashflow needs, MPA implemented its internal electronic e-invoices workflow to facilitate faster certification and approval of e-invoices and also increased payment frequency.

One Maritime Portal for Grants & Incentives

MPA offers various programmes to support maritime businesses and the development of manpower for the maritime industry. To provide a better overall experience for companies applying for maritime grants and incentives, MPA has initiated the idea of a single maritime grants and incentive system.

The portal will be the single platform for the application, processing and management of all grants and incentives programmes administered by MPA and is expected to be commissioned in 2022.

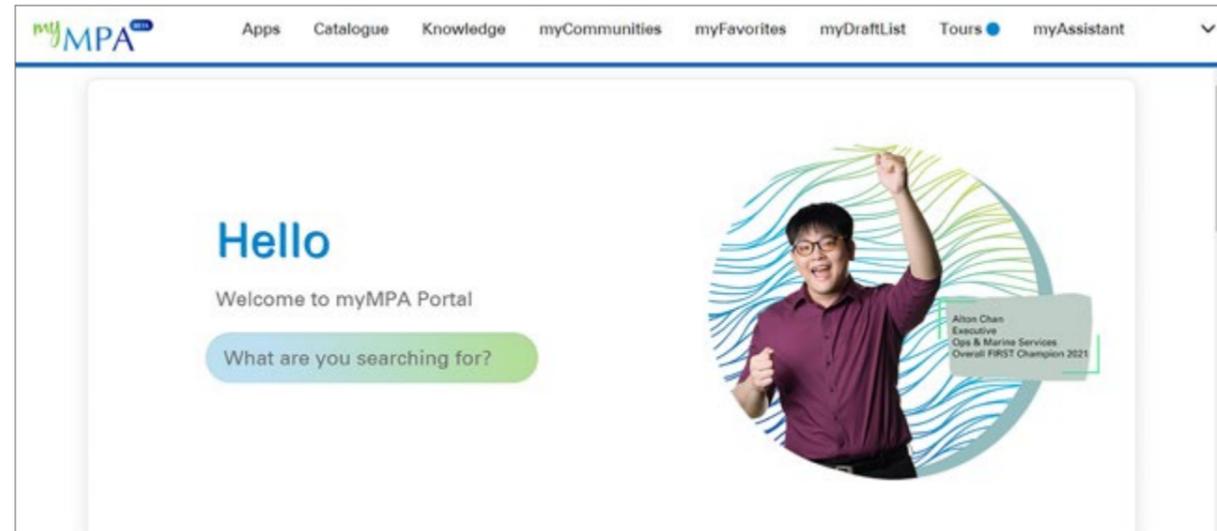
Enhanced E-Shipyard-Offshore System

MPA enhanced its system to prompt more timely renewal applications by sending system-generated status expiry reminders to eligible companies. This allowed concessionary port dues rates for eligible vessel calls to be applied.

Improving the Digital Workplace

MPA has been investing in improving our officers' digital workplace, so that our officers can be more productive, feel more empowered to drive improvements, collaborate online, and have a better overall digital experience. Remote working driven by the pandemic has made this investment all the more important.

Launch of the myMPA Portal

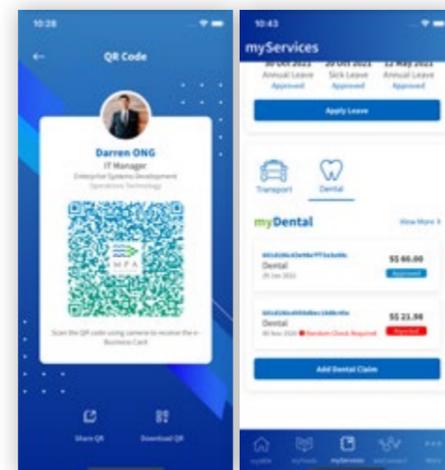


As part of the digital transformational efforts, MPA launched the beta release of its employee service portal, the myMPA portal, on 1 December 2021. The portal aims to create a brand new digital workplace experience for MPA staff, with an e-concierge to provide a one stop self-service portal for the full suite of employee services. It will also become the primary source of internal communications to allow staff to stay abreast of what is happening in MPA and remain connected with one another through its digital community space. The improved workflow capabilities built through this effort will help MPA accelerate its digitalisation efforts across the organisation, especially the corporate functions.

To be digital to the core, the consumption of IT services is expected to shoot up. Providing these services in an efficient and service-centric manner is thus important. The IT Service Management Portal will be an important part of MyMPA Portal, and will be released in 2022 as part of Phase 2 launch.

myMPA App

The myMPA App, launched in 2020, continues to be the mobile app for MPA officers to access corporate information and perform administrative functions such as applying for leave and claims while on-the-go. In the near future, myMPA app will be integrated to myMPA portal to allow officers to access and acknowledge workflows on-the-go. The app will also be updated every six months, the latest being released in December 2021. User statistics has shown a 40 per cent increase in transactions for both leave and transport claims since launch and at least 600 employees have downloaded the app.



Project CUMULUS

MPA embarked on Project CUMULUS led by the Accountant-General's Department, Public Service Division, and GovTech to onboard to a WOG cloud-based central corporate system where finance, human capital and payroll processes and systems are consolidated and standardised into Workday with other onboarded agencies. Workday will also improve user experience through a single platform and accessibility on-the-go. It is a one year project to be completed by Jul 2022 where officers from FPA, HRD and ITD are involved in the business process and IT system changes, and driving the user change management to support this WOG effort on Project CUMULUS.



Enhanced IT Support

With rising number of applications and systems to support MPA's growing business needs, an Application Helpdesk was set up in August 2021. The Application Helpdesk provides Level 1 support to users for MPA Applications starting with digitalPORT@SG™. The team also provides user access and identity management for all systems and applications.

In line with service excellence through IT support, the IT Care Centre has also performed well in FY2021. The IT Care Centre has deployed 207 laptops to users and closed



an average of 343 tickets per month with 90 per cent of users satisfied with IT services.

With the pandemic dictating the new normal of work, there was also a need to implement video conferencing capabilities that support meetings which require secured classifications. Secure Video Conferencing for meetings with classification was implemented at two meeting rooms at mTower in August 2021.

Government to Employee Satisfaction

The digital workplace transformation has led to improvement in overall employees' satisfaction with their Workplace ICT tools and services in the CY2020 Government to Employee (G2E) survey. MPA has achieved the target of 75-80 per cent with a score of 76.8 per cent, an increase of 17.5 per cent from CY2019 G2E survey results. Most improved in G2E satisfaction results were for support from

agency specific apps (+31 per cent), agency's helpdesk (+22 per cent), level of training (+21 per cent), searching for info (+20 per cent). Officers' have feedback that there were good IT support, timeliness and usefulness of information on workplace ICT tools, services have grown appreciably, and there were computing devices to support their work.

TALENTMPA

To meet both the career aspirations of our officers and the talent needs of the organisation, MPA develops our officers professionally and facilitate the progress of their careers in MPA and the Public Service.

MPA recognises the need to actively respond and adapt to an ever-changing workforce and environment. To enhance the adaptability of our workforce, MPA is moving from a role-based organisation to skill-based one.

With heavier demands on the officers due to COVID-19, both professionally and personally, well-being initiatives have also become more critical to mitigate the risk of burnouts.

TALENT ATTRACTIONS AND DEVELOPMENT

MPA adopts a multi-pronged approach to attract and develop the right people. Besides focusing on attracting suitable candidates from the external market, MPA also offers opportunities for MPA officers to acquire the skills and competencies for current and future jobs, through upskilling and job redesign efforts.

MPA continuously provides developmental opportunities for technical staff assessed to be ready for supervisory roles in operational technology domains. For instance, since the launch of the competency framework for port systems engineers in 2020, two of MPA's technical executives were successfully promoted to become assistant engineers in 2021. The framework successfully addressed the competency gap between technical support and engineering staff through a systematic process of competency development.

The Lifelong Employability and Accelerated Programme (LEAP) was also introduced to prepare MPA officers for the next phase of their career.

Our key achievements include the following:



In 2021, MPA clocked an average training hours of **188 hours** per officer.



Awarded **six overseas scholarships** as part of professional development/training.



17 officers were rotated under the structured job rotation, **five secondments, five sponsorships** and **14 officers** appointed to leadership positions.



Jobs were redesigned to allow progression of **four officers** from Grade 7A to Grade 9.



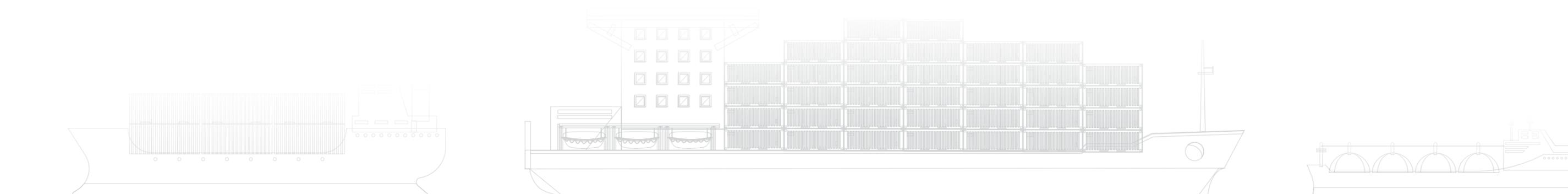
65% of our experienced officers made use of the **LEAP** for their next phase of working life and developmental needs.

Change Leaders Programme

The Change Leaders Programme aims to develop a core of middle managers to be change leaders equipped to drive transformation within MPA and become change agents who are able to adopt an agile mindset to tackle complex issues. A total of 28 Change Leaders and more than 50 team members have participated in 16 commissioned projects, which represented areas of high strategic priorities for MPA to advance its mission and transform the organisation from within.

A year on, there has been positive progress in the projects with action items being successfully incorporated into divisions' workplans and useful conversations facilitated in the different areas. There was strong camaraderie fostered in each team with members eager to drive positive change in MPA.

The Change Leaders Programme was a silver award winner in the Excellence in Leadership Development category at the MPA's HR Excellence Awards 2021.



Technical Training for MPA Staff

Technical training is a cornerstone of MPA staff development. To keep their skills updated, the MPA Academy organises training courses to develop the technical skills & functional competencies of MPA officers to enable them to perform their jobs effectively. In 2021, a total of about 650 officers attended 85 courses – about half of the courses were online.



MPA staff undergoing training courses to develop their technical skills and functional competencies at MPA Academy.

In January 2021, our Marine Surveyor training programme was successfully accredited by Institute of Marine Engineering, Science and Technology (IMarEST) after an assessment process that began in November 2020. The accreditation by IMarEST builds on the IALA Accreditation for Vessel Traffic Officer training which was attained in 2014. The accreditations are part of MPA Academy's efforts to deliver quality training while ensuring that our programmes are on par with international standards.

Training continued despite COVID-19 disruptions. To support continuous learning for our staff, classroom training was substituted with online learning where practicable. Otherwise, safe distancing measures were put in place for classroom training to ensure the safety of our officers. While e-learning was not new to MPA, the use of online learning was accelerated. A new e-learning system operated by online maritime training provider Ocean Technologies was introduced to our marine surveyors to complement their training. The new e-learning platform by Ocean Technologies features 142 learning modules and an easy-to-use mobile app covering topics such as risk management, cargo handling, marine engineering, environmental protection, safety and security to IMO conventions and ship operations.

MPA also organised functional training for staff to develop and hone their functional skills that are relevant in various work settings. Courses organised in 2021 included Tableau, Data Analytics, Design Thinking, Cyber Security (Phishing) as well as Video Analytics courses.

Staff Engagement

Engagement with staff continued on both virtual and hybrid platforms during the pandemic. Examples include CE's engagement with new officers, townhall sessions and wellness activities such as webinars on managing emotions and eating well.

- As part of LEAP's implementation, HR conducted two sessions to share how the programme can help officers enhance their lifelong employability.
- HR conducted a briefing session on the 2021 Employees' Agreement to share joint efforts between MPA and the Union to further enhance the welfare of MPA staff.

MPA also conducted a series of workshops to raise awareness of our HR policies and benefits:

- Performance Management 101: As part of the implementation of the enhanced performance management framework, two sessions were organised to communicate the enhancements and how they may impact staff. At the sessions, we also addressed staff's questions on performance management.
- Compensation 101: HR conducted three sharing sessions regarding MPA's Compensation Framework for officers to gain better understanding on compensation matters such as its philosophy, pay components and salary structure. During the session, HR also made clarifications and addressed staff questions.



HR Policy Reviews and Process Improvements

To maintain its edge as an employer of choice, MPA continually reviews market benchmark, management framework, remuneration and other benefits.

Some of the policy reviews and process excellence initiatives which were undertaken in the last 10 months included the following:

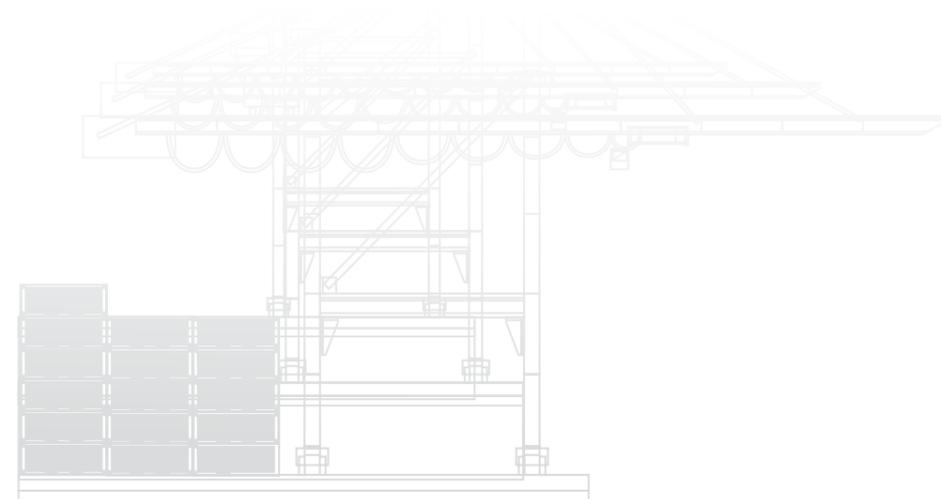
Policy Reviews	Process Improvements
<ul style="list-style-type: none"> • Reviewed Merit Increment (MI)/Performance Bonus (PB) matrices to align with market benchmark and new performance management framework • Reviewed the performance management policies • Reviewed the retirement policy in alignment to Public Service Division's policies 	<ul style="list-style-type: none"> • Implemented straight-through leave processing • Developed the electronic personnel files • Streamlined processes such as dental claims and employee self-service for leave approval in myMPA mobile app • Embarked on the initial phase of mapping HR processes, data verification and data migration under Project CUMULUS

MPA Cares

Our officers' wellbeing continues to be one of MPA's top priorities. With working conditions altered intensely due to the COVID-19 pandemic, the Senior Management Team reaffirmed their commitment to the CARE principles (**C**ommitment, **A**void working on rest/off days, **R**espect personal time, **E**ngage regularly). Regular engagement sessions, webinars, interactive activities, and workplace wellbeing survey have also been implemented to better engage and support our officers. In 2021, we have conducted more than 14 sessions of wellbeing and mindfulness programmes.

Labour Relations

MPA's relations with the Amalgamated Union of Statutory Board Employees (AUSBE) is built on trust and mutual understanding. We recognise the importance of the AUSBE in promoting good industrial relations for a harmonious and productive working environment, and to promote lifelong employability for our officers through continuous learning. In October 2021, MPA completed our Employees' Agreement with AUSBE which signifies another milestone in our partnership. MPA will continue to work closely with AUSBE to support and prepare our officers for Maritime Singapore's next chapter – that is, our exciting move to Tuas.



ONEMPA

The whole is greater than the sum of its parts. With MPA's operating environment becoming even more complex with digitalisation, decarbonisation and disruptions, MPA will continue to build a culture of collaboration and trust to further OneMPA. Apart from developing shared understanding of our organisation's priorities and challenges, we will also need to facilitate flow of knowledge, information and data in MPA to facilitate better decision making and innovation. We also continue to celebrate our achievements together, build collective pride in what we do, and deepen trust in one another.

Regular and Institutionalised Communication Channels

To encourage regular communication between employees and its senior management, MPA held three virtual townhall sessions to share MPA's policies on TalentMPA, OneMPA, decarbonisation and digitalisation. During these sessions, senior management updated staff on key developments in MPA and in the maritime

community. Staff were also given an opportunity to air their views and provide feedback. Besides the townhalls, which proved to be a useful and effective two-way communication channel, MPA also conducted informal dialogue sessions, and virtual chats for new hires to engage its officers and build camaraderie.



MPA Senior Management and staff gathered for a hybrid Townhall

MPA Workplan Seminar 2021

MPA held its first hybrid Workplan Seminar 2021 on 4 February 2021 at the Gardens By The Bay in conjunction with MPA's 25th Anniversary. The Workplan Seminar is an annual corporate event for MPA's management to share with staff and industry stakeholders on MPA's challenges and future aspirations.

The theme of the seminar "Charting the Next 25 Years of a Resilient, Agile and Sustainable Maritime Singapore" reflected MPA's aspirations to become a green global maritime hub with unparalleled connectivity, vibrant innovation, skilled talent, and a commitment to be future-ready. The seminar attracted more than 600 MPA staff, external stakeholders and industry partners.

Despite COVID-19, MPA has tackled the challenges, seized opportunities and emerged stronger as OneMPA



MPA Chief Executive, MPA Quah Ley Hoon presented a token of appreciation to Keynote Speaker Mr Peter Ho, Senior Advisor for Strategic Futures and Senior Fellow, Civil Service College.



MPA Senior Management discussed the future of MPA at the 2021 Workplan Seminar

Transform Newsletter

Launched in 2020, Transform continues to be the internal e-newsletter that provides staff with easy-to-digest big picture information and developments in MPA. This is in line with our efforts to build a culture where our people will be the first to hear about MPA news, organisational happenings and insights on the work undertaken by various divisions. In 2021, the newsletter went online on the MyMPA.



CY2020 IM4L Audit on Public Records

MPA achieved Band 1 for the CY2020 IM4L Audit on Public Records in Feb 2021. From coordinating administrative needs, to hosting and facilitating the conduct of interview sessions by the external auditors with the selected project officers across MPA divisions and MPA Chief Records Officer, and Finance, Procurement and Administration Division ensured adherence to good record management practices and processes during the preparation and the physical audit itself. These will continue as part of MPA processes. The exercise was important as it reinforced the discipline for officers to maintain records systematically to institutionalise the information and enable future search.

25th Anniversary Celebrations

MPA celebrated its 25th anniversary in 2021. Several events and activities were organised to mark the occasion. These included an exhibition at the Singapore Maritime Gallery (SMG), named "The Voyage", where visitors learnt more about the milestones in MPA's 25-year journey in partnering the industry and unions to build up the maritime sector in Singapore. Through immersive and interactive displays, the exhibition also offered visitors a glimpse into how MPA is working with other stakeholders to future-proof the industry through

maritime digitalisation, decarbonisation and more. The exhibition began on August 2021 and ended on 31 March 2022.

Throughout the year, MPA officers engaged in different activities and games as part of our 25th anniversary celebration. These culminated in the Staff Event on 12 October 2021, which was conducted in a hybrid manner in view of the then-prevailing Safe Distancing Measures. Nonetheless, that did not deter MPA officers from enjoying the occasion together. Around 400 MPA officers were able to connect with one another despite the physical constraints, celebrate the special occasion together as OneMPA, and felt energised as we look forward to the next 25 years.

To make the celebrations even more meaningful, MPA collaborated with its adopted charities MINDS and REACH Community Services to co-create the vessel artwork "Voyage: The Next 25 Years". The "sail" was constructed with patchworks individually designed and hand-sewn by MPA officers. The patchworks were then stitched together into four larger sails by REACH Community Services. MINDS then created the "fenders" on the hull using recycled materials. Together, "Voyage" embodied the journey as One Maritime Singapore and OneMPA to achieve our collective aspirations for the next 25 years.



Minister for Transport, S Iswaran, together with Chairman and Chief Executive of MPA, launched the MPA 25th Anniversary Exhibition in the Singapore Maritime Gallery.



Minister for Transport, S Iswaran and MPA Chairman, Niam Chiang Meng, launched the "Voyage" at the staff event on 12 October 2021.

The staff event also witnessed the debut of an original song composed by "The Castaways", a band consisting of talented officers from MPA's Vessel Traffic Management Department. The song, titled "Stronger Together", was inspired by the MPA spirit of keeping positive and resilient despite the challenges. The song reminded that MPA will, without a doubt, emerge "Stronger Together" as OneMPA, One Maritime Singapore.

At the Staff Event, MPA also launched the 25th Anniversary commemorative book "Anchor of Our Nation", tracing MPA's history from its establishment in 1996. The book captured the personal recollections of MPA's pioneers and its historic achievements as well as aspirations for the future for Maritime Singapore.

As part of MPA's 25th anniversary public engagement efforts, a social media campaign was also rolled out to share staff's personal anecdotes on how MPA had played its part to strengthen Maritime Singapore. MPA also conducted online games and giveaways to increase engagement among netizens. MPA also gave back to society by conducting activities with its beneficiaries, such as MINDS.



VIPs at the Vessel artwork "Voyage: The Next 25 Years".



The commemorative book "Anchor of Our Nation" captured MPA's 25-year journey through stories of our pioneers, photos and milestones.

Promoting Bonding and Interactions

Major festivities such as the Lunar New Year and National Day observance ceremony were celebrated together with senior management. These celebrations promoted bonding and interaction amongst MPA officers across divisions. In addition, the senior management team also visited frontline officers during public holidays to show their appreciation for employees working on shifts.



Giving Back as OneMPA

MPA continues to engage our two adopted charities, MINDS and REACH Community Services to give back to the community.



The MPA CARE Team partnered our charities to raise awareness of the intellectually disabled and the underprivileged. Although these events were mostly virtual, MPA has stepped up to the challenge to raise awareness and funds for these charities.



MPA supported REACH Community Services' virtual charity run in November 2021 and co-created the "Eat Happy, Eat Healthy" initiative, which included a virtual cooking session by our staff (broadcast virtually to the beneficiaries) to raise funds to donate and deliver food packs to bring warmth to the elderly during the year-end season. In a short span of time, we raised a total of 166 Christmas packs donation (\$8,300), beyond our initial target of 120. There were notes of appreciation from the seniors and also a special note from our Chief Executive to thank all contributors and volunteers.

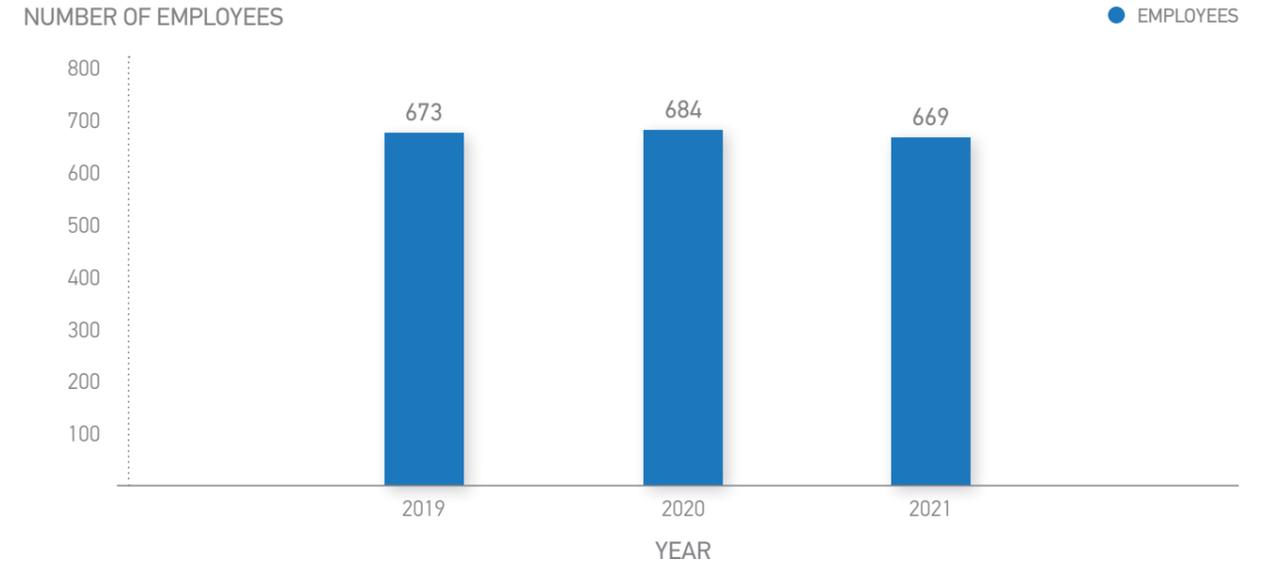
MPA also supported MINDS by purchasing their merchandise for Mother's Day and festive cookies. Due to the on-going COVID-19 pandemic, MPA provided PPEs and other supplies to MINDS to protect their staff and beneficiaries. MPA also worked with both charities to create a combined patchwork of sails titled "Voyage: The Next 25 Years".



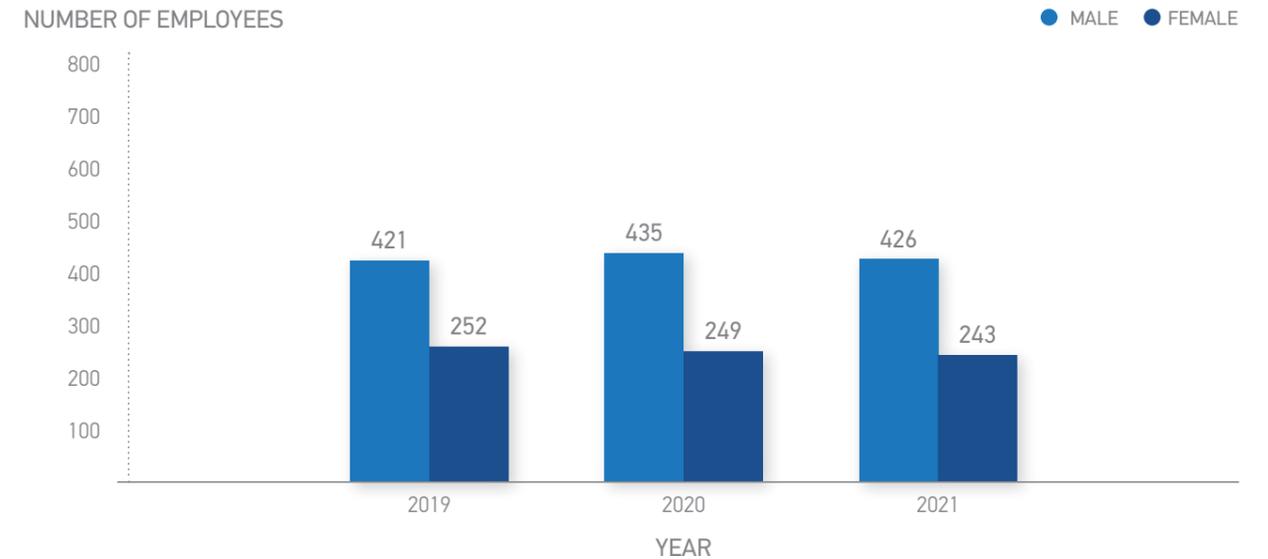
In recognition of our efforts, MPA was awarded both the SHARE Gold Award and President's Volunteerism & Philanthropy Awards for Organisation of Good (Public Institution) Category.

FY2021 EMPLOYEE DEMOGRAPHICS

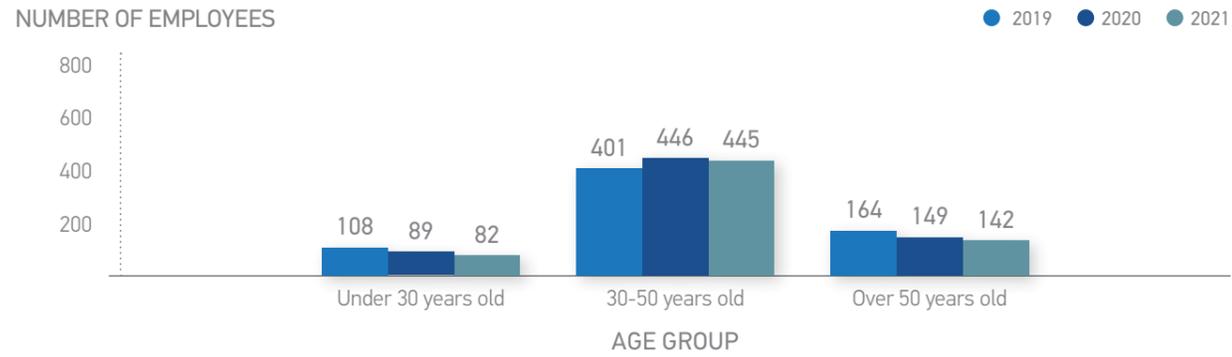
TOTAL NUMBER OF EMPLOYEES



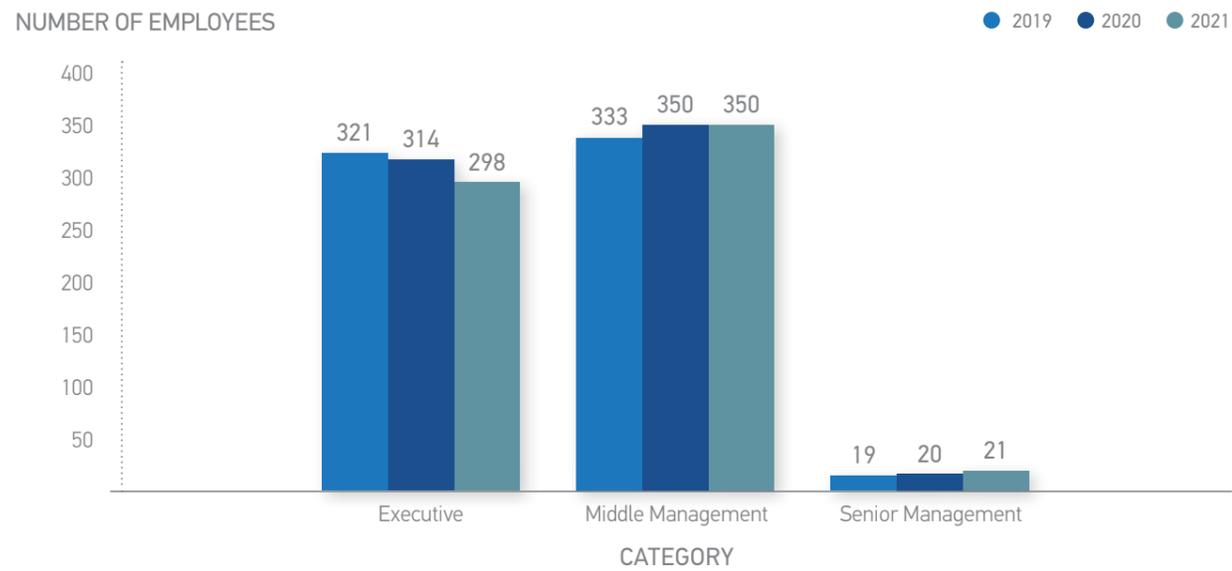
TOTAL NUMBER OF EMPLOYEES BY GENDER



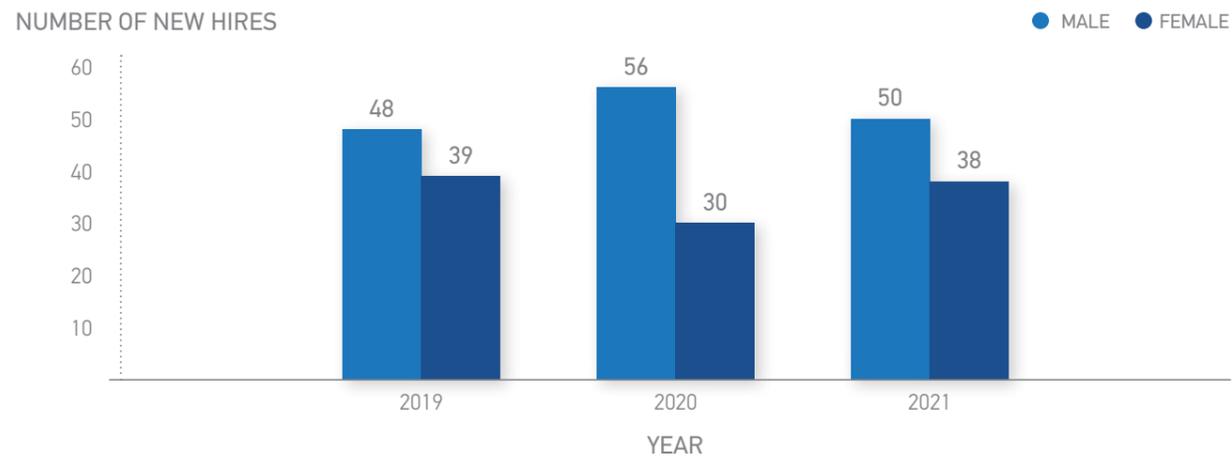
TOTAL NUMBER OF EMPLOYEES BY AGE GROUP



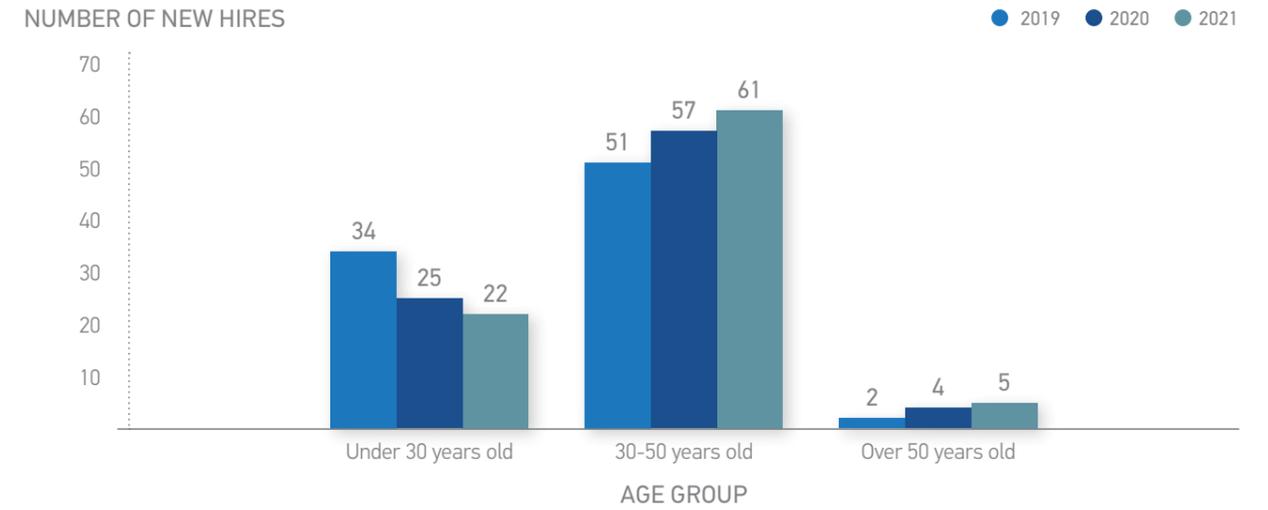
TOTAL NUMBER OF EMPLOYEES BY EMPLOYEE CATEGORY



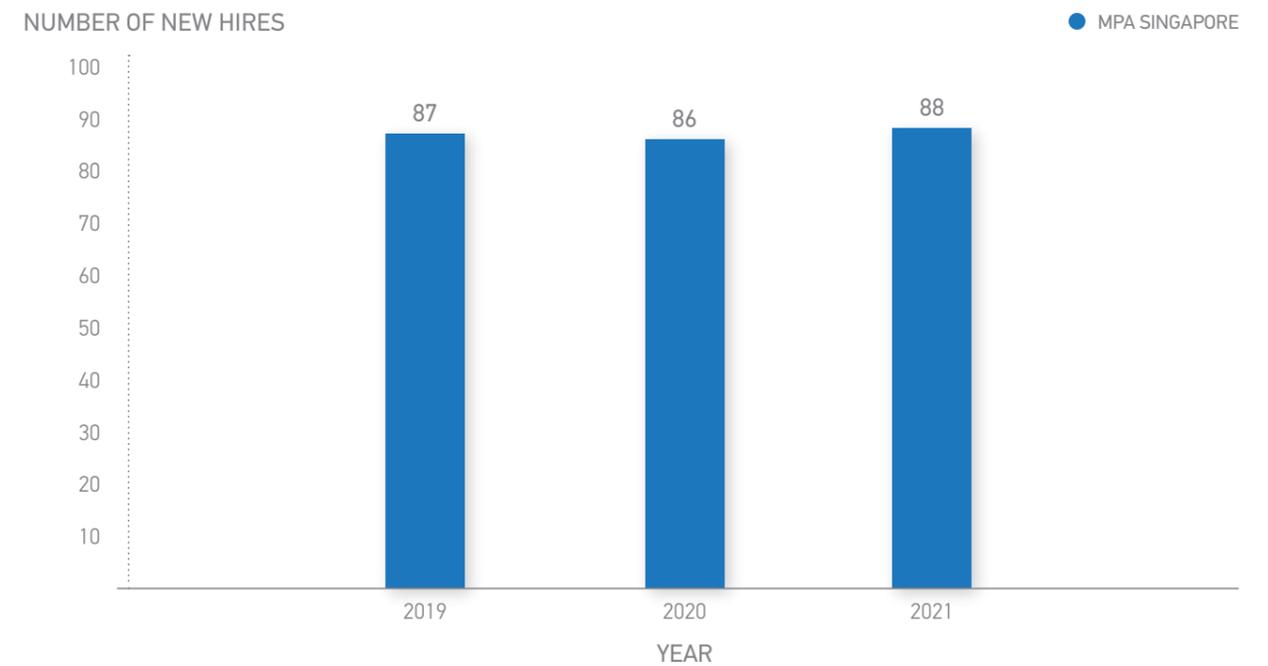
TOTAL NUMBER OF NEW HIRES BY GENDER



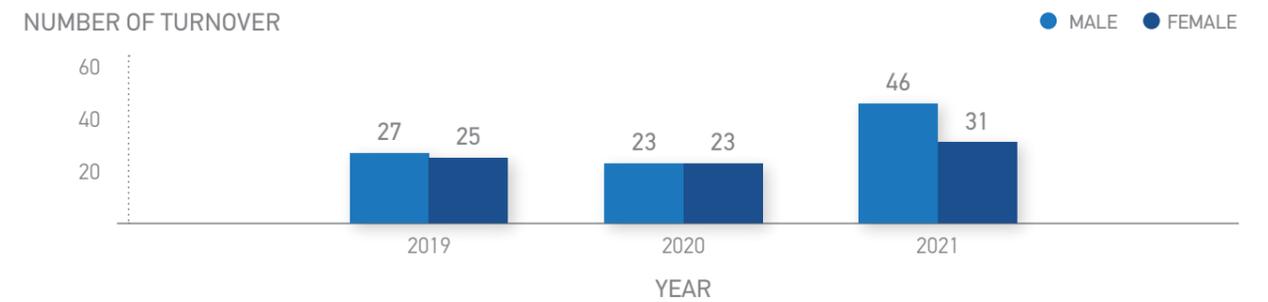
TOTAL NUMBER OF NEW HIRES BY AGE GROUP



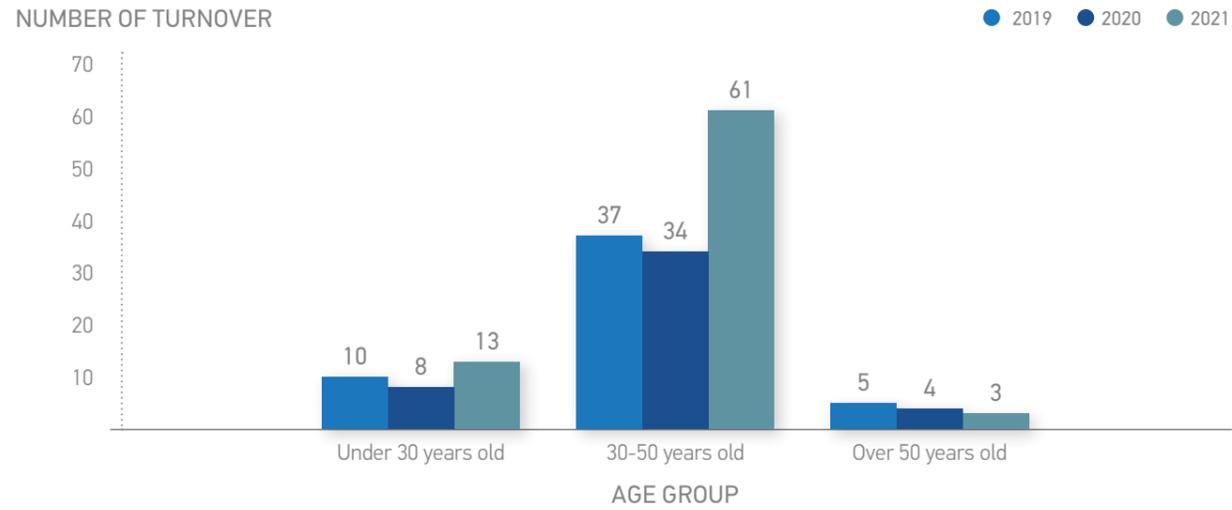
TOTAL NUMBER OF NEW HIRES BY REGION



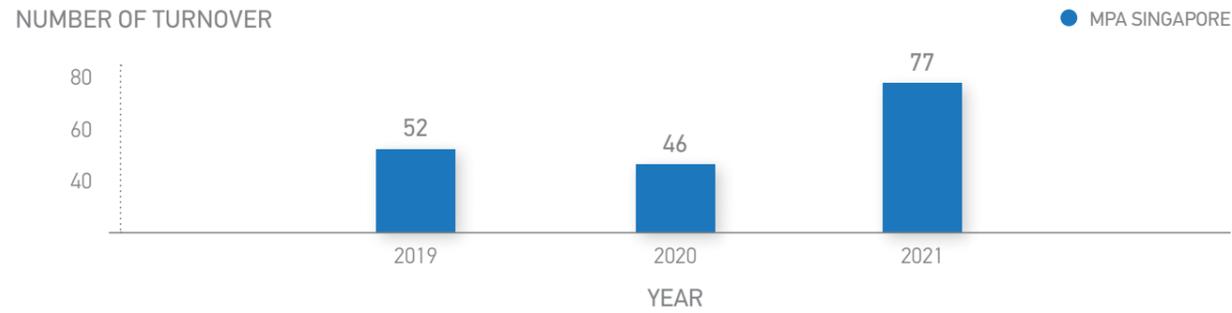
TOTAL NUMBER OF TURNOVER BY GENDER



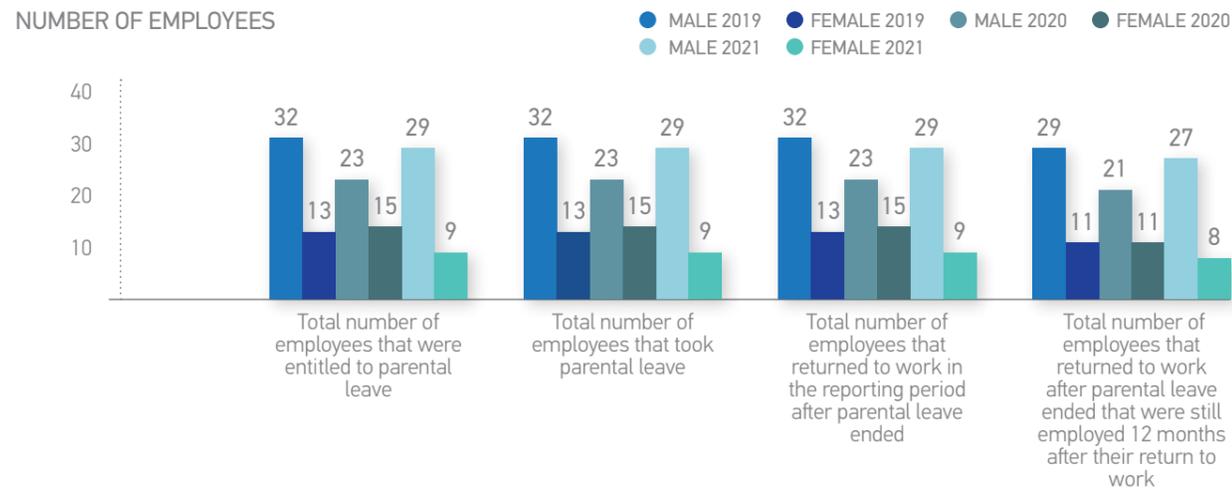
TOTAL NUMBER OF TURNOVER BY AGE GROUP



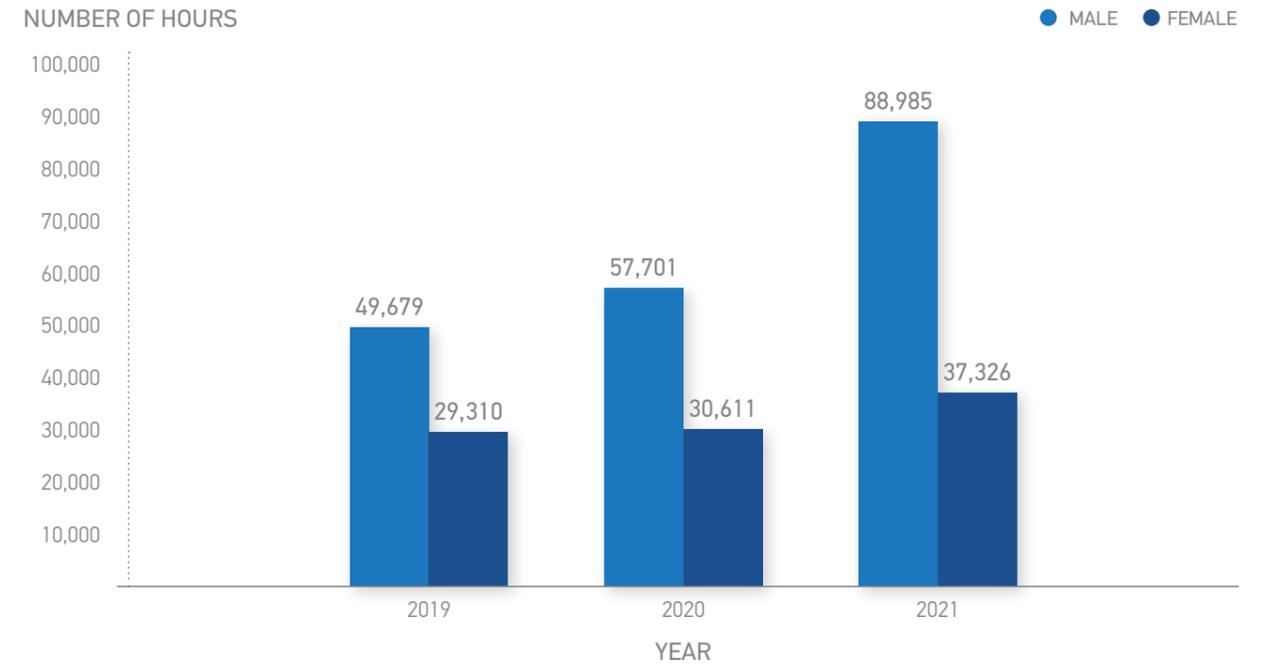
TOTAL NUMBER OF TURNOVER BY REGION



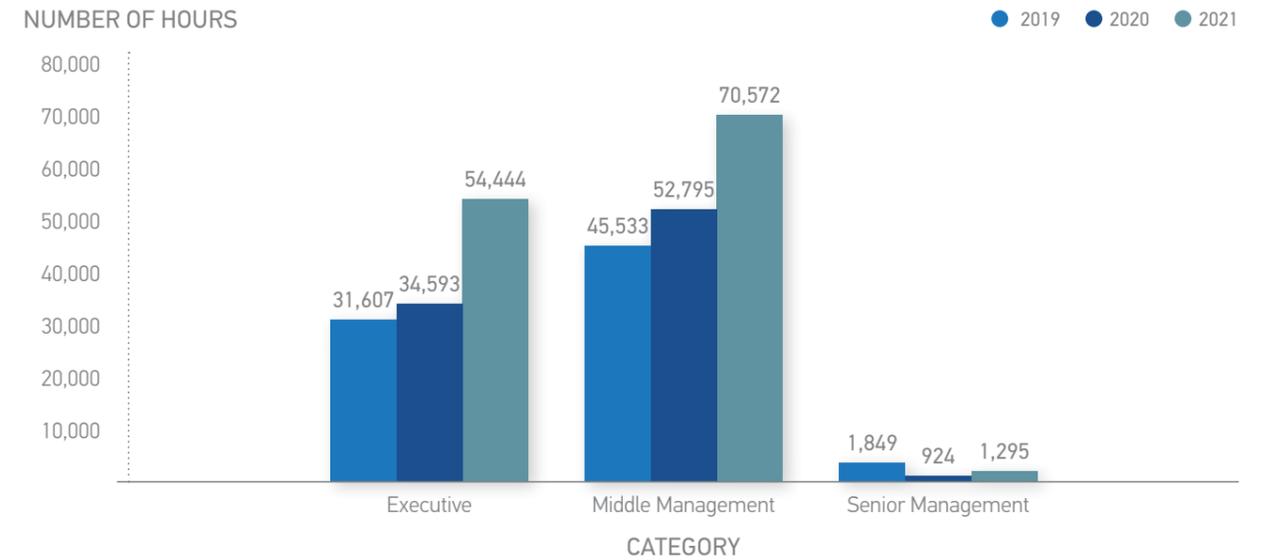
PARENTAL LEAVE



TRAINING HOURS PER EMPLOYEE BY GENDER



TRAINING HOURS PER EMPLOYEE BY EMPLOYEE CATEGORY



GLOSSARY

Term & Abbreviation	Definition	Page(s)
Amalgamated Union of Statutory Board Employees (AUSBE)	AUSBE looks after the interests of employees across 12 statutory boards, including MPA.	82, 89
Asia-Pacific Economic Cooperation (APEC)	APEC is an intergovernmental forum established in 1989 comprising 21 member economies in the Pacific Rim. It promotes free trade in the Asia-Pacific region.	51
Association of Southeast Asian Nations (ASEAN)	ASEAN is a regional organisation established in 1967 that comprises 10 Member States. It promotes regional peace and stability while accelerating economic growth, social progress and cultural development in the region.	79
Bill of lading	A bill of lading is a document issued by a carrier to acknowledge the receipt of cargo for shipment. It is used as a contract for the movement of cargo.	4
Classification society	A classification society carries out statutory surveys and issues certificates to Singapore-registered ships on behalf of MPA.	3, 27, 36, 71
COVID-19 Polymerase Chain Reaction (PCR) test	A COVID-19 PCR test is performed to detect genetic material from a specific organism such as a virus	27
digitalOCEANS™	digitalOCEANS™ is an interoperable platform and information hub that facilitates cross-border data exchanges and automated services across supply chain players, clearance authorities and national single windows.	4
digitalPORT@SG™	digitalPORT@SG™ is a maritime single window that serves as a one-stop portal for maritime regulatory and port services transactions.	3, 4, 47, 77, 85
Enterprise Singapore (ESG)	ESG is a statutory board under the Ministry of Trade and Industry. It champions enterprise development by working with companies to build capabilities, innovate and internationalise. In addition to serving as the national standards and accreditation body, ESG supports the growth of Singapore as a hub for global trading and start-ups.	78
FIRST values	MPA's FIRST values are forward thinking, integrity, respect, service excellence and teamwork.	70
GeoSpace-Sea	GeoSpace-Sea is a new national marine spatial data infrastructure that harmonises Singapore's marine and coastal geospatial data and information from various sources. It combines hydrographic data, marine environmental data, coastline details and habitat information to produce a comprehensive visual representation of Singapore's sea space.	32, 75, 76
Global Reporting Initiative Sustainability Reporting Standards (GRI Standards)	GRI Standards create a common language for organisations to report on their sustainability impact in a consistent and credible manner. It enhances global comparability and helps organisations to be transparent and accountable.	18
Greenhouse gas (GHG)	GHGs are natural and anthropogenic gaseous constituents of the atmosphere that absorb and re-emit infrared radiation.	4, 42, 43, 57, 58, 59, 60
IMO 2020 regulations	The IMO 2020 regulations impose a 0.50 per cent global sulphur cap on marine fuel with the aim of cutting sulphur oxide emissions. The regulations kicked in on 1 January 2020.	38
Institute of Marine Engineering, Science and Technology (IMarEST)	IMarEST is the international membership body and learned society for marine professionals operating in the spheres of marine engineering, science and technology.	88
Integrated Reporting <IR>	<IR> outlines how an organisation's strategy, governance, performance and prospects lead to value creation over time.	0
International Advisory Panel on Maritime Decarbonisation (IAP)	The IAP was established by the Singapore Maritime Foundation with the support of MPA to make recommendations on decarbonising Singapore's maritime industry. It is co-chaired by Mr Andreas Sohmen-Pao and Mr Wong Weng Sun.	56
International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA)	IALA is a non-profit international technical association established in 1957 to facilitate the harmonisation of marine aids to navigation worldwide. It promotes the safe, expeditious and cost-effective movement of vessels.	42, 43, 44, 88

Term & Abbreviation	Definition	Page(s)
International Association of Ports and Harbors (IAPH)	IAPH is the global trade association for seaports worldwide. It is headquartered in Tokyo, Japan.	74, 81
International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	STCW, which was established in 1978, sets the minimum qualifications for masters, officers and watch personnel on seagoing merchant ships and large yachts.	28
International Hydrographic Organization (IHO)	The IHO is an intergovernmental organisation that champions the survey and charting of the world's seas, oceans and navigable waters. Established in 1921, it coordinates the activities of national hydrographic offices and promotes uniformity in nautical charts and documents. It issues survey best practices, provides guidelines to maximise the use of hydrographic survey data and develops the hydrographic capabilities of Members States.	42, 43, 54
International Maritime Centre (IMC)	An IMC provides a comprehensive range of high-quality maritime services.	14, 39, 41, 52
International Maritime Organization (IMO)	The IMO is a specialised United Nations agency that sets global regulatory standards for the safety, security and environmental performance of international shipping.	3, 38, 42, 43, 44, 46, 47, 58, 59, 88
Internship Reimbursement Scheme	The Internship Reimbursement Scheme encourages maritime companies to continue offering internships to local students despite the challenges arising from the COVID-19 pandemic. MPA co-funds 50 per cent of the internship allowances paid by maritime companies, capped at S\$500 per intern per month for up to six months.	63
Jurong Port Pte Ltd	Jurong Port Pte Ltd operates the only multi-purpose port in Singapore that handles bulk, break-bulk and containerised cargo.	11, 29
Liquefied natural gas (LNG)	LNG is a natural gas that has been converted to liquid form for ease of storage or transport.	3, 59
Maritime Cluster Fund (MCF)	The MCF facilitates the growth of Singapore's maritime cluster in the areas of business and manpower development as well as productivity improvements.	40
Maritime Innovation and Technology (MINT) Fund	The MINT Fund supports the growth of Singapore's maritime innovation and technology ecosystem. It aims to grow the competitiveness of the Port of Singapore, build technological capabilities in niche areas of the maritime industry and transform the sector into a highly productive and innovative cluster by leveraging cutting-edge technologies.	4, 10, 55
MaritimeSG Together Package	The S\$27 million MaritimeSG Together Package comprises a series of relief measures that MPA put together to support maritime companies, employees and seafarers in the wake of the COVID-19 outbreak.	4, 28, 63
Mass flow meter	A mass flow meter is a device that measures the flow rate through a tube by mass per unit time.	76
National Maritime Safety at Sea Council	The National Maritime Safety at Sea Council was established in 2015 to drive maritime safety sustainably on a national level.	37
"NextGEN" ("Green and Efficient Navigation")	"NextGEN" is a concept for a collaborative global ecosystem of maritime decarbonisation initiatives. It facilitates information sharing on decarbonization initiatives across the industry, academia and Member States of the International Maritime Organization. "NextGEN" also identifies opportunities for decarbonisation in the maritime industry and creates platforms for collaborations.	58
Port Authorities Roundtable (PAR)	PAR is a by-invitation event for representatives of leading port authorities. Inaugurated by MPA in 2015, it facilitates discussions to address issues of common interests, exchange best practices and seek mutually beneficial collaboration opportunities.	42, 45
Port of Singapore	The Port of Singapore refers to the collective facilities and terminals that conduct maritime trade and handle shipping in Singapore.	0, 3, 4, 14, 15, 18, 21, 24, 32, 33, 38, 59, 64, 74, 77
Port Operations Control Centre	The Port Operations Control Centre monitors vessels plying the Singapore Strait using the Vessel Traffic Information System, which has the capability of tracking up to 10,000 vessels at any one time.	34, 51, 73

Term & Abbreviation	Definition	Page(s)
PSA Corporation Ltd (PSAC)	PSAC (the corporate successor to the Port of Singapore Authority) was established in 1997 to manage and commercially operate container terminals and related businesses in the Port of Singapore.	11, 29
PSA International (PSA)	PSA International (PSA) is a leading port group with port projects spanning across Asia, Europe and America. It is the investment holding company for PSA's group of businesses worldwide.	72
Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP)	ReCAAP is the first regional government-to-government agreement to promote and enhance cooperation against piracy and armed robbery of ships in Asia. It has 20 Contracting Parties.	45
ReCAAP Information Sharing Centre (ISC)	Based in Singapore, the ReCAAP ISC is the executive unit of ReCAAP that conducts timely and accurate information sharing on incidents of piracy and sea robbery.	45
Safety@Sea	Safety@Sea is an industry-wide effort to raise awareness of safe practices and inculcate a safety-first culture at sea.	0, 32, 37
Singapore Maritime Foundation (SMF)	SMF forges dialogue and cooperation amongst diverse private and public maritime stakeholders to strengthen Singapore's maritime ecosystem. It also conducts outreach activities to grow awareness of Singapore's maritime industry.	29, 63, 65, 66
Singapore Maritime Institute (SMI)	SMI charts the maritime research strategy and promotes industry-academia R&D collaborations in Singapore.	29
Singapore Maritime Officers' Union (SMOU)	SMOU is a global union established in 1951 to safeguard the interests and well-being of seafaring officers.	28, 29
Singapore Nautilus	Singapore Nautilus is MPA's corporate publication. Available online, in print and via smartphone app SG Nautilus, Singapore Nautilus shares up-to-date and engaging content on the maritime sector.	67
Singapore Organisation of Seamen (SOS)	SOS represents seamen in promoting sound industrial relations.	25, 28, 71, 72, 78
Singapore Registry of Ships (SRS)	The SRS is the administration responsible for the registration of ships sailing under the Singapore Flag. It ensures that ships and owners meet the stringent criteria for registration.	0, 4, 15, 16, 36, 56
Singapore Shipping Association (SSA)	SSA is a national trade association that represents shipping companies and businesses allied to the shipping industry. It promotes the interests of its members and enhances the competitiveness of Singapore as an international maritime centre.	11, 25, 28, 56, 58, 71, 78
Singapore Shipping Tripartite Alliance Resilience (SG-STAR) Fund	The SG-STAR Fund is the first global ground-up tripartite initiative that reaches out to stakeholders in seafaring nations on the implementation of safe crew change practices and the development of solutions for crew change.	25
Smart Port Challenge (SPC)	SPC is an annual competition for global technology start-ups to address challenge statements shared by maritime companies. It is a core programme of PIER71, a collaboration between MPA and NUS Enterprise, the entrepreneurial arm of the National University of Singapore (NUS).	55
SmartEntry@Sea	SmartEntry@Sea is a digital platform introduced by MPA to facilitate contact tracing of shore-based personnel who regularly board and work on ships in Singapore's anchorages. Using SmartEntry@Sea, workers scan a unique QR code to provide information on the ships they are boarding.	0, 26, 76
The Nautical Institute	The Nautical Institute is a non-governmental organisation with consultative status at the International Maritime Organization. It represents the interests of its members and promotes professionalism, best practice and safety in the maritime industry.	37
Throughput	Throughput is the amount of material or items passing through a system or process.	3, 17
Tuas Port	Tuas Port will be a digital and automated port capable of handling up to 65 million twenty-foot equivalent units annually. It will cater for the future growth in container-handling demand when completed by the 2040s.	1, 3, 12, 50, 51, 66, 75, 76

Term & Abbreviation	Definition	Page(s)
Twenty-foot equivalent unit (TEU)	TEU is a standard unit for describing a ship or terminal's cargo-carrying capacity.	3, 17, 50
United Nations (UN)	The UN is an intergovernmental organisation that maintains international peace and security, develops friendly relations amongst nations, fosters international cooperation and facilitates the harmonisation of actions amongst nations.	18, 43, 54, 56
United Nations Sustainable Development Goals (UN SDGs)	The UN SDGs are a set of 17 interconnected goals adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.	0, 18
Vessel Traffic Services (VTS)	VTS are established by harbour and port authorities to maintain the safety and efficiency of vessel traffic. They interact with the traffic and respond to vessel traffic situations.	44

APPROACH TO INTEGRATED REPORTING

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D. Risks and opportunities	Key Material Issues	18-19
E. Strategy and resource allocation	Chairman's Message	3
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	FY2021 Financial Statements - published separately	-
G. Outlook	Chairman's Message	3
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H. Basis of preparation and presentation	About This Report	0
	Key Material Issues	18-19
	Statutory Board Financial Reporting Standards (FY2020 Financial Statements) - published separately	-

GRI CONTENT INDEX



For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.

GRI Standard	Disclosure Number	Disclosure Title	References/Remarks
GENERAL DISCLOSURES			
1. Foundation			
GRI 101: Foundation 2016	101		GRI 101 does not include any disclosure
2. Organizational Profile			
GRI 102: General Disclosures 2016	102-1	Name of the organization	Maritime and Port Authority of Singapore (MPA)
	102-2	Activities, brands, products, and services	pg. 14-15
	102-3	Location of headquarters	Singapore
	102-4	Location of operations	Singapore
	102-5	Ownership and legal form	MPA is a statutory board under the Ministry of Transport since 1996.
	102-6	Markets served	pg. 14-15
	102-7	Scale of the organization	pg. 14-15, 95. FY2021 Financial Statements.
	102-8	Information on employees and other workers	pg. 95-96. All employees are based in Singapore. Only two employees are on temporary contracts.
	102-9	Supply chain	pg. 73
	102-10	Significant changes to the organization and its supply chain	No significant changes to the organisation and its supply chain during the reporting period.
	102-11	Precautionary principle or approach	Pg. 18-19
	102-12	External initiatives	pg. 29, 36-38, 39-41, 42-47, 50-51, 52-55, 58-59, 65-67, 73, 92-94
	102-13	Membership of associations	pg. 35-38, 42-47
3. Strategy			
GRI 102: General Disclosures 2016	102-14	Statement from senior decision-maker	pg. 2-5
	102-15	Key impacts, risks, and opportunities	pg. 2-5, 18-21
4. Ethics and Integrity			
GRI 102: General Disclosures 2016	102-16	Values, principles, standards, and norms of behavior	pg. 70
	102-17	Mechanisms for advice and concerns about ethics	pg. 70, 88
5. Governance			
GRI 102: General Disclosures 2016	102-18	Governance structure	pg. 10-13
	102-19	Delegating authority	pg. 10-13
	102-20	Executive-level responsibility for economic, environmental, and social topics	pg. 10-11
	102-21	Consulting stakeholders on economic, environmental, and social topics	pg. 29, 36-38, 39-41, 42-47, 50-51, 52-55, 58-59, 65-67, 70-73, 88, 90, 94
	102-22	Composition of the highest governance body and its committees	pg. 10-13
	102-23	Chair of the highest governance body	pg. 10-13
	102-24	Nominating and selecting the highest governance body	pg. 10-13
	102-25	Conflicts of interest	pg. 75, 78
	102-26	Role of highest governance body in setting purpose, values, and strategy	pg. 10-13
	102-27	Collective knowledge of highest governance body	pg. 10-13

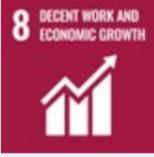
GRI Standard	Disclosure Number	Disclosure Title	References/Remarks
	102-28	Evaluating the highest governance body's performance	pg. 10-11. The Board plays a non-executive role.
	102-29	Identifying and managing economic, environmental, and social impacts	pg. 10-11, 18-19
	102-30	Effectiveness of risk management processes	pg. 10-11, 18-19
	102-31	Review of economic, environmental, and social topics	pg. 10-11, 18-19
	102-32	Highest governance body's role in sustainability reporting	pg. 10-11, 12-13
	102-33	Communicating critical concerns	pg. 70, 90
	102-34	Nature and total number of critical concerns	pg. 70, 90
	102-35	Remuneration policies	pg. 10-11
	102-36	Process for determining remuneration	pg. 10-11, 88
	102-37	Stakeholders' involvement in remuneration	pg. 10-11, 88, 90
	102-38	Annual total compensation ratio	MPA does not measure this disclosure specifically. As MPA is a statutory board, compensation policies are aligned with the guidelines of Public Service Division.
	102-39	Percentage increase in annual total compensation ratio	MPA does not measure this disclosure specifically. As MPA is a statutory board, compensation policies are aligned with the guidelines of Public Service Division.
	6. Stakeholder Engagement		
GRI 102: General Disclosures 2016	102-40	List of stakeholder groups	pg. 71
	102-41	Collective bargaining agreements	pg. 89
	102-42	Identifying and selecting stakeholders	"Stakeholders are entities or individuals that can reasonably expect to be significantly affected by MPA's activities, or whose actions can reasonably expect to affect the ability of MPA to successfully implement its strategies and achieve its objectives. In determining key stakeholders, MPA considers their interests in sustainability, potential influence, as well as the extent to which MPA's activities can impact them."
	102-43	Approach to stakeholder engagement	pg. 29, 36-38, 39-41, 42-47, 50-51, 52-55, 58-59, 65-67, 70-73, 88, 90, 94
	102-44	Key topics and concerns raised	pg. 29, 36-38, 39-41, 42-47, 50-51, 52-55, 58-59, 65-67, 70-73, 88, 90, 94
	7. Reporting Practice		
GRI 102: General Disclosures 2016	102-45	Entities included in the consolidated financial statements	FY2021 Financial Statements
	102-46	Defining report content and topic Boundaries	pg. 1
	102-47	List of material topics	pg. 18-19
	102-48	Restatements of information	For FY2020, the Electricity Consumption is 4,361,390kWh. The Energy Intensity remains at 0.0183 and GHG Emission is 1,781,628kgCO2. Paper collected for recycling remains at 7,910kg.
	102-49	Changes in reporting	There were no significant changes in the list of material issues and topic boundaries from MPA's previous Sustainability/Integrated Report.
	102-50	Reporting period	Jan 2021 to Dec 2021
	102-51	Date of most recent report	MPA's previous Sustainability/Integrated Report for FY2020 was published on 13 July 2021.
	102-52	Reporting cycle	MPA publishes its Sustainability/Integrated Reports annually.
	102-53	Contact point for questions regarding the report	pg. 1
	102-54	Claims of reporting in accordance with the GRI Standards	pg. 1
	102-55	GRI content index	GRI Content Index on pg. 104
102-56	External assurance	MPA has not sought external assurance for this report.	

GRI Standard	Disclosure Number	Disclosure Title	References/Remarks
Safe, Efficient and Sustainable Global Hub Port			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	pg. 18-19
	103-2	The management approach and its components	pg. 24-29, 32-38, 39-41, 50-51, 52-55, 56-61
	103-3	Evaluation of the management approach	pg. 24-29, 32-38, 39-41, 50-51, 52-55, 56-61
GRI 415: Public Policy 2016	415-1	Political contributions	MPA does not make any financial or in-kind political contributions.
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	MPA does not currently measure this disclosure.
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	MPA did not observe any non-compliance issues during this reporting period.
Economic Contribution			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	pg. 18-19
	103-2	The management approach and its components	pg. 39-41, 50-51, 52-55, 62-64
	103-3	Evaluation of the management approach	pg. 39-41, 50-51, 52-55, 62-64
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	pg. 39-41, 50-51, 52-55, 62-64
	203-2	Significant indirect economic impacts	pg. 39-41, 50-51, 52-55, 62-64
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	MPA does not currently measure this disclosure.
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	MPA does not currently measure this disclosure.
	205-2	Communication and training about anti-corruption policies and procedures	MPA does not currently measure this disclosure.
	205-3	Confirmed incidents of corruption and actions taken	There were no incidents of corruption during this reporting period.
Environmental Sustainability			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	pg. 18-19
		The management approach and its components	pg. 50-51, 56-61
	103-3	Evaluation of the management approach	pg. 50-51, 56-61
GRI 302: Energy 2016	302-1	Energy consumption within the organization	pg. 60
	302-2	Energy consumption outside of the organization	MPA does not currently measure this disclosure.
	302-3	Energy intensity	pg. 60
	302-4	Reduction of energy consumption	MPA does not currently measure the reduction of energy consumption from specific initiatives.
	302-5	Reductions in energy requirements of products and services	MPA does not currently measure the reduction in energy requirements of products and services.
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	pg. 50-51, 61
	303-2	Management of water discharge-related impacts	MPA does not discharge water except for general office sewage.
	303-3	Water withdrawal	MPA's water use, mainly for its office premises, comes from PUB, Singapore's National Water Agency.
	303-4	Water discharge	MPA does not discharge water except for general office sewage.
	303-5	Water consumption	pg. 61

GRI Standard	Disclosure Number	Disclosure Title	References/Remarks
GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	pg. 50-51
	304-2	Significant impacts of activities, products, and services on biodiversity	"For the reclamation of Tuas Port, MPA conducted environmental impact assessments and adhered to strict environmental quality objectives to protect marine biodiversity. Where applicable, MPA has reported its responsibilities and initiatives in managing the impact on biodiversity brought about by the activities of Singapore's maritime industry."
	304-3	Habitats protected or restored	MPA's operations do not affect protected areas.
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	MPA's operations do not affect IUCN Red List species and national conservation list species.
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	MPA is still reviewing its GHG emissions for scope 1.
	305-2	Energy indirect (Scope 2) GHG emissions	pg. 60
	305-3	Other indirect (Scope 3) GHG emissions	MPA does not currently measure GHG emissions outside of its organisation.
	305-4	GHG emissions intensity	pg. 60
	305-5	Reduction of GHG emissions	pg. 60
		Emissions of ozone-depleting substances (ODS)	MPA's operations do not emit ODS.
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	MPA's operations do not emit Nox, SOx or other significant air emissions.
International Support and Community Engagement			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	pg. 18-19
	103-2	The management approach and its components	pg. 42-47, 62-64, 94
	103-3	Evaluation of the management approach	pg. 42-47, 62-64, 94
GRI 202: Market Presence 2016	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	The Ministry of Manpower does not prescribe minimum wage for workers in Singapore, whether local or foreign.
	202-2	Proportion of senior management hired from the local community	All members of MPA's Senior Management Team are hired locally from Singapore.
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	pg. 29, 36-38, 39-41, 42-47, 50-51, 52-55, 58-59, 65-67, 70-73, 88, 90, 94. While MPA reports on local community engagements, impact assessments and development programs, it does not currently measure the percentage of operations involved in these activities.
	413-2	Operations with significant actual and potential negative impacts on local communities	MPA did not observe significant actual/potential negative impact on local communities that arose from its operations during the reporting period.
Financial Sustainability			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	pg. 18-19
	103-2	The management approach and its components	FY2021 Financial Statements
	103-3	Evaluation of the management approach	FY2021 Financial Statements
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	FY2021 Financial Statements
	201-2	Financial implications and other risks and opportunities due to climate change	MPA does not currently assess the direct financial implications due to climate change.
		Defined benefit plan obligations and other retirement plans	Not applicable as MPA is a statutory board.
	201-4	Financial assistance received from government	Not applicable as MPA is a statutory board.

GRI Standard	Disclosure Number	Disclosure Title	References/Remarks
Our People and Culture			
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	pg. 18-19
	103-2	The management approach and its components	pg. 72-82, 83-99
	103-3	Evaluation of the management approach	pg. 72-82, 83-99
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	pg. 96-98
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	MPA provides pro-rated benefits to its part-time employees.
	401-3	Parental leave	pg. 98
GRI 402: Labor/Management Relations 2016	402-1	Minimum notice periods regarding operational changes	When operational changes occur, MPA gives employees as much notice as it can.
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	pg. 82
	403-2	Hazard identification, risk assessment, and incident investigation	pg. 82
	403-3	Occupational health services	pg. 82
	403-4	Worker participation, consultation, and communication on occupational health and safety	pg. 90
	403-5	Worker training on occupational health and safety	pg. 82, 90
	403-6	Promotion of worker health	pg. 82
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	pg. 82
	403-8	Workers covered by an occupational health and safety management system	pg. 82
	403-9	Work-related injuries	pg. 82
	403-10	Work-related ill health	No work-related ill health incidents reported in FY2021.
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	pg. 99
		Programs for upgrading employee skills and transition assistance programs	pg. 83-88
	404-3	Percentage of employees receiving regular performance and career development reviews	pg. 88

UN-SDGS INDEX

Goal	Target Indicator	Section	Pages		
 4 QUALITY EDUCATION Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.4	By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Chapter 8: An exciting and rewarding career for all Chapter 11: Choice employer	62-64 83-99	
	4.7	By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping	56-61	
 7 AFFORDABLE AND CLEAN ENERGY Ensure access to affordable, reliable, sustainable and modern energy for all	7.3	By 2030, double the global rate of improvement in energy efficiency	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping	56-61	
 8 DECENT WORK AND ECONOMIC GROWTH Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro-, small- and medium-sized enterprises, including through access to financial services	Chapter 3: Singapore as a leading international maritime centre Chapter 5: Tuas port-anchoring Singapore's position as a global hub port Chapter 6: Harness innovation as a new wave of growth	39-41 50-51 52-55	
		8.5	By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	Chapter 8: An exciting and rewarding career for all	62-64
		8.6	By 2020, substantially reduce the proportion of youth not in employment, education or training	Chapter 8: An exciting and rewarding career for all	62-64
		8.8	Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment	Chapter 8: An exciting and rewarding career for all	62-64
				Chapter 8: An exciting and rewarding career for all	62-64

Goal	Target Indicator	Section	Pages	
 <p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	9.1	Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	Chapter 2: Strengthening port operations, enhancing safety 32-38	
		Chapter 6: Harness innovation as a new wave of growth 52-55		
		Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61		
	9.4	By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	Chapter 2: Strengthening port operations, enhancing safety 32-38	
		Chapter 6: Harness innovation as a new wave of growth 52-55		
		Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61		
9.5	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending	Chapter 6: Harness innovation as a new wave of growth 52-55		
 <p>Make cities and human settlements inclusive, safe, resilient and sustainable</p>	11.2	By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	Chapter 1: Keeping our ports open 24/7 24-31	
		11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage	Chapter 2: Strengthening port operations, enhancing safety 32-38
	11.5	By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations	Chapter 3: Singapore as a leading international maritime centre 39-41	
			Chapter 2: Strengthening port operations, enhancing safety 32-38	
	 <p>Ensure sustainable consumption and production patterns</p>	12.5	By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61
		12.6	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61
12.7		Promote public procurement practices that are sustainable, in accordance with national policies and priorities	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61	
12.8		By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61	

Goal	Target Indicator	Section	Pages	
 <p>Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	14.1	By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61	
		14.2	By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61
			14.5	By 2020, conserve at least 10 per cent of coastal and marine areas, consistent with national and international law and based on the best available scientific information
	 <p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels</p>	16.5	Substantially reduce corruption and bribery in all their forms	Chapter 10: Culture of excellence 70-82
		16.A	Strengthen relevant national institutions, including through international cooperation, for building capacity at all levels, in particular in developing countries, to prevent violence and combat terrorism and crime	Chapter 11: Choice employer 83-99
				Chapter 2: Strengthening port operations, enhancing safety 32-38
 <p>Strengthen the means of implementation and revitalize the global partnership for sustainable development</p>	17.16	Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilise and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries	Chapter 7: Grow opportunities in decarbonisation and sustainable shipping 56-61	
			17.17	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

OUR CONTRIBUTORS



FROM LEFT TO RIGHT:

- 01 - Andy Hue
- 02 - Hermione Choong
- 03 - Felicia Wong
- 04 - Yeo Hui Wen
- 05 - Putra Mohammad Danish
- 06 - Minerva Lim
- 07 - Natasha Teh
- 08 - Kester Kiong
- 09 - George Goh
- 10 - Goldwin Koh
- 11 - Fouziah Rahim
- 12 - Frances Goh
- 13 - Tang Kin Ho
- 14 - Melissa Ng
- 15 - Ariel Lim
- 16 - Norman Tan

NOT IN PHOTO:

- Ong Ah Kiong
- Pearlyn Pang
- Saddiq Haque
- Scott Ngiam
- Winnie Lim
- Sabrina Chiok

THE MARITIME AND PORT AUTHORITY
OF SINGAPORE

ANNUAL FINANCIAL STATEMENTS
For the financial year ended 31 December 2021

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

ANNUAL REPORT
For the financial year ended 31 December 2021

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THE MARITIME AND PORT AUTHORITY OF SINGAPORE

STATEMENT BY BOARD OF MEMBERS

For the financial year ended 31 December 2021

In the opinion of the Board of Members,

- (a) the financial statements of the Maritime and Port Authority of Singapore (the "Authority") as set out on pages 6 to 60 are properly drawn up so as to present fairly, in all material respects, the state of affairs of the Authority as at 31 December 2021 and of the results of the business, changes in equity and cash flows of the Authority for the financial year then ended in accordance with the provisions of the Public Sector (Governance) Act 2018, the Maritime and Port Authority of Singapore Act 1996 and Statutory Board Financial Reporting Standards; and
- (b) at the date of this statement, there are reasonable grounds to believe that the Authority will be able to pay its debts as and when they fall due.

On behalf of the Board of Members,



Niam Chiang Meng
Chairman

24 March 2022



Quah Ley Hoon
Chief Executive and Board Member

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE BOARD
OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE**

Report on the Audit of the Financial Statements

Our Opinion

In our opinion, the accompanying financial statements of the Maritime and Port Authority of Singapore (the "Authority") are properly drawn up in accordance with the provisions of the Public Sector (Governance) Act 2018 (the "Public Sector (Governance) Act"), the Maritime and Port Authority of Singapore Act 1996 (the "Act") and Statutory Board Financial Reporting Standards ("SB-FRS") so as to present fairly, in all material respects, the state of affairs of the Authority as at 31 December 2021 and the results, changes in equity and cash flows of the Authority for the year ended on that date.

What we have audited

The financial statements of the Authority comprise:

- The balance sheet as at 31 December 2021;
- the statement of comprehensive income for the financial year ended 31 December 2021;
- the statement of changes in equity for the financial year then ended;
- the statement of cash flows for the financial year then ended; and
- the notes to the financial statements, including a summary of significant accounting policies.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Authority in accordance with the Accounting and Corporate Regulatory Authority Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code.

Other Information

Management is responsible for the other information. The other information comprises the Statement by Board of Members but does not include the financial statements and our auditor's report thereon.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE BOARD
OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE (continued)**

Other Information (continued)

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the provisions of the Public Sector (Governance) Act, the Act and SB-FRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

A statutory board is constituted based on its Act and its dissolution requires Parliament's approval. In preparing the financial statements, management is responsible for assessing the Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless there is intention to wind up the Authority or for the Authority to cease operations.

Those charged with governance are responsible for overseeing the Authority's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE BOARD
OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE (continued)**

Auditor's Responsibilities for the Audit of the Financial Statements (continued)

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Authority to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

Opinion

In our opinion:

- (a) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by the Authority during the year are, in all material respects, in accordance with the provisions of the Public Sector (Governance) Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Authority; and
- (b) proper accounting and other records have been kept, including records of all assets of the Authority whether purchased, donated or otherwise.

**INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE BOARD
OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE (continued)**

Basis for Opinion

We conducted our audit in accordance with SSAs. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Compliance Audit* section of our report. We are independent of the Authority in accordance with the ACRA Code together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management's compliance.

Responsibilities of Management for Compliance with Legal and Regulatory Requirements

Management is responsible for ensuring that the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Public Sector (Governance) Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Authority. This responsibility include monitoring related compliance requirements relevant to the Authority, and implementing internal controls as management determines are necessary to enable compliance with the requirements.

Auditor's Responsibilities for the Compliance Audit

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investment of moneys and the acquisition and disposal of assets, are in accordance with the provisions of the Public Sector (Governance) Act, the Act and the requirements of any other written law applicable to moneys of or managed by the Authority.

Our compliance audit includes obtaining an understanding of the internal control relevant to the receipts, expenditure, investment of moneys and the acquisition and disposal of assets; and assessing the risks of material misstatement of the financial statements from non-compliance, if any, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Because of the inherent limitations in any internal control system, non-compliances may nevertheless occur and not be detected.



PricewaterhouseCoopers LLP
Public Accountants and Chartered Accountants
Singapore, 24 March 2022

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

BALANCE SHEET

As at 31 December 2021

	Note	2021 \$	2020 \$
ASSETS			
Non-current assets			
Property, plant and equipment	4	83,900,646	95,171,289
Right-of-use assets	5	19,635,249	23,275,470
Capital work-in-progress	4,6	21,902,214	10,903,072
Financial assets	8	790,408,468	472,529,894
		<u>915,846,577</u>	<u>601,879,725</u>
Current assets			
Trade receivables	9	40,257,103	37,664,104
Deposits, prepayments and other receivables	10	12,658,540	12,169,160
Derivative financial instruments	24	10,684,402	5,424,918
Cash and cash equivalents	11	771,719,561	1,076,002,109
		<u>835,319,606</u>	<u>1,131,260,291</u>
Total assets		<u>1,751,166,183</u>	<u>1,733,140,016</u>
EQUITY			
Capital account	12	147,375,155	147,375,155
Share capital	13	3,978,616	3,978,616
Accumulated surplus		1,492,223,592	1,469,001,368
Total equity		<u>1,643,577,363</u>	<u>1,620,355,139</u>
LIABILITIES			
Non-current liabilities			
Deferred capital grant	15	13,784,451	15,093,927
Lease liabilities	16	14,993,121	19,096,765
		<u>28,777,572</u>	<u>34,190,692</u>
Current liabilities			
Trade and other payables	17	46,189,438	40,522,551
Advances, deposits and unearned income	18	12,418,821	11,340,407
Derivative financial instruments	24	3,017,339	3,085,441
Lease liabilities	16	5,553,508	4,899,309
Provision for contribution to Consolidated Fund	23	11,632,142	18,746,477
		<u>78,811,248</u>	<u>78,594,185</u>
Total liabilities		<u>107,588,820</u>	<u>112,784,877</u>
Total equity and liabilities		<u>1,751,166,183</u>	<u>1,733,140,016</u>
Funds managed/held on behalf of others	28	8,624,017	38,245,434
Funds' net assets managed/held on behalf of others	28	<u>(8,624,017)</u>	<u>(38,245,434)</u>

The accompanying notes form an integral part of these financial statements.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

STATEMENT OF COMPREHENSIVE INCOME

For the financial year ended 31 December 2021

	Note	2021 \$	2020 \$
Operating revenue			
Port dues and marine services	19	262,988,637	229,295,388
Shipping services	19	7,272,077	5,987,240
Rental income	19	2,897,415	2,654,561
Training	19	422,094	500,705
Miscellaneous revenue	19	247,869	328,236
		<u>273,828,092</u>	<u>238,766,130</u>
Operating expenditure			
Staff cost	20	98,675,848	83,735,410
Depreciation of property, plant and equipment	4	22,639,350	21,637,209
Depreciation of right-of-use assets	5	6,284,912	5,409,655
Hire of marine craft and sea garbage services		11,263,520	11,220,036
Fuel, repairs and maintenance		27,206,672	16,964,926
Interest on lease liabilities	16	739,396	735,686
Other operating expenses	21	74,104,460	69,834,996
		<u>240,914,158</u>	<u>209,537,918</u>
Operating surplus		32,913,934	29,228,212
Other income and gains - net	22	34,165,956	79,710,705
Surplus before grant and contribution to Consolidated Fund		67,079,890	108,938,917
Amortisation of deferred capital grant	15	1,309,476	1,309,476
Surplus before contribution to Consolidated Fund		68,389,366	110,248,393
Contribution to Consolidated Fund	23	(11,632,142)	(18,746,477)
Surplus for the year, representing total comprehensive income for the year		<u>56,757,224</u>	<u>91,501,916</u>

There is no other comprehensive income for the financial years ended 31 December 2021 and 2020.

The accompanying notes form an integral part of these financial statements.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

STATEMENT OF CHANGES IN EQUITY

For the financial year ended 31 December 2021

	Capital account \$	Share capital \$	Accumulated surplus \$	Total \$
2021				
Beginning of financial year	147,375,155	3,978,616	1,469,001,368	1,620,355,139
Total comprehensive income for the year				
Surplus for the year	-	-	56,757,224	56,757,224
Dividends paid, representing total transaction with owners, recognised directly in equity	-	-	(33,535,000)	(33,535,000)
End of financial year	147,375,155	3,978,616	1,492,223,592	1,643,577,363
2020				
Beginning of financial year	147,375,155	3,978,616	1,388,790,452	1,540,144,223
Total comprehensive income for the year				
Surplus for the year	-	-	91,501,916	91,501,916
Dividends paid, representing total transaction with owners, recognised directly in equity	-	-	(11,291,000)	(11,291,000)
End of financial year	147,375,155	3,978,616	1,469,001,368	1,620,355,139

The accompanying notes form an integral part of these financial statements.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

STATEMENT OF CASH FLOWS

For the financial year ended 31 December 2021

	Note	2021 \$	2020 \$
Cash flows from operating activities			
Surplus before contribution to Consolidated Fund		68,389,366	110,248,393
Adjustments for:			
- Depreciation of property, plant and equipment	4	22,639,350	21,637,209
- Depreciation of right-of-use assets	5	6,284,912	5,409,655
- Impairment loss on financial assets	9	114,796	74,114
- Provision for employee benefits	14	18,147	77,718
- Amortisation of deferred capital grant	15	(1,309,476)	(1,309,476)
- Interest on lease liabilities	16	739,396	735,686
- Net investment gain from funds with fund managers	22	(29,564,164)	(34,719,780)
- Interest income on bank deposits	22	(819,495)	(3,626,354)
- Net loss/(gain) on disposal of property, plant and equipment	22	31,478	(40,821,281)
		<u>66,524,310</u>	<u>57,705,884</u>
Changes in working capital:			
- Trade receivables		(2,707,795)	12,477,303
- Deposits, prepayments and other receivables		(1,674,418)	(257,559)
- Derivative financial instruments		(5,327,586)	1,263,447
- Trade and other payables		4,737,995	(2,286,126)
- Advances, deposits and unearned income		1,078,414	(1,897,697)
Cash generated from operations		62,630,920	67,005,252
Payment of employee benefits	14	(18,147)	(500,095)
Contribution paid to Consolidated Fund	23	(18,746,477)	(38,359,578)
Net cash from operating activities		<u>43,866,296</u>	<u>28,145,579</u>
Cash flows from investing activities			
Withdrawal of industry funds with Accountant-General's Department		33,722,178	27,136,210
Proceeds from sale of property, plant and equipment		4,229	41,003,565
Purchases of property, plant and equipment and capital work-in-progress		(21,474,666)	(23,953,704)
Placement of funds with custodian		(182,262,567)	(30,917,486)
Interest received		2,004,533	4,479,190
Net cash (used in)/from investing activities		<u>(168,006,293)</u>	<u>17,747,775</u>
Cash flows from financing activities			
Dividends paid		(33,535,000)	(11,291,000)
Principal repayment of lease liabilities	16	(6,094,136)	(4,725,264)
Interest paid	16	(739,396)	(735,686)
Net cash used in financing activities		<u>(40,368,532)</u>	<u>(16,751,950)</u>
Net (decrease)/increase in cash and cash equivalents		<u>(164,508,529)</u>	<u>29,141,404</u>
Cash and cash equivalents at beginning of financial year		279,773,115	250,631,711
Cash and cash equivalents at end of financial year	11	<u>115,264,586</u>	<u>279,773,115</u>

The accompanying notes form an integral part of these financial statements.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

These notes form an integral part of and should be read in conjunction with the accompanying financial statements.

1. General information

The Maritime and Port Authority of Singapore ("MPA") under the purview of Ministry of Transport, was established on 2 February 1996 under the Maritime and Port Authority of Singapore Act 1996 with the merger of the following organisations:

- The National Maritime Board (NMB);
- The Marine Department (MD); and
- The regulatory departments of the Port of Singapore Authority (PSA).

MPA is domiciled in Singapore and the address of its registered office is 460 Alexandra Road, 19th Storey, mTower, Singapore 119963.

The principal activities of MPA include the control of vessel movements to ensure a safe and secure port, and also the regulation of the port and marine services and facilities. MPA is the champion agency to develop and promote Singapore as an International Maritime Centre. MPA also represents Singapore regionally and internationally to safeguard Singapore's maritime interests.

The principal activities of its subsidiary and associated companies are set out in Note 7.

2. Significant accounting policies

2.1 Basis of preparation

These financial statements of MPA ("the Authority") have been prepared in accordance with the provisions of the Public Sector (Governance) Act 2018 and the Maritime and Port Authority of Singapore Act 1996 and Statutory Board Financial Reporting Standards ("SB-FRS").

The financial statements have been prepared under the historical cost convention except as disclosed in the accounting policies below.

The preparation of financial statements in conformity with SB-FRS requires management to exercise its judgement in the process of applying the Authority's accounting policies. It also requires the use of certain critical accounting estimates and assumptions. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 3.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

Interpretations and amendments to published standards effective in 2021

On 1 January 2021, the Authority adopted the new or amended SB-FRS and Interpretations of SB-FRS that are mandatory for application for the financial year. Changes to the Authority's accounting policies have been made as required, in accordance with the transitional provisions in the respective SB-FRS.

The adoption of these new or amended SB-FRS did not result in substantial changes to the Authority's accounting policies and had no material effect on the amounts reported for the current or prior financial years.

2.2 Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Authority recognises revenue when it transfers control of a product or service to a customer. Revenue comprises the fair value of the consideration received or receivable for the rendering of services in the ordinary course of the Authority's activities. Revenue is presented net of goods and services tax, rebates and discounts.

The Authority recognises revenue when the amount of revenue and related cost can be reliably measured, it is probable that the collectability of the related receivables is reasonably assured and when the specific criteria for each of the Authority's activities are met as follows:

(a) *Port dues and marine services*

Dues, licence and permit fees, and agency fee are recognised over time as and when services are performed. Any other marine services are recognised as and when the services are completed.

(b) *Training revenue*

Training revenue are recognised over time as and when services are performed.

(c) *Shipping services*

Shipping services, which comprise registration fees and seaman engagement and discharge fees, are recognised as and when services are completed. Annual payment scheme, such as annual administrative fee, will be recognised over time as and when services are performed.

(d) *Rental income*

Rental income from operating leases (net of any incentives given to the lessees) is recognised on a straight-line basis over lease term.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.2 Revenue recognition (continued)

(e) *Interest income*

Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable.

(f) *Dividend income*

Dividend income is recognised when the right to receive payment is established.

2.3 Government grants

Government grants received for the purchase or the construction of depreciable assets are accounted for as deferred capital grants. The deferred capital grants are amortised and charged to income or expenditure over the period necessary to match the annual depreciation charge of these assets or when the assets are disposed or written off. Where the grants relate to an expense item, they are recognised in income or expenditure over the periods necessary to match them on a systematic basis, to the costs, which they are intended to compensate.

2.4 Group accounting

(a) *Subsidiary*

A subsidiary is an entity over which the Authority has control. The Authority controls an entity when the Authority is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. A subsidiary is fully consolidated from the date on which control is transferred to the Authority. It is deconsolidated from the date on that control ceases.

(b) *Associated company*

Associated company is an entity over which the Authority has significant influence, but not control, generally accompanied by a shareholding giving rise to voting rights of 20% and above but not exceeding 50%.

Investments in associated company is accounted for in the consolidated financial statements using the equity method of accounting less impairment losses, if any.

To the extent the Authority's associated company is limited by guarantee and it does not share in their profits or losses, the Authority records its contributions to associated company as project grants in the statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.5 Property, plant and equipment

(a) Measurement

Property, plant and equipment are initially recognised at cost and subsequently carried at cost less accumulated depreciation and accumulated impairment losses.

The cost of an item of property, plant and equipment initially recognised includes its purchase price and any cost that is directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

The cost of a self-constructed asset includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management, and the cost of dismantling and removing the items and restoring the site on which they are located. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Assets previously from the former National Maritime Board, the Marine Department and the regulatory departments of the Port of Singapore Authority were taken in at their transacted cost.

Property, plant and equipment acquired and funded under Government grants are capitalised and depreciated over their useful lives. The related accretion of deferred capital grants is matched against the depreciation (please refer to Note 2.3).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.5 Property, plant and equipment (continued)

(b) Depreciation

Depreciation on property, plant and equipment is calculated using the straight-line method to allocate their depreciable amounts over their estimated useful lives as follows:

	<u>Useful lives</u>
Leasehold land	Over the lease periods ranging from 6 to 58 years
Building structures	Over the lease periods ranging from 2 to 38 years
Wharves, hard-standing and roads	Over the lease periods ranging from 3 to 28 years
Renovation	8 years
Plant, machinery and equipment	5 to 15 years
Vehicles	10 years
Computers	5 years
Furniture and fittings	8 years
Floating craft	8 or 15 years

The residual values, estimated useful lives and depreciation method of property, plant and equipment are reviewed, and adjusted as appropriate, at each balance sheet date. The effects of any revision are recognised in income or expenditure when the changes arise.

(c) Subsequent expenditure

Subsequent expenditure relating to property, plant and equipment that has already been recognised is added to the carrying amount of the asset only when it is probable that future economic benefits associated with the item will flow to the Authority and the cost of the item can be measured reliably. All other repair and maintenance expenses are recognised in income or expenditure when incurred.

(d) Disposal

On disposal of an item of property, plant and equipment, the difference between the disposal proceeds and its carrying amount is recognised in income or expenditure within "Other income and gains - net".

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.6 Capital work-in-progress

Capital work-in-progress is stated at cost. Expenditure relating to the capital work-in-progress is capitalised when incurred. No depreciation is provided until the capital work-in-progress is completed and the related property, plant and equipment are available for use.

2.7 Impairment of non-financial assets

Property, plant and equipment

Right-of-use assets

Capital work-in-progress

Investments in subsidiary and associated companies

Property, plant and equipment, right-of-use assets, capital work-in-progress and investments in subsidiary and associated companies are tested for impairment whenever there is any objective evidence or indication that these assets may be impaired.

For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash inflows that are largely independent of those from other assets. If this is the case, the recoverable amount is determined for the CGU to which the asset belongs.

If the recoverable amount of the asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount.

The difference between the carrying amount and recoverable amount is recognised as an impairment loss in income or expenditure.

An impairment loss for an asset other than goodwill is reversed only if, there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised. The carrying amount of this asset is increased to its revised recoverable amount, provided that this amount does not exceed the carrying amount that would have been determined (net of any accumulated amortisation or depreciation) had no impairment loss been recognised for the asset in prior years. A reversal of impairment loss for an asset other than goodwill is recognised in income or expenditure.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.8 Financial assets

(a) Classification

The Authority classifies its financial assets in the following categories: amortised cost and fair value through profit or loss ("FVTPL") under SB-FRS 109. The classification depends on the nature of the asset and the purpose for which the assets were acquired. The Authority determines the classification of its financial assets at initial recognition, based on SB-FRS 109's Business Model and Contractual Cash Flows tests.

(i) Financial Assets held at Amortised Cost

Financial assets held at Amortised Cost comprises mainly non-derivative cash and bank balances and trade and other receivables with fixed or determinable payments that are not quoted in an active market. They are presented as current assets except for those expected to be realised later than 12 months after the balance sheet date which are presented as non-current assets. These financial assets are presented as "trade receivables" (Note 9), "other receivables" (Note 10) and "cash and cash equivalents" (Note 11) on the balance sheet.

(ii) Financial assets held at Fair Value through Profit or Loss ("FVTPL")

Financial assets held at FVTPL are non-derivatives that are either classified or designated in this category. They are presented as non-current assets unless the investment matures or the Authority intends to dispose of the assets within 12 months after the balance sheet date.

The Authority's investments in equity and debt securities, including equity and debt securities placed by fund managers, where investment performance is evaluated on a fair value (total return) basis, are classified as FVTPL financial assets.

(b) Recognition and derecognition

Regular way purchases and sales of financial assets are recognised on trade-date - the date on which the Authority commits to purchase or sell the asset.

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Authority has transferred substantially all risks and rewards of ownership. On disposal of a financial asset, the difference between the carrying amount and the sale proceeds is recognised in income or expenditure. Any amount previously recognised in other comprehensive income relating to that asset is reclassified to income or expenditure.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

(c) Initial measurement

Except for trade receivables measured at transaction price, at initial recognition, financial assets are measured at its fair value plus or minus, in the case of a financial asset or financial liability not at fair value through profit or loss, transaction costs that are directly attributable to the acquisition or issue of the financial asset. Financial assets held at FVTPL are recognised at fair value.

(d) Subsequent measurement

FVTPL financial assets are subsequently carried at fair value. Trade and other receivables are subsequently carried at amortised cost using the effective interest method.

Interest and dividend income on FVTPL financial assets, and changes in fair values of FVTPL debt and equity securities are recognised in income or expenditure.

(e) Impairment

The Authority recognises a loss allowance for expected credit losses ("ECL") on trade and other receivables. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

The Authority recognises lifetime ECL for trade receivables. The expected credit losses on these financial assets are estimated using a provision matrix based on the Authority's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Authority recognises lifetime ECL when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on the financial instrument has not increased significantly since initial recognition, the Authority measures the loss allowance for that financial instrument at an amount equal to 12-month ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition instead of on evidence of a financial asset being credit-impaired at the reporting date or an actual default occurring.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

(e) Impairment (continued)

Significant increase in credit risk

In assessing whether the credit risk on a financial instrument has increased significantly since initial recognition, the Authority compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Authority considers historical loss rates for each category of customers and adjusts to reflect current and forward-looking macroeconomic factors affecting the ability of the customers to settle the receivables. The Authority has identified the credit default risk for logistics and transportation industry to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

The Authority presumes that the credit risk on a financial asset has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Authority has reasonable and supportable information that demonstrates otherwise.

The Authority assumes that the credit risk on a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have low credit risk at the reporting date. A financial instrument is determined to have low credit risk if i) the financial instrument has a low risk of default, ii) the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and iii) adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations.

The Authority regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

Definition of default

The Authority considers that default has occurred when a financial asset is more than 90 days past due unless the Authority has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

(e) *Impairment* (continued)

Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred.

Write-off policy

The Authority writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings, or in the case of trade receivables, when the chances of recovery are remote. Financial assets written off may still be subject to enforcement activities under the Authority's recovery procedures, taking into account legal advice where appropriate. Any recoveries made are recognised in income or expenditure.

Measurement and recognition of expected credit losses

For financial assets, the expected credit loss is estimated as the difference between all contractual cash flows that are due to the Authority in accordance with the contract and all the cash flows that the Authority expects to receive, discounted at the original effective interest rate.

If the Authority has measured the loss allowance for a financial instrument at an amount equal to lifetime ECL in the previous reporting period, but determines at the current reporting date that the conditions for lifetime ECL are no longer met, the Authority measures the loss allowance at an amount equal to 12-month ECL at the current reporting date.

2.9 Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

2. Significant accounting policies (continued)

2.10 Trade and other payables

Trade and other payables represent liabilities for goods and services provided to the Authority prior to the end of financial year which are unpaid. They are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). Otherwise, they are presented as non-current liabilities.

Trade and other payables are initially recognised at fair value, and subsequently carried at amortised cost using the effective interest method.

2.11 Derivative financial instruments

The Authority engages external fund managers to manage some of its surplus funds. The Authority is exposed primarily to the financial risks of foreign exchange and interest rate fluctuations on debt and equity securities and cash and cash equivalents placed by the fund managers. The fund managers also hold derivative financial instruments to manage these risks. The use of hedging instruments is governed by the Authority's investment mandate which provides guidelines on the use of financial instruments consistent with the Authority's risk management strategy.

A derivative financial instrument is initially recognised at its fair value on the date the contract is entered into and is subsequently carried at its fair value. Changes in fair value are recognised in income or expenditure.

2.12 Fair value estimation of financial assets and liabilities

The fair values of financial instruments traded in active markets (such as exchange-traded and over-the-counter securities and derivatives) are based on quoted market prices at the balance sheet date. The quoted market prices used for financial assets are the current bid prices; the appropriate quoted market prices for financial liabilities are the current asking prices.

The fair values of financial instruments that are not traded in an active market are determined by using valuation techniques. The Authority uses a variety of methods and makes assumptions based on market conditions that are existing at each balance sheet date. Where appropriate, quoted market prices or dealer quotes for similar instruments are used. Valuation techniques, such as discounted cash flow analysis, are also used to determine the fair values of the financial instruments.

The fair values of current financial assets and liabilities carried at amortised cost approximate their carrying amounts.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.13 Leases

(a) Leases

(i) The Authority as lessee

The Authority assess whether a contract is or contains a lease, at inception of the contract. The Authority recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term lease (defined as leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the Authority recognises the lease payments as an operating expense on a straight-line basis over the lease term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Authority uses the incremental borrowing rate specific to the lessee.

Lease payments included in the measurement of the lease liability comprise:

- fixed lease payments (including in-substance fixed payments), less any lease incentives;
- variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;
- the amount expected to be payable by the lessee under residual value guarantees;
- the exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and
- payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the balance sheet.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.13 Leases (continued)

(a) Leases (continued)

(i) The Authority as lessee (continued)

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Authority remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

- the lease term has changed or there is significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;
- the lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using the initial discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used); or
- a lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day, less any lease incentives received and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.13 Leases (continued)

(a) Leases (continued)

(i) The Authority as lessee (continued)

Whenever the Authority incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under SB-FRS 37. To the extent that the costs relate to a right-of-use asset, the costs are included in the related right-of-use asset.

Right-of-use assets are depreciated over the shorter period of lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Authority expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

The right-of-use assets are presented as a separate line in the balance sheet.

The Authority applies SB-FRS 36 to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as described in Note 2.7.

Variable rents that do not depend on an index or rate are not included in the measurement of the lease liability and the right-of-use asset. The related payments are recognised as an expense in the period in which the event or condition that triggers those payments occurs and are included in the line "Other operating expenses" in the statement of comprehensive income.

As a practical expedient, SB-FRS 116 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. The Authority has not used this practical expedient. For a contract that contains a lease component and one or more additional lease or non-lease components, the Authority allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.13 Leases (continued)

(a) Leases (continued)

(i) The Authority as lessee (continued)

Rent concessions

The Authority has elected to early adopt the amendments to SB-FRS 116 which introduced a practical expedient for a lessee to elect not to assess whether a rent concession is a lease modification, if all the following conditions are met:

- (a) the change in lease payments results in revised considerations for the lease that is substantially the same as, or less than, the consideration for the lease immediately preceding the change;
- (b) any reduction in lease payments affects only payments originally due on or before 30 June 2022; and
- (c) there is no substantive change to other terms and conditions of the lease.

The Authority has elected to apply this practical expedient to all property leases. As a result of applying the practical expedient, rent concessions was recognised as reduction in the rental expenses as disclosed in Note 21 (a).

(ii) The Authority as lessor

The Authority enters into lease agreements as a lessor with respect to rental space and buildings.

Leases for which the Authority is a lessor are classified as finance or operating lease. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are classified as operating lease.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the leased term.

When a contract includes lease and non-lease components, the Authority applies SB-FRS 15 to allocate the consideration under the contract to each component.

NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.14 Provisions

A provision is recognised when the Authority has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

2.15 Employee compensation

Employment benefits are recognised as an expense, unless the cost qualifies to be capitalised as an asset.

(a) *Defined contribution plans*

Defined contribution plans are post-employment benefit plans under which the Authority pays fixed contributions into separate entities such as the Central Provident Fund on a mandatory, contractual or voluntary basis. The Authority has no further payment obligations once the contributions have been paid.

(b) *Pension benefits*

Provision for pensions is made for the payment of retirement benefits to pensionable officers transferred to the Authority on 2 February 1996.

The cost of pension benefit due to pensionable officers is determined based on the estimated present value of the future cash outflows to be made in respect of services provided by these pensionable officers up to the balance sheet date.

(c) *Employee leave entitlement*

Employee entitlements to annual leave are recognised when they accrue to employees. A provision is made for the estimated liability for annual leave as a result of services rendered by employees up to the balance sheet date.

NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 December 2021

2. Significant accounting policies (continued)

2.16 Currency translation

(a) *Functional and presentation currency*

The financial statements are presented in Singapore Dollars, which is the functional currency of the Authority.

(b) *Transactions and balances*

Transactions in a currency other than Singapore Dollar ("foreign currency") are translated into Singapore Dollars using the exchange rates at the dates of the transactions. Currency exchange differences resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at the closing rates at the balance sheet date are recognised in income or expenditure. Non-monetary items measured at fair values in foreign currencies are translated using the exchange rates at the date when the fair values are determined. Currency translation differences on these items are included in income or expenditure.

2.17 Cash and cash equivalents

For the purpose of presentation in the statement of cash flows, cash and cash equivalents include cash on hand, deposits with financial institutions, commercial papers, short-term bills and notes which are readily convertible to cash and are subject to an insignificant risk of change in value, and bank overdrafts, except those which are managed by the fund managers or which are placed under the Statutory Board Approved Funds with the Accountant-General's Department. Bank overdrafts are presented as current borrowings on the balance sheet.

2.18 Funds managed/held on behalf of others

Funds are set up to account for contributions received from external sources for specific purposes.

The assets and liabilities of funds - Singapore Stranded Seafarers' Fund, and agency funds held in trust for Ministry of Transport are presented as a line item at the bottom of the balance sheet of the financial statements as prescribed by SB-FRS Guidance Note 3 *Accounting and Disclosures for Trust Funds*. Income or expenditure relating to these funds are accounted for directly in these funds. Details of income, expenditure, assets and liabilities are disclosed in Note 28 to the financial statements.

NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 December 2021

3. Critical accounting estimates, assumptions and judgements

Estimates, assumptions and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

3.1 Critical accounting estimates and assumptions

Useful lives of property, plant and equipment

The Authority reviews the estimated useful lives of property, plant and equipment regularly, in accordance with the accounting policy in Note 2.5, in order to determine the amount of depreciation expense to be recorded for each financial year. Changes in the expected level of use of the assets and the Authority's historical experience with similar assets after taking into account anticipated technological changes could impact the economic useful lives and the residual values of the assets, and therefore, future depreciation charges could be revised. Any changes in the economic useful lives could impact the depreciation charges and consequently affect the Authority's results. Refer to Note 4 for the carrying value of property, plant and equipment at the balance sheet date.

Accounting for investments in and contributions to associated companies

MPA has determined that it has significant influence over its associated companies based on the voting rights of 20% and above but not exceeding 50%, held by its representatives at the board of directors of the associated companies. As the associated companies are incorporated as company limited by guarantee and MPA does not share in their profits or losses, MPA has recorded the contributions of \$12,284,643 (2020: \$11,603,144) made to the associated companies as grant expenditure in the statement of comprehensive income.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 December 2021

4. Property, plant and equipment

	Leasehold land*	Building structures	Wharves, hard-standing and roads*	Renovation	Plant, machinery and equipment	Vehicles	Computers	Furniture and fittings	Floating craft	Sub-total	Capital work-in-progress	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
2021												
Cost												
Beginning of financial year	8,477,517	58,175,939	113,494,485	18,373,193	16,185,038	669,276	110,730,421	3,564,072	9,756,526	339,426,467	10,903,072	350,329,539
Additions	-	-	-	137,409	641,728	-	4,938,134	21,565	-	5,738,836	16,664,720	22,403,556
Transfers	(94)	(22,970)	3,881,768	-	(305,908)	-	1,783,810	(76,456)	(67,500)	(1,816,337)	(5,665,578)	-
Disposals/write-off	(94)	(22,970)	-	(34,805)	(305,908)	-	(1,308,604)	(76,456)	(67,500)	(1,816,337)	-	(1,816,337)
End of financial year	8,477,423	58,152,969	117,376,253	18,475,797	16,520,858	669,276	116,143,761	3,509,181	9,689,026	349,014,544	21,902,214	370,916,758
Accumulated depreciation												
Beginning of financial year	4,600,981	42,375,923	83,618,831	12,804,548	10,986,131	347,263	79,616,203	2,082,772	7,822,526	244,255,178	-	244,255,178
Depreciation charge	343,510	1,667,433	6,515,656	1,275,048	1,041,461	66,928	11,103,815	383,749	241,750	22,639,350	-	22,639,350
Disposals/write-off	-	(22,970)	-	(34,805)	(296,638)	-	(1,308,604)	(50,113)	(67,500)	(1,780,630)	-	(1,780,630)
End of financial year	4,944,491	44,020,386	90,134,487	14,044,791	11,730,954	414,191	89,411,414	2,416,408	7,996,776	265,113,898	-	265,113,898
Carrying amount:												
End of financial year	3,532,932	14,132,583	27,241,766	4,431,006	4,789,904	255,085	26,732,347	1,092,773	1,692,250	83,900,646	21,902,214	105,802,860
2020												
Cost												
Beginning of financial year	8,449,290	57,686,103	120,378,140	18,155,835	16,447,828	669,276	102,557,782	3,562,144	9,769,026	337,675,424	9,481,644	347,157,068
Additions	28,227	471,771	912,150	186,773	1,202,180	-	8,447,351	128,803	-	11,377,255	7,762,176	19,139,431
Transfers	-	54,053	-	145,892	-	-	6,140,803	-	-	6,340,748	(6,340,748)	-
Disposals/write-off	-	(35,988)	(7,795,805)	(115,307)	(1,464,970)	-	(6,415,515)	(126,675)	(12,500)	(15,966,960)	-	(15,966,960)
End of financial year	8,477,517	58,175,939	113,494,485	18,373,193	16,185,038	669,276	110,730,421	3,564,072	9,756,526	339,426,467	10,903,072	350,329,539
Accumulated depreciation												
Beginning of financial year	4,252,583	40,817,509	84,958,672	11,621,343	11,468,977	280,335	75,615,613	1,796,837	7,590,776	238,402,645	-	238,402,645
Depreciation charge	348,398	1,594,402	6,455,964	1,268,312	905,190	66,928	10,372,296	383,979	241,750	21,637,209	-	21,637,209
Disposals/write-off	-	(35,988)	(7,795,805)	(85,107)	(1,388,036)	-	(6,371,696)	(98,044)	(10,000)	(15,784,676)	-	(15,784,676)
End of financial year	4,600,981	42,375,923	83,618,831	12,804,548	10,986,131	347,263	79,616,203	2,082,772	7,822,526	244,255,178	-	244,255,178
Carrying amount:												
End of financial year	3,876,536	15,800,016	29,875,654	5,569,645	5,198,907	322,013	31,114,218	1,481,300	1,934,000	95,171,289	10,903,072	106,074,361

* Include right-of-use assets with carrying amounts of \$5,560,630 (2020: \$7,242,531) and depreciation charge of \$1,681,901 (2020: \$2,005,545). There are no corresponding lease liabilities as these leases have been fully paid for.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

5. Right-of-use assets

The Authority leases a number of building structures, plant, machinery and equipment and floating craft. The lease term ranges from 1 year to 8 years (2020: 1 year to 9 years).

	Building structures \$	Plant, machinery and equipment \$	Other equipment \$	Floating craft \$	Total \$
2021					
Cost					
Beginning of financial year	7,727,450	36,168	17,800	21,615,648	29,397,066
Additions	2,589,171	-	-	-	2,589,171
Modification of lease liabilities	55,520	-	-	-	55,520
Disposals	(115,007)	-	-	-	(115,007)
End of financial year	10,257,134	36,168	17,800	21,615,648	31,296,750
Accumulated depreciation					
Beginning of financial year	2,898,409	19,089	2,472	3,201,626	6,121,596
Depreciation charge	3,220,117	12,056	5,933	3,046,806	6,284,912
Disposals	(115,007)	-	-	-	(115,007)
End of financial year	6,003,519	31,145	8,405	6,248,432	12,291,501
Carrying amount:					
End of financial year	4,253,615	5,023	9,395	15,367,216	19,635,249
2020					
Cost					
Beginning of financial year	5,261,618	36,168	-	1,509,124	6,806,910
Additions	2,746,504	-	17,800	20,106,524	22,870,828
Modification of lease liabilities	1,501,585	-	-	-	1,501,585
Disposals	(1,782,257)	-	-	-	(1,782,257)
End of financial year	7,727,450	36,168	17,800	21,615,648	29,397,066
Accumulated depreciation					
Beginning of financial year	2,109,884	7,033	-	377,281	2,494,198
Depreciation charge	2,570,782	12,056	2,472	2,824,345	5,409,655
Disposals	(1,782,257)	-	-	-	(1,782,257)
End of financial year	2,898,409	19,089	2,472	3,201,626	6,121,596
Carrying amount:					
End of financial year	4,829,041	17,079	15,328	18,414,022	23,275,470

During the current year, the Authority renegotiated and modified existing lease contracts for 1 (2020: 2) building structure by revising the lease periods and revised lease payments. These revisions are accounted for as lease modifications to the right-of-use assets. The corresponding remeasurement to lease liabilities is recorded under Note 16.

THE MARITIME AND PORT AUTHORITY OF SINGAPORE

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

6. Capital work-in-progress

Capital work-in-progress relates mainly to the cost of computer systems and maritime and port projects under development (Note 4).

7. Investments in subsidiary and associated companies

(a) Subsidiary

	2021 \$	2020 \$
Cost of investment		
At beginning of financial year	2	2
Disposal	(2)	-
At end of financial year	-	2

Details of the subsidiary are as follows:

Name of subsidiary	Country of incorporation	Effective equity held by the Authority	
		2021 %	2020 %
MPA Venture Pte. Ltd.	Singapore	-	100

On 11 January 2021, upon application made by MPA Venture Pte. Ltd. to the Accounting and Corporate Regulatory Authority ("ACRA"), the Company was struck off from the register on 4 May 2021 pursuant to Section 344A of the Companies Act 1967.

The principal activity of the subsidiary was to act as a holding company to own jointly intellectual properties and manage investments in maritime technology start-ups and companies and joint ventures with partners. The subsidiary was dormant, as such no consolidation was performed in 2021 and 2020.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

7. Investments in subsidiary and associated companies (continued)

(b) Associated companies

Singapore Maritime Institute

In January 2011, the Authority, together with Agency for Science, Technology and Research ("A*STAR"), incorporated Singapore Maritime Institute ("SMI"), a company limited by guarantee. The principal activity of SMI is to develop strategies and programmes related to the academic, policy and research and development aspects of the maritime industry. As at 31 December 2021, the Authority had contributed a total amount of \$76,440,633 (2020: \$64,460,633) of grants to SMI (including unutilised amount of \$846,577 (2020: \$1,151,220)).

Global Centre for Maritime Decarbonisation

In July 2021, the Authority incorporated the Global Centre for Maritime Decarbonisation ("GCMD"), a company limited by guarantee. The principal activity of GCMD is to promote and translate research and development, testbeds and trials on decarbonisation into solutions for the maritime industry and to foster collaborations between sectors on maritime decarbonisation. Total expected contributions from MPA and six founding partners is \$120,000,000. As of 31 December 2021, the Authority had not made any contributions to GCMD.

As these associated companies are limited by guarantee and the Authority does not share in their profits or losses, the Authority records its contributions to these associated companies as project grants in the statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

8. Financial assets

	2021 \$	2020 \$
Non-current		
Classified as Fair Value through Profit or Loss:		
- Quoted equity securities managed by fund managers	325,252,536	158,560,028
- Quoted debt securities managed by fund managers		
- Government bonds	160,648,931	94,722,668
- Corporate Bonds	304,507,001	219,247,198
	<u>790,408,468</u>	<u>472,529,894</u>

The Authority manages its holding of investments in quoted equity securities on a portfolio level with the objective of ensuring long term growth of its portfolio. The objective is not to collect contractual cash flows, nor is it to collect contractual cash flows by selling these securities. These securities have no fixed maturity or coupon rate. The fair values of these securities are based on closing quoted market prices on the last market day of the financial year.

The investment in quoted debt securities are held by the Authority for trading purposes with the objective of ensuring long term growth of its portfolio. The fair values of these securities are based on closing quoted market prices on the last market day of the financial year.

Investment income, amounting to \$29,564,164 (2020: \$34,719,780) have been included in income or expenditure for the financial year as part of "Other income and gains - net" in Note 22.

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021
9. Trade receivables

	2021 \$	2020 \$
Trade receivables	40,531,437	37,823,642
Less: Loss allowance	(274,334)	(159,538)
Trade receivables - net	<u>40,257,103</u>	<u>37,664,104</u>

The Authority's exposure to credit risk arises through its trade receivables. Due to the nature of the Authority's business, credit risk is not concentrated in any specific geographical region but concentrated in many shipping companies exposed to business cyclical fluctuations.

Trade receivables are mainly denominated in Singapore Dollar, which is the Authority's functional currency.

Impairment losses

The average credit period on sale of goods is 30 days (2020: 30 days).

The loss allowance on trade receivables has been measured at an amount equal to lifetime expected credit losses. In addition, trade receivable is written off when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery.

The following tables detail the Authority's credit risk exposure in relation to trade receivables from contracts with customers based on the Authority's provision matrix. As the Authority's historical credit loss experience show significantly different loss patterns for different customer segments (including normal and low risk type), the provision for loss allowance based on past due status is further distinguished between the Authority's customer segment of different risk type.

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021
9. Trade receivables (continued)*Impairment losses (continued)*

The average credit period on sale of goods is 30 days (2020: 30 days).

	Normal risk type customers			
	ECL rate	Estimated total gross carrying amount at default \$	Lifetime ECL \$	Total \$
2021				
Current	-	34,602,381	-	34,602,381
1 - 30 days	1.56%	2,968,864	(46,325)	2,922,539
31 - 60 days	13.43%	172,165	(23,130)	149,035
61 - 90 days	18.12%	58,282	(10,562)	47,720
> 90 days	16.79%	1,157,006	(194,317)	962,689
Total		<u>38,958,698</u>	<u>(274,334)</u>	<u>38,684,364</u>
	Low risk type customers			
	ECL rate	Estimated total gross carrying amount at default \$	Lifetime ECL \$	Total \$
2021				
Current	-	-	-	-
1 - 30 days	-	-	-	-
31 - 60 days	-	-	-	-
61 - 90 days	-	-	-	-
> 90 days	-	1,572,739	-	1,572,739
Total		<u>1,572,739</u>	<u>-</u>	<u>1,572,739</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

9. Trade receivables (continued)

Impairment losses (continued)

	Normal risk type customers		
	ECL rate	Estimated total gross carrying amount at	
		default	Lifetime ECL
	\$	\$	\$
2020			
Current	-	33,575,457	33,575,457
1 - 30 days	0.45%	508,117	(2,281)
31 - 60 days	13.20%	376,054	(49,637)
61 - 90 days	0.93%	1,010,202	(9,366)
> 90 days	18.30%	536,917	(98,254)
Total		36,006,747	(159,538)
			35,847,209
	Low risk type customers		
	ECL rate	Estimated total gross carrying amount at	
		default	Lifetime ECL
		\$	\$
2020			
Current	-	493	-
1 - 30 days	-	-	-
31 - 60 days	-	599,244	-
61 - 90 days	-	132,804	-
> 90 days	-	1,084,354	-
Total		1,816,895	-
			1,816,895

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

9. Trade receivables (continued)

The movements in credit loss allowance are as follows:

	2021	2020
	\$	\$
Beginning of financial year	159,538	85,424
Loss allowance recognised in income or expenditure during the year on:		
- Asset originated	274,334	159,538
- Reversal of unutilised amounts	(159,538)	(85,424)
	114,796	74,114
End of financial year	274,334	159,538

Based on historical default rate, the Authority believes that, apart from the above, no impairment allowance is necessary in respect of other trade receivables outstanding at the balance sheet date.

10. Deposits, prepayments and other receivables

	2021	2020
	\$	\$
Deposits	617,476	830,921
Prepayments	3,254,153	1,683,061
Other receivables	4,307,621	4,689,930
Amount due from associate (non-trade)	846,577	1,151,220
Interest receivable	3,632,713	3,814,028
	12,658,540	12,169,160

Other receivables mainly comprise dividends receivable and receivables on sale of financial instruments.

Amount due from associate is unsecured, interest-free and is repayable on demand.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

10. Deposits, prepayments and other receivables (continued)

As at the balance sheet date, other receivables and accrued interest receivable include the following items managed by fund managers:

	2021 \$	2020 \$
Interest receivable	3,200,248	2,196,526
Receivables on sale of financial instruments	112	427,199
Other receivables (mainly dividend receivables and withholding tax receivables)	419,636	243,087
	<u>3,619,996</u>	<u>2,866,812</u>

The Authority has not made any allowance for ECL on the financial assets as the Authority is of the view that these are recoverable.

11. Cash and cash equivalents

	2021 \$	2020 \$
Cash at bank and on hand	29,488,206	260,438,192
Placement with Accountant-General's Department	538,929,681	741,469,291
- Statutory Board Approved Funds ("SBAF")	428,398,799	462,120,977
- Centralised Liquidity Management Framework ("CLMF")	110,530,882	279,348,314
Short-term bills and notes	203,301,674	74,094,626
	<u>771,719,561</u>	<u>1,076,002,109</u>

For the purpose of presenting the statement of cash flows, cash and cash equivalents comprise the following:

	2021 \$	2020 \$
Cash and bank balances (as above)	771,719,561	1,076,002,109
Less: Cash and cash equivalents managed by fund managers	(228,056,176)	(334,108,017)
Less: Placement with SBAF	(428,398,799)	(462,120,977)
Cash and cash equivalents per statement of cash flows	<u>115,264,586</u>	<u>279,773,115</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

11. Cash and cash equivalents (continued)

The Authority's cash and cash equivalents (excluding those managed by fund managers) are mainly denominated in Singapore Dollar, which is the Authority's functional currency.

Placement with the Accountant-General's Department comprise:

- (i) \$110,530,882 (2020: \$279,348,314) which is centrally managed by the Accountant-General's Department under the CLMF, as set out in the Accountant-General's Circular No. 4/2009 Centralised Liquidity Management for Statutory Boards and Ministries, and
- (ii) Industry funds of \$428,398,799 (2020: \$462,120,977) which is placed under the SBAF and is subject to restrictions.

As at the balance sheet date, cash and cash equivalents include the following managed by fund managers:

	2021 \$	2020 \$
Cash at bank and on hand	24,754,502	260,013,391
Short-term bills and notes	203,301,674	74,094,626
	<u>228,056,176</u>	<u>334,108,017</u>

The effective interest rates of fixed deposits with the Accountant-General's Department under the CLMF vary from 0.28% to 0.39% (2020: 0.51% to 1.77%) per annum ("p.a."). The maturity of CLM fixed deposits ranges from 8 months to 14 months (2020: from 7 months to 14 months). These deposits are highly liquid, readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value.

The effective interest rates of cash and cash equivalents managed by fund managers are as follows:

	2021 % p.a.	2020 % p.a.
Commercial paper	0.13 to 0.34	0.21 to 0.49
Short-term bills and notes	<u>(0.85) – 1.00</u>	<u>(0.81) to 1.76</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

12. Capital account

The capital account comprises the net book value of assets transferred to the Authority from the former National Maritime Board, the Marine Department and the regulatory departments of the Port of Singapore Authority.

Capital management

The Authority defines "capital" to include capital account and reserves. The Board's policy is to maintain a strong capital base to safeguard the ability to meet the long-term development needs of the Authority. The Board of Directors monitors the "Operating Surplus" and "Other income and gains - net" on a regular basis. The Board monitors the major capital expenditure which is strategic in nature and may draw on reserves.

There were no changes in the capital management approach during the year.

The Authority is not subject to externally imposed capital requirements.

13. Share capital

Share capital refers to equity injections by the Minister for Finance ("MOF") in its capacity as shareholder under the Capital Management Framework for statutory boards, implemented with effect from 1 September 2004.

14. Employment benefits

	2021	2020
	\$	\$
Beginning of financial year	-	422,377
Provision made	18,147	77,718
Provision utilised	(18,147)	(500,095)
End of financial year	-	-

The Authority operates an unfunded employment benefit plan for a limited pool of employees under the provisions of the Pensions Act 1956. Benefits are payable based on the last drawn salary of the employees and the number of years of service with the Authority.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

15. Deferred capital grant

	2021	2020
	\$	\$
Beginning of financial year	15,093,927	16,403,403
Amortisation to income	(1,309,476)	(1,309,476)
End of financial year	13,784,451	15,093,927

The above represents the unamortised portion of Government grant received in connection with specific property, plant and equipment acquired by the Authority.

16. Lease liabilities

	2021	2020
	\$	\$
Maturity Analysis:		
Year 1	6,135,845	5,614,819
Year 2	4,081,919	4,917,114
Year 3	3,737,229	3,909,238
Year 4	3,304,472	3,688,280
Year 5	3,104,814	3,274,895
Year 6 onwards	1,892,851	4,997,665
	22,257,130	26,402,011
Less: Unearned interest	(1,710,501)	(2,405,937)
	20,546,629	23,996,074
Analysed as:		
Current	5,553,508	4,899,309
Non-current	14,993,121	19,096,765
	20,546,629	23,996,074

The Authority leases building structures, plant, machinery and equipment and floating craft, which are used in the Authority's operations. There are no externally imposed covenant on these lease arrangements.

Reconciliation of lease liabilities from financing activities

	Beginning of the year	Principal and interest payments	Non-cash changes				End of the year
			Addition during the year	Modification of lease liabilities	Rent concession	Interest expense	
	\$	\$	\$	\$	\$	\$	\$
2021	23,996,074	(6,833,532)	2,589,171	55,520	-	739,396	20,546,629
2020	4,398,449	(5,460,950)	22,870,828	1,501,585	(49,524)	735,686	23,996,074

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

16. Lease liabilities (continued)

	2021 \$	2020 \$
(a) Lease expense not capitalised in lease liabilities		
Lease expense – short term and low value lease	2,627,799	2,259,957
(b) Total cash outflow for all the leases	<u>8,721,935</u>	<u>6,985,221</u>

(c) Future cash outflow which are not capitalised in lease liabilities

Extension options

The leases for certain ROU assets contain extension periods, for which the related lease payments had not been included in lease liabilities as the Authority is not reasonably certain to exercise these extension option. The Authority negotiates extension options to optimise operational flexibility in terms of managing the assets used in the Authority's operations. The extension options are exercisable by the Authority and not by the lessor.

17. Trade and other payables

	2021 \$	2020 \$
Trade payables	4,183,306	1,306,167
Payables on purchase of financial instruments	112,943	291,383
Accrued capital expenditure	7,201,035	6,272,144
Accrued operating expenses	31,707,289	27,028,987
Other payables	2,984,865	5,623,870
	<u>46,189,438</u>	<u>40,522,551</u>

Trade payables are mainly denominated in Singapore Dollar, which is the Authority's functional currency. Payables on purchase of financial instruments, managed by fund managers, are mainly denominated in Singapore Dollar.

Accrued operating expenses include accrual for performance bonus and group bonus of \$13,741,774 (2020: \$10,300,000) and accrued administrative fee payable to the fund managers and custodian bank amounting to \$677,626 (2020: \$1,043,860).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

17. Trade and other payables (continued)

The following are the expected contractual undiscounted cash outflows of the financial liabilities, including interest payments:

	2021 \$	2020 \$
Undiscounted cash flows within 1 year		
Non-derivative financial liabilities		
Trade and other payables	<u>(46,189,438)</u>	<u>(40,522,551)</u>

18. Advances, deposits and unearned income

	2021 \$	2020 \$
Advances and deposits	6,603,724	5,558,046
Unearned operating lease income [Note (a)]	4,432,663	5,300,784
Unearned annual port dues and Maritime Welfare Fee [Note (b)]	1,382,434	481,577
	<u>12,418,821</u>	<u>11,340,407</u>

(a) Unearned operating lease income mainly relates to sub-lease of properties to third party for a period of 5 to 6 years (2020: 6 to 7 years), of which payments were received in advance.

(b) Unearned annual port dues and Maritime Welfare Fee relate to specific customers under annual and 6-months port dues schemes, and the advance payments of Maritime Welfare Fee. These customers, whose ships that call frequently at the port are allowed to pay port dues on an annual or 6-months basis in advance instead of on a per-call basis.

Deposits due within 1 year approximate their carrying amount of \$6,207,039 (2020: \$5,263,717).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

19. Operating revenue

	2021	2020
	\$	\$
Timing of revenue recognition		
<u>SB-FRS 115 revenue</u>		
Over time		
- Dues, licence & permit fees, and agency fee	182,779,687	161,994,351
- Annual Administrative Fee	1,334,280	1,095,241
- Training	422,094	500,705
At a point in time		
- Other marine services	80,208,950	67,301,037
- Shipping services	5,937,797	4,891,999
<u>Non SB-FRS 115 revenue</u>		
- Rental income	2,897,415	2,654,561
- Miscellaneous revenue	247,869	328,236
	<u>273,828,092</u>	<u>238,766,130</u>

To help the maritime industry weather the crisis due to the COVID-19 outbreak, MPA rolled out stimulus economic packages which were first announced on 18 February 2020 under the overall Singapore Budget and later on 26 March 2020 as part of the Resilience Budget. These included rental rebates, public license fee waivers and port dues concessions. MPA also rolled out MaritimeSG Together Package which took effect from 1 May 2020 to 31 December 2021 and subsequently extended to 30 June 2022, to provide targeted financial support for maritime companies, individuals and seafarers, on top of economic relief measures announced earlier. These initiatives bring the total expected relief measures for the maritime industry to \$36 million.

20. Staff cost

	2021	2020
	\$	\$
Wages and salaries	79,189,050	68,710,884
Employer's contribution to Central Provident Fund	11,582,303	10,165,510
Employer's contribution to other defined benefit plans (Note 14)	18,147	77,718
Other benefits	7,886,348	4,781,298
	<u>98,675,848</u>	<u>83,735,410</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

21. Other operating expenses

	2021	2020
	\$	\$
Project grants	23,349,183	22,050,969
Contribution to Maritime Cluster Fund projects	13,492,888	12,091,845
Contribution to International Organisations	4,189,750	4,334,482
Transport & travel	644,513	795,852
Rental expense [Note (a)]	2,627,799	2,259,957
Property tax [Note (b)]	1,150,839	779,048
Telecommunication	2,414,796	2,460,688
Water cost & water sales service fee	1,018,945	1,192,347
Utility charges	1,115,590	1,329,633
Events & publicity	4,880,289	2,428,270
Professional & consultancy fees	9,494,530	9,209,832
Other administrative expenses	7,819,802	9,109,208
Other miscellaneous expenses	1,905,536	1,792,865
	<u>74,104,460</u>	<u>69,834,996</u>

- (a) Included within rental expense are COVID-19 related rent concessions received from lessors of \$Nil (FY2020: \$49,524) to which the Authority applied the practical expedient.
- (b) Included within property tax expenses are COVID-19 related property tax rebates received from the government of \$Nil (FY2020: \$639,706) to which the Authority had transferred to tenants in the form of rent rebates during the year and rental waivers provided to eligible tenants as part of the qualifying conditions of the grant.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

22. Other income and gains - net

	2021 \$	2020 \$
Investment income and gains - net		
Dividend income	3,580,249	3,597,720
Interest income	10,206,170	9,981,410
Fair value gain on investment - realised	22,939,207	17,545,945
Fair value (loss)/gain on investment - unrealised	(3,978,126)	6,585,627
(Loss)/gain on foreign exchange - net	(181,361)	580,764
Other investment expenses	(3,001,975)	(3,571,686)
Investment income and gains from funds with fund managers - net	29,564,164	34,719,780
Non-investment income and gains - net		
Interest income	819,495	3,626,354
Gain on foreign exchange - net	52,262	107,675
(Loss)/gain on disposal of property, plant and equipment - net	(31,478)	40,821,281
Others - net	3,761,513	435,615
Non-investment income and gains - net	4,601,792	44,990,925
	<u>34,165,956</u>	<u>79,710,705</u>

23. Contribution to Consolidated Fund

The contribution to the Consolidated Fund is made in accordance with Section 3(a) of the Statutory Corporations (Contributions to Consolidated Fund) Act 1989. The contribution is based on 17% (2020: 17%) of the surplus for the year.

	2021 \$	2020 \$
Beginning of financial year	18,746,477	38,359,578
Amount contributed	(18,746,477)	(38,359,578)
Provision for the year	11,632,142	18,746,477
End of financial year	<u>11,632,142</u>	<u>18,746,477</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

24. Derivative financial instruments

The Authority places its surplus funds with fund managers to manage its investment portfolio under a balanced mandate. These fund managers are given discretion in managing their portfolio, subject to the investment guidelines set out in the fund management agreements.

As part of risk management activities, the fund managers use financial derivatives for hedging purposes. Hedge accounting is not applied.

The financial derivatives used include financial futures, options and forward foreign exchange contracts.

	2021 \$	2020 \$
Fair Value		
Asset		
Derivatives		
- Futures contracts	1,513,444	809,846
- Forward contracts and options	9,170,958	4,615,072
	<u>10,684,402</u>	<u>5,424,918</u>
Liabilities		
Derivatives		
- Futures contracts	(549,104)	(500,473)
- Forward contracts and options	(2,468,235)	(2,584,968)
	<u>(3,017,339)</u>	<u>(3,085,441)</u>

As at balance sheet date, the notional amounts of the above financial derivatives held by the fund managers are as follows:

	2021 \$	2020 \$
Notional amounts		
Futures contracts		
- Gross inflow	63,497,255	65,957,724
- Gross outflow	(43,216,818)	(21,395,226)
Forward contracts and options		
- Gross inflow	945,626,717	554,405,665
- Gross outflow	<u>(945,471,527)</u>	<u>(554,618,120)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

25. Commitments

(a) Capital commitments

Capital expenditures contracted for at the balance sheet date but not recognised in the financial statements are as follows:

	2021 \$	2020 \$
Property, plant and equipment	<u>40,036,317</u>	35,356,458

(b) Operating lease commitments - Where the Authority is a lessor:

Operating leases, in which the Authority is the lessor, relates to rental space and buildings owned by the Authority with lease terms of between 1 year to 30 years (2020: 1 year to 30 years). The lessee does not have the option to purchase the property at the expiry of the lease period.

(b) Operating lease commitments - Where the Authority is a lessor: (continued)

Maturity analysis of operating lease payments to be received:

	2021 \$	2020 \$
Maturity Analysis:		
Year 1	1,552,341	2,448,500
Year 2	914,935	1,550,814
Year 3	914,935	915,511
Year 4	914,935	915,511
Year 5	631,003	915,511
Year 6 onwards	445,504	1,085,147
Total	<u>5,373,653</u>	7,830,994

During the year ended 31 December 2021, the Authority recognised \$2,783,415 (2020: \$2,586,161) of rental income from non-cancellable operating leases.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management

Financial risk factors

The Authority's activities expose it to market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk.

Risk management is integral to the whole operations of the Authority. The Authority has a system of controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Authority's risk management process to ensure that an appropriate balance between risk and control is achieved.

Funds with fund managers

In connection with the funds placed with fund managers, the funds placed with fund managers are exposed to a variety of financial risk: credit risk, liquidity risk and market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk).

The fund managers appointed under the balanced mandate are held responsible in achieving the investment objectives set forth in their respective fund manager agreements entered with the Authority. All income and realised capital gains are to be reinvested by the fund managers unless otherwise instructed by the Authority.

The fund managers' overall risk management programme seeks to maximise the returns derived for the level of risk to which they are exposed and seeks to minimise the potential adverse effects on the fund managers' financial performance.

A significant proportion of the Authority's security investments present a risk of loss of capital. The maximum loss of capital is represented by the carrying values of those security investments.

The management of these risks carried out by the fund managers is governed by the mandate set forth in the fund manager agreements approved by the Investment Committee of the Authority. The mandate provides written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, the use of derivative and non-derivative financial instruments.

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021

26. Financial risk management (continued)
Funds with fund managers (continued)

(a) Market risk

(i) Currency risk

The Authority invests in financial instruments and enters into transactions denominated in currencies other than its functional currency. Consequently, the Authority is exposed to risks that the exchange rate of its functional currency relative to other foreign currencies may change in a manner that has an adverse effect on the value of that portion of the Authority's assets or liabilities denominated in currencies other than the functional currency.

The financial assets managed by fund managers denominated in currencies other than the Authority's functional currency comprise the following:

	2021 \$	2020 \$
British pound sterling	17,416,439	10,008,900
Canadian dollar	72,243,969	26,074,457
Euro	65,860,965	37,618,751
Japanese yen	30,344,843	22,465,507
Swiss franc	8,826,663	6,813,400
United States dollar	491,957,151	355,444,480
Various other foreign currencies	33,791,789	43,893,235
	<u>720,441,819</u>	<u>502,318,730</u>

At the balance sheet date, if there is a +/-5% movement in exchange rates relative to the Singapore Dollar, with all other variables held constant, the increase/(decrease) in the fair value of financial assets in income or expenditure would be as follows:

	2021 \$	2020 \$
+5% scenario		
Income or expenditure	<u>36,022,091</u>	25,115,936
-5% scenario		
Income or expenditure	<u>(36,022,091)</u>	(25,115,936)

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021

26. Financial risk management (continued)

(a) Market risk (continued)

(ii) Interest rate risk

Interest rate risk arises from the effects of fluctuations in the prevailing levels of market interest rates on the fair value of financial assets and liabilities and future cash flows. The Authority holds debt securities and derivatives that expose the Authority to fair value interest rate risk.

FVTPL debt securities, managed by fund managers

At the balance sheet date, assuming that all other variables are held constant and no loss event has occurred, a 100 basis point increase/(decrease) in the interest rate would (decrease)/increase the fair values of the financial assets in income or expenditure by the following amounts:

	2021 \$	2020 \$
+100 basis point scenario		
Income or expenditure	<u>(24,765,781)</u>	(17,865,625)
-100 basis point scenario		
Income or expenditure	<u>28,367,281</u>	20,439,454

At the balance sheet date, assuming that all other variables are held constant, a 100 basis point increase/(decrease) in interest rate would increase/(decrease) the interest income of the floating rate debt securities recorded in income or expenditure by the following amounts:

	2021 \$	2020 \$
+100 basis point scenario		
Income or expenditure	<u>176,731</u>	435,873
-100 basis point scenario		
Income or expenditure	<u>(176,731)</u>	(435,873)

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021

26. Financial risk management (continued)

(a) Market risk (continued)

(ii) Interest rate risk (continued)

Derivatives (futures), managed by fund managers

At the balance sheet date, if interest rates had been 100 basis point higher/(lower) with all other variables held constant, the increase/(decrease) in the fair values of the interest rate derivatives in the income or expenditure would be as follows:

	2021 \$	2020 \$
+100 basis point scenario		
Income or expenditure	<u>5,134,387</u>	<u>2,216,585</u>
-100 basis point scenario		
Income or expenditure	<u>(6,388,092)</u>	<u>(2,084,450)</u>

The fair values at balance sheet date of the debt securities held by the fund managers and the period in which they mature or reprice are as follows:

	2021 \$	2020 \$
Fixed rate		
Maturing in less than 1 year	115,216,565	27,854,822
Maturing between 1 to 5 years	102,078,349	123,207,450
Maturing in more than 5 years	217,551,773	141,383,426
Floating rate		
Repricing in less than 3 months	13,758,376	15,314,988
Repricing in between 3 to 6 months	4,915,749	2,640,235
Repricing in more than 6 months	11,635,120	3,568,944
	<u>465,155,932</u>	<u>313,969,865</u>

As at 31 December 2021, the financial instruments held by the Authority are referenced to inter-bank offered rates ("IBOR") and have not yet transitioned to new benchmark rates. These instruments will mature before the replacement of IBOR.

NOTES TO THE FINANCIAL STATEMENTS
 For the financial year ended 31 December 2021

26. Financial risk management (continued)

(a) Market risk (continued)

(iii) Equity price risk

The Authority is exposed to equity price risk. This arises from investments held by the Authority for which prices in the future are uncertain. Where equity securities are denominated in currencies other than the functional currency of the Authority, the price initially expressed in foreign currency and then converted into the functional currency will also fluctuate because of changes in foreign exchange rates. Paragraph (a)(i) "Currency risk" sets out how this component of price risk is managed and measured.

The Authority's policy to manage price risk is via diversification and selection of securities and other financial instruments within specified limits set by the Investment Committee. The majority of the Authority's equity investments is publicly traded. The overall market position of these equity investments is monitored on a daily basis by the fund managers and is reviewed on a quarterly basis by the members of the Investment Committee. Compliance with the Authority's fund management mandate is reported to the members of the Investment Committee on a quarterly basis.

At the balance sheet date, assuming that all other variables are held constant, a 5% increase/(decrease) in the underlying equity prices would increase/(decrease) the Authority's net surplus for the year by the following amounts:

	2021 \$	2020 \$
+5% scenario		
Equity securities, managed by fund managers		
Income or expenditure	<u>16,262,627</u>	<u>7,928,001</u>
-5% scenario		
Equity securities, managed by fund managers		
Income or expenditure	<u>(16,262,627)</u>	<u>(7,928,001)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management (continued)

(b) Credit risk

The Authority's current credit risk grading framework comprises the following categories:

Category	Description	Basis for recognising expected credit losses (ECL)
Performing	The counterparty has a low risk of default and does not have any past-due amounts.	12-month ECL
Doubtful	Amount is >30 days past due or there has been a significant increase in credit risk since initial recognition.	Lifetime ECL - not credit-impaired
In default	Amount is >90 days past due or there is evidence indicating the asset is credit-impaired.	Lifetime ECL - credit-impaired
Write-off	There is evidence indicating that the debtor is in severe financial difficulty and the Authority has no realistic prospect of recovery.	Amount is written off

The table below details the credit quality of the Authority's financial assets as well as maximum exposure to credit risk by credit risk rating grades:

	Note	Internal credit rating	12-month or lifetime ECL	Gross carrying amount \$	Loss allowance \$	Net carrying amount \$
2021						
Trade receivable	9	(i)	Lifetime ECL (simplified approach)	40,531,437	274,334	40,257,103
Other receivables	10	Performing	12-month ECL	9,404,387	-	9,404,387
					<u>274,334</u>	

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management (continued)

(b) Credit risk (continued)

	Note	Internal credit rating	12-month or lifetime ECL	Gross carrying amount \$	Loss allowance \$	Net carrying amount \$
2020						
Trade receivable	9	(i)	Lifetime ECL (simplified approach)	37,823,642	159,538	37,664,104
Other receivables	10	Performing	12-month ECL	10,486,099	-	10,486,099
					<u>159,538</u>	

- (i) The Authority determines the expected credit losses on these items by using a provision matrix, estimated based on historical credit loss experience based on the past due status of the debtors, adjusted as appropriate to reflect current conditions and estimates of future economic conditions.

The Authority has adopted procedures in extending credit terms to customers and in monitoring its credit risk. The Authority only grants credit to creditworthy counterparties. Cash is held with creditworthy institutions and is subject to immaterial credit loss.

Although the Authority's credit exposure is concentrated mainly in Singapore, it has no significant concentration of credit risk with any single customer or group of customers.

Funds with fund managers

Credit risk is the risk that a counterparty to a financial instrument will fail to discharge an obligation or commitment that it has entered into with the Authority. The fund manager has a credit policy in place and the exposure to credit risk is monitored on an on-going basis.

As at 31 December 2021, the following financial assets were exposed to credit risk: investment in equity and debt securities, receivables on sale of financial instruments, cash and cash equivalents, derivative financial assets and other receivables. The total carrying amount of financial assets exposed to credit risk amounted to \$1,032,769,042 (2020: \$814,929,641).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management (continued)

(b) Credit risk (continued)

The Authority limits its credit risk exposure in respect of investments in debt securities by restricting the fund managers to invest in debt securities that have a sound credit rating from Standard & Poor's and Moody's (at least BBB- by the former or Baa3 by the latter, on the lower rating of both in the event of split ratings). Given these credit ratings, management does not expect any counterparty to fail to meet its obligations.

The maximum exposure to credit risk is represented by the carrying amount of each financial asset on the balance sheet.

(c) Liquidity risk

The Authority monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Authority's operations and to mitigate the effects of fluctuations in cash flows.

Funds with fund managers

The Authority's listed debt and equity securities are considered readily realisable, as they are listed on the major stock exchanges. The fund managers are required to comply with the restrictions and limitations as stipulated in the investment mandate. All transactions carried out by the fund managers are settled daily through the Authority's custodian of the portfolio of investments placed by fund managers.

The fund managers may periodically invest in some debt securities and derivative contracts on behalf of the Authority that are traded over the counter, which are not traded in an organised market and may be illiquid. As a result, the Authority may not be able to liquidate its investments in these instruments at an amount close to their fair value to meet its liquidity requirements or be able to respond to specific events such as the deterioration in the creditworthiness of any particular issuer.

At the balance sheet date, non-derivative financial liabilities held by the Authority are as disclosed in Note 16, 17 and 18.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management (continued)

(d) Fair value measurements

The following presents assets and liabilities measured and carried at fair value and classified by level of the following fair value measurement hierarchy:

- (a) quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1);
- (b) inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices) (Level 2); and
- (c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (Level 3).

The fair value of financial instruments traded in active markets (the Authority's equity and debt securities managed by fund managers) is based on quoted market prices at the balance sheet date. The quoted market price used for financial assets held by the Authority is the current bid price. These instruments are classified as Level 1.

Derivatives used by fund managers

Futures contracts are marked to market daily using listed market prices with any gains or losses posted to the related variation margin accounts.

The fair value of forward exchange contracts is based on their listed market price and the fair value of options are based on quotations from independent third party vendors and sources that apply fair value techniques. These instruments are classified as Level 2.

There were no transfers between Levels 1 and 2 during the year.

The fair values of current financial assets and liabilities carried at amortised cost approximate their carrying amounts.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

26. Financial risk management (continued)

(e) Financial instruments by category

The carrying amounts of the different categories of financial instruments are as follows:

	2021 \$	2020 \$
Financial assets, at amortised cost	821,381,051	1,124,152,312
Financial assets, at FVTPL	801,092,870	477,954,812
Financial liabilities, at amortised cost	73,339,791	70,076,671
Financial liabilities, at FVTPL	<u>3,017,339</u>	<u>3,085,441</u>

27. Related party transactions

In addition to the information disclosed elsewhere in the financial statements, the following transactions took place between the Authority and related parties at terms agreed between the parties.

(a) Sales of services

	2021 \$	2020 \$
Provision of dumping and monitoring services to Statutory Boards	30,011,183	18,982,752
Provision of agency and project management services to a Ministry	8,658,218	7,354,529
Provision of private wharfage services to a Statutory Board	<u>3,171,724</u>	<u>2,195,338</u>

(b) Key management personnel compensation

Key management personnel of the Authority are those persons having the Authority and responsibility for planning, directing and controlling the activities of the Authority. These key management personnel comprise the Board of Members and Executive Management Team of the Authority.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

27. Related party transactions (continued)

(b) Key management personnel compensation (continued)

Key management personnel compensation is as follows:

	2021 \$	2020 \$
Salary and short-term employee benefits	6,232,659	5,896,116
CPF contributions	322,258	346,080
Directors' fees	219,390	222,974
	<u>6,774,307</u>	<u>6,465,170</u>

28. Funds managed/held on behalf of others - Funds held in trust

Funds held in trust and managed by the Authority comprise the following:

	2021 \$	2020 \$
Singapore Stranded Seafarers' Fund	342,812	341,720
Agency funds held in trust of Ministry of Transport	8,281,205	37,903,714
	<u>8,624,017</u>	<u>38,245,434</u>

Singapore Stranded Seafarers' Fund ("SSSF")

- (a) The SSSF was set up in September 1999 (following the Authority's Board approval for its creation at an earlier board meeting in July 1999). The SSSF is managed by a Committee made up of representatives from the Authority and the unions, namely Singapore Maritime Officers' Union and Singapore Organisation of Seamen.

The Fund is humanitarian in nature. It shall be used only as a last resort when it becomes evidently clear that the ship owners concerned are no longer able to bear responsibility towards their ship crew, e.g. due to insolvency. It is used mainly to buy fuel (i.e. to run the ship's generators) and provide food and portable water to sustain the stranded ship crew onboard Singapore-registered ships stranded in Singapore or overseas, until such time they are repatriated or the dispute is settled.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

28. Funds managed/held on behalf of others - Funds held in trust (continued)

(b) The assets and liabilities of the SSSF as at 31 December are as follows:

	2021 \$	2020 \$
Accumulated fund	342,812	341,720
Current assets		
Interest receivable	640	642
Cash and cash equivalents	342,172	341,078
	342,812	341,720

(c) The results of the SSSF for the year ended 31 December are as follows:

	2021 \$	2020 \$
Interest income	1,092	1,093
Surplus for the year	1,092	1,093
Accumulated fund as at 1 January	341,720	340,627
Accumulated fund as at 31 December	342,812	341,720

Agency funds held in trust of Ministry of Transport

(a) On 11 March 2005, the Authority was appointed by Ministry of Transport ("MOT") as its managing agent in connection with the proposed land reclamation at Pasir Panjang Terminal Phases 3 and 4 and Tuas Port.

(b) The assets and liabilities of the agency funds held in trust as at 31 December are as follows:

	2021 \$	2020 \$
Accumulated fund	8,281,205	37,903,714
Current assets		
Cash at bank	8,071,197	40,597,447
Amount due from various Government bodies	5	8
GST receivable	9,567,205	3,047,720
	17,638,407	43,645,175
Current liabilities		
GST payable	(9,357,202)	(5,741,461)
Net assets	8,281,205	37,903,714

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2021

28. Funds managed/held on behalf of others - Funds held in trust (continued)

(c) The results of the agency funds held in trust for the year ended 31 December are as follows:

	2021 \$	2020 \$
Grants received	542,710,811	453,423,324
Interest income	105,922	610,390
	542,816,733	454,033,714
Grants disbursed	(564,243,973)	(415,993,374)
Agency fees paid/payable	(8,195,269)	(6,888,602)
Surplus for the year	(29,622,509)	31,151,738
Accumulated fund as at 1 January	37,903,714	6,751,976
Accumulated fund as at 31 December	8,281,205	37,903,714

29. Events occurring after balance sheet date

Subsequent to the end of the financial year, and as at the date these financial statements are authorised for issue, the value of investment portfolio managed by fund managers has reduced by approximately 3% largely from unrealised losses amidst the global market sell-off triggered by heightened tapering fears from high inflation exacerbated by the negative economic implications from the Russia-Ukraine conflict.

30. New or revised accounting standards and interpretations

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2021 reporting periods and have not been early adopted by the Company. These standards are not expected to have a material impact on the Company in the current or future reporting periods and on foreseeable future transactions.

31. Authorisation of financial statements

These financial statements were authorised for issue by the Board of Members on 24 March 2022.