

SUSTAINING A FUTURE ➤ READY MARITIME SINGAPORE

SUSTAINABILITY • INTEGRATED REPORT 2017





ABOUT THIS REPORT

[GRI 102-49, 102-50, 102-51, 102-52, 102-53, 102-54, 102-56]

This is the Maritime and Port Authority of Singapore's (MPA) 4th Sustainability/Integrated Report, with the inaugural edition published in 2014. This report details MPA's sustained sustainability efforts, and new initiatives undertaken as MPA further develops the diverse maritime cluster, and promotes more efficient and sustainable shipping. The report was prepared in accordance with the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) based on the Comprehensive option. It is also aligned with the principle-based International Integrated Reporting <IR> Framework issued by the International Integrated Reporting Council (IIRC). In addition, MPA has aligned MPA's material issues and associated chapters within the report with United Nations Sustainable Development Goals.


Our Annual Report and our Financial Report are published separately, and cover material information pertaining to all MPA's operations during the Financial Year (FY) from

1 January 2017 to 31 December 2017. Together, the two reports constitute the Integrated Report <IR>.

The principles of the materiality standards of AA1000, GRI Standards, and IIRC were used to identify MPA's material sustainability issues. MPA's Senior Management reviewed these issues at a February 2018 meeting, and determined that MPA's material sustainability issues for FY2017 had not changed significantly. To be at the forefront of sustainability reporting, MPA is working towards having our Sustainability Report assured in the medium term.

There were no significant organisational changes during the current reporting period.

We welcome your feedback on this report. For any feedback or enquiries, please contact Ms Brenda Kwong at brenda_kwong@mpa.gov.sg.



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CHAIRMAN'S MESSAGE

Mr Niam Chiang Meng

Chairman

Maritime and Port Authority of Singapore

Singapore's shipping and maritime industry maintained its strength and vibrancy, despite weaker-than-expected global economic conditions, and significant structural changes in the maritime world.

The Port of Singapore sustained its performance in 2017, with annual vessel arrival tonnage rising by 5.1% to reach 2.8 billion gross tonnes. Singapore also remained the world's top bunkering port in 2017, with annual bunker sales crossing the 50 million-tonne mark for the first time. The total volume of bunkers sold here grew 4.2% to 50.6 million tonnes.

“ Clearly, the strength of Maritime Singapore lies in its cohesiveness, dynamism, and forward-thinking nature. ”

While we have done well, we cannot be complacent. As a maritime and shipping hub, we are also committed to delivering service that is second none. In 2017, the Port of Singapore once again clinched the No. 1 spot in Menon's Leading Maritime Capitals of the World Report. It was also bestowed the title “Best Seaport in Asia” for the 29th time at the 2017 Asia Freight, Logistics and Supply Chain Awards.

We do not take these accolades and achievements for granted. In fact, they spur us on to work even harder and more effectively for all our stakeholders. That is why MPA set up the collaborative International Maritime Centre (IMC) 2030 Advisory Committee. The Committee's vision is for Maritime Singapore to be the Global Maritime Hub for Connectivity, Innovation and Talent. In its report submitted to the Government last year, it reaffirmed that Singapore's global hub port and IMC remain the complementing twin engines of growth for Maritime Singapore.

As for the future, plans are underway to grow and strengthen the maritime sector. The Sea Transport Industry Transformation Map (ITM) was launched in January 2018. Developed by MPA in partnership with the industry, unions and other government agencies, it builds on MPA's strategic long-term plans to develop Singapore's next-generation port, and strengthen our IMC. Specific initiatives have been laid out in the ITM to catalyse innovation, drive productivity improvements as well as enhance the skills of the maritime workforce. Our aim is to grow the sector's value-add by \$4.5 billion while creating more than 5,000 good jobs by 2025.

Clearly, the strength of Maritime Singapore lies in its cohesiveness, dynamism, and forward-thinking nature. I would like to take this opportunity to extend my sincere thanks to all our partners and industry stakeholders for their willingness to collaborate with us to help realise the full potential of Maritime Singapore. It is this robust collaborative spirit that has been and will continue to be the driving force behind the strength and success of Maritime Singapore.



CHIEF EXECUTIVE'S MESSAGE

Mr Andrew Tan

Chief Executive

Maritime and Port Authority of Singapore

Maritime Singapore withstood the strong headwinds experienced by the maritime industry in 2017. In yet another challenging year, the global shipping and maritime industry continued to face a multitude of challenges, including chronic demand and supply imbalances, further industry consolidation, tighter regulations, and additional technological disruptions. All these came on the back of sluggish trade growth.

Amidst these challenges, Maritime Singapore remained a bastion of strength for the industry. Singapore's vibrant maritime eco-system continued to grow, and now has over 5,000 establishments employing more than 170,000 people, and contributing about 7% to Singapore's gross domestic product.

A testament to the confidence the shipping industry has in Singapore, all the major container shipping alliances – 2M, Ocean Alliance and The Alliance – operate from our shores. Ocean Network Express, the result of a merger between three members of The Alliance, NYK, MOL and K-Line, has set up its global headquarters here. As these new alliances went into full-swing operations in 2017, Singapore's container throughput grew by 9% to 33.7 million TEUs.

Singapore's steady and sustained investment in our maritime sector remains a major draw for global shipping companies. A prime example of our efforts is our investment in Singapore's new Tuas Next-Generation Port which is proceeding right on schedule. To ensure that this next-generation port lives up to its name, MPA is working closely with port operator PSA to develop and deploy their new automated systems there.

MPA is also driving maritime innovation to enhance Singapore's hub port competitiveness. We are leveraging on technology to help maritime companies innovate and move into new growth areas. Towards this goal, MPA has established the MPA Living Lab as well as two Centres of Excellence (COE) with partners to deepen maritime R&D competencies. A third COE will be set up this year.

2017 saw us ramping up our efforts to maintain and enhance Maritime Singapore's competitiveness. Competition is intensifying all around us. New maritime clusters are emerging while existing ones are repositioning themselves to recover lost ground. Meanwhile, new supply chains and intermodal networks are changing trade patterns. All these are happening right on our doorstep.

To sustain Singapore's longer-term global competitiveness, the IMC 2030 Advisory Committee, formed in August 2016, has mapped out a vision for Maritime Singapore. The key recommendations centred on strengthening existing clusters of maritime and related activities, and creating new ones around Connectivity, Innovation and Talent.

To prepare for changes arising from structural shifts, technological developments and emerging growth opportunities, MPA is spearheading the development of the Industry Transformation Map (ITM) for Sea Transport in consultation with our stakeholders and partners. We will focus on promoting innovation, raising productivity, generating good jobs and upskilling, and helping our companies develop into regional and global players.

The effective implementation of both the IMC 2030 recommendations, and the ITM are key to ensuring we stay

agile and versatile in adapting to the ever-changing global landscape.

Even as we work to enhance Maritime Singapore's global competitiveness, MPA continues to showcase Maritime Singapore to the international audience through the annual Singapore Maritime Week (SMW). SMW has become a gold mark event that other shipping centres have attempted to replicate. It engages the international maritime community, and also features public outreach activities to develop a greater appreciation of Singapore as a premier global hub port and leading IMC.

During SMW 2017, we signed five MoUs with PSA, Jurong Port, MPA-ST Electronics, Lloyd's Register (LR), and a four-party collaboration comprising Alpha Ori, LR, and National University of Singapore's Technology Centre for Offshore and Marine. These will catalyse the creation and adoption of emerging technologies while enhancing information flow and connectivity within the maritime community.

Again in keeping with this collaborative spirit, MPA is working with industry partners to drive the Singapore maritime industry's digital transformation. In October 2017, we signed an MoU with Shell Eastern Trading (Pte) Ltd to cooperate in maritime projects relating to clean fuel technologies, automation, and digitalisation.

To promote the use of cleaner fuels, MPA injected another \$12 million into the Liquefied Natural Gas (LNG) Bunkering Programme. Half of the additional funds will co-fund the building of new LNG bunker vessels to facilitate the development of ship-to-ship LNG bunkering in the Port of Singapore. The rest will be used to top up MPA's existing co-funding programme to support the building of LNG-fuelled vessels.

“ The effective implementation of both the IMC 2030 recommendations, and the ITM are key to ensuring we stay agile and versatile in adapting to the ever-changing global landscape. ”

While developing Maritime Singapore, keeping our waters safe and secure remains an important priority for MPA. In 2017, innocent lives were lost in the collision between USS John S. McCain and Alnic MC, and that between Kartika Segara and JBB De Rong 19. These incidents spur us to work even harder at enhancing safety and security in our waters. MPA will continue to nurture a culture of excellence within our own organisation, and work more closely with the maritime community to promote a wider culture of excellence here.

Looking ahead, MPA remains steadfast and focused in our efforts to work for the benefit of Maritime Singapore and all its stakeholders. Our programmes and initiatives will continue to hone Maritime Singapore's global competitive edge, and safeguard Singapore's strategic maritime interests.

BOARD OF DIRECTORS [GRI 102-18, 102-22, 102-23, 405-1]



Mr Niam Chiang Meng
Chairman
Maritime and Port Authority of Singapore



Mr Andrew Tan
Chief Executive
Maritime and Port Authority of Singapore



BG (NS) Ishak Ismail
Regional Director
Business Development (APAC)
BAE Systems Hägglunds AB



Mr Luke Goh
Deputy Secretary (Trade)
Ministry of Trade and Industry



Mr Kam Soon Huat
**General Secretary
& Chief Operating Officer**
Singapore Organisation
of Seamen



RADM Lai Chung Han
Chief of Navy
Republic of Singapore Navy
(till 15 Jun 17)



RADM Lew Chuen Hong
Chief of Navy
Republic of Singapore Navy
(from 16 Jun 17)

BOARD COMMITTEES [GRI 102-18, 102-22, 102-23, 405-1]

INVESTMENT COMMITTEE

Chairman
Mr Niam Chiang Meng

Members
Mr Andrew Tan
Dr Vincent Lien
Mrs Quek Bin Hwee
Mr Wong Weng Sun (till 1 Feb 18)
Mr Luke Goh (from 26 May 17)
Mr Chris Ong Leng Yeow
(from 20 Feb 18)

Secretary
Director (Corporate
Development)/CFO

AUDIT REVIEW COMMITTEE

Chairman
Dr Vincent Lien

Members
Mr Carl Arnet
Mr Luke Goh
RADM Lai Chung Han (till 15 Jun 17)
RADM Lew Chuen Hong (from 17 Jul 17)
Mrs Quek Bin Hwee

Secretary
Head (Internal Audit)

WELFARE COMMITTEE FOR SEAMEN

Chairman
BG(NS) Ishak Ismail (till 1 Feb 18)
Mr Kam Soon Huat (from 20 Feb 18)

Members
Mr Kam Soon Huat (till 1 Feb 18)
Mr Esben Poulsson
Mr Teo Choo Wee
Mr Walter Fernandez (from 20 Feb 18)

SSA
Capt Anuraj Singh (till 1 Feb 18)
Deputy General Manager
Maritime Human Resources
NYK Shipmanagement Pte Ltd

Capt Deepak Arora (from 20 Feb 18)
Deputy General Manager
Maritime Human Resources
NYK Shipmanagement Pte Ltd

PSA Corporation
Mr Lee Siak Quee (till 1 Feb 18)
Assistant Vice President
Keppel Terminal

Mr Adrian Sim (from 20 Feb 18)
Assistant Vice President

Jurong Port Pte Ltd
Capt Hemant Gupta
Head
Operations Department



Mr Carl Krogh Arnet
Chief Executive Officer
BW Offshore Ltd



Dr Vincent Lien
Director
Wah Hin & Company Pte Ltd



Mrs Quek Bin Hwee
Director
The Hongkong and Shanghai
Banking Corporation Limited



Mr Wong Weng Sun
President & CEO
Sembcorp Marine Ltd
(till 1 Feb 18)



Mr Esben Poulsen
President
Singapore Shipping Association



Mr Teo Choo Wee
Executive Director
Fleet Division Pacific
International Lines (Pte) Ltd



Mr Chris Ong Leng Yeow
Chief Executive Officer
& Managing Director (Offshore)
Keppel Offshore & Marine
(from 2 Feb 18)



Mr Walter Fernandez
Editor-In-Chief
Mediaport Pte Ltd
(from 2 Feb 18)

Seamen's Missions

Rev Peter Manimuthu
Port Chaplain
Mission to Seafarers

Rev Schmidt Christian (till 1 Feb 18)
Port Chaplain
International Lutheran Seamen's
Mission

Rev Kirsten Eistrup (from 20 Feb 18)
Port Chaplain
Danish Seamen's Church

MPA

Director (Corporate
Development)/CFO
Director (Shipping)

Secretary

Deputy Director (Shipping 2)
(till 1 Feb 18)
Assistant Director (Seafarer
Management) (from 20 Feb 18)

REGISTRATION COMMITTEE

Chairman

BG(NS) Ishak Ismail

Members

Mr Luke Goh
Mr Kam Soon Huat
Mr Teo Choo Wee

Secretary

Director (Shipping)

MINT FUND STEERING COMMITTEE

Chairman

Mr Wong Weng Sun (till 1 Feb 18)
BG(NS) Ishak Ismail (from 20 Feb 18)

Members

Mr Andrew Tan
Mr Carl Arnet
RADM Lai Chung Han (till 15 Jun 17)
RADM Lew Chuen Hong (from 17 Jul 17)
Mr Esben Poulsen

Industry Representative

Prof Lui Pao Chuen
Advisor
National Research Foundation

Secretary

Director (RTID)

SENIOR PERSONNEL BOARD

Chairman

Mr Niam Chiang Meng

Members

Mr Andrew Tan
BG(NS) Ishak Ismail
Mrs Quek Bin Hwee

Secretary

Director (Human Resource)

SENIOR MANAGEMENT [GRI 102-18, 102-20, 202-2, 405-1]



- | | | |
|---|--|---|
| <p>1. Mr Kenneth Lim
Director (Research & Technology and Industry Development)/
Chief Technology Officer</p> | <p>4. Captain Kevin Wong
Acting Director (Operations)/
Port Master</p> | <p>7. Ms Yvonne Chan
Director (Corporate Development)/
Chief Financial Officer</p> |
| <p>2. Ms Caitlin Fua
Director (Communications & Community)</p> | <p>5. Captain M Segar
Assistant Chief Executive (Operations)</p> | <p>8. Ms Ong Seok Bin
Director (Human Resource)</p> |
| <p>3. Er Tham Wai Wah
Director (Engineering & Information Technology)</p> | <p>6. Mr Tan Suan Jow
Dean (MPA Academy)/
Director (Sustainability)</p> | |



9. Ms Bernice Yeoh
Director (International Maritime Centre)

12. Ms Angela Png
Director (International)

15. Dr Parry Oei
Director (Port Services)

10. Mr David Foo
Director (Port Systems)

13. Captain Daknashamoorthy Ganasen
Director (Shipping)/Director of Marine

16. Mr Tan Cheng Peng
Director (Port Policy)

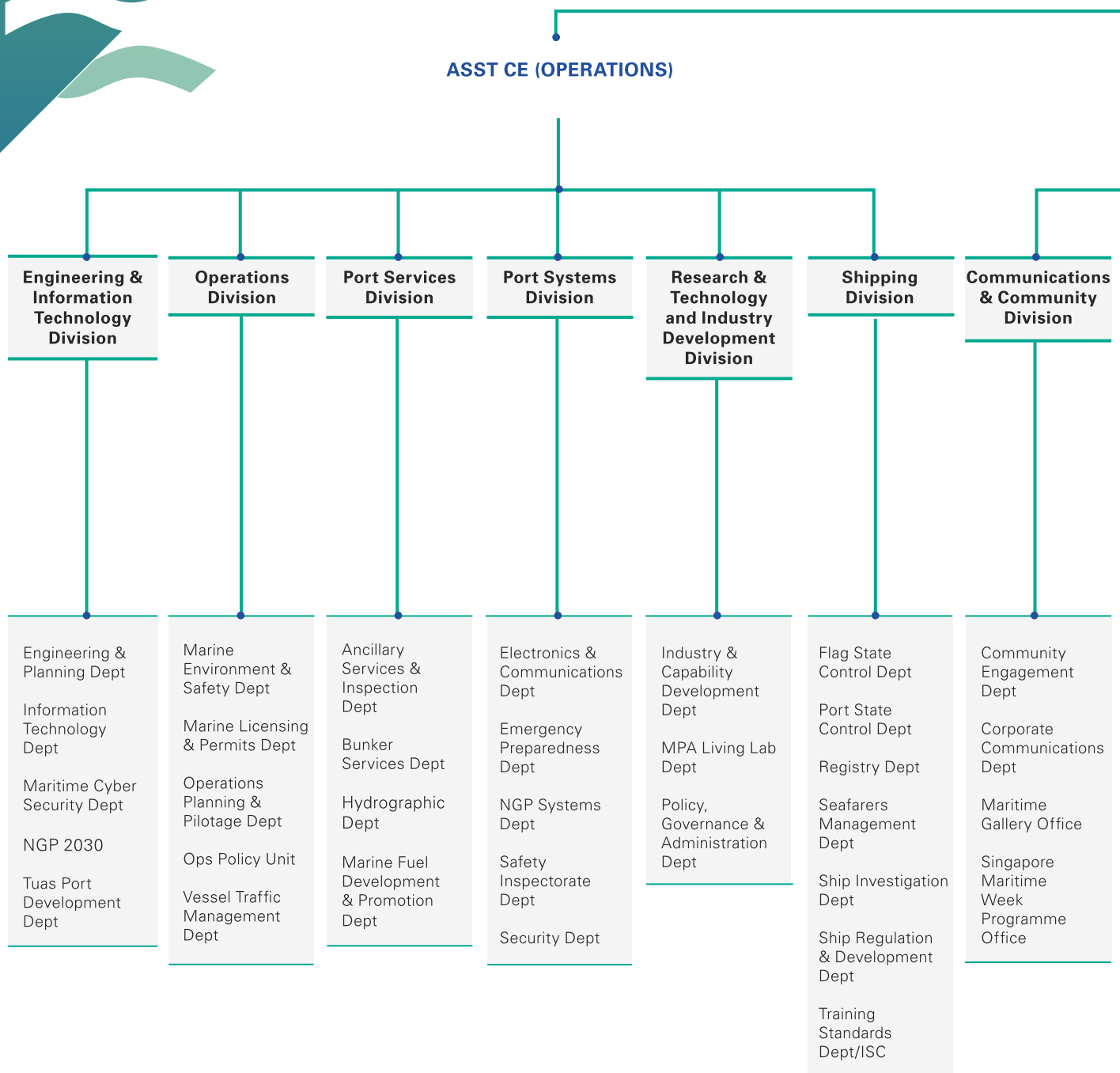
11. Mr Andrew Tan
Chief Executive

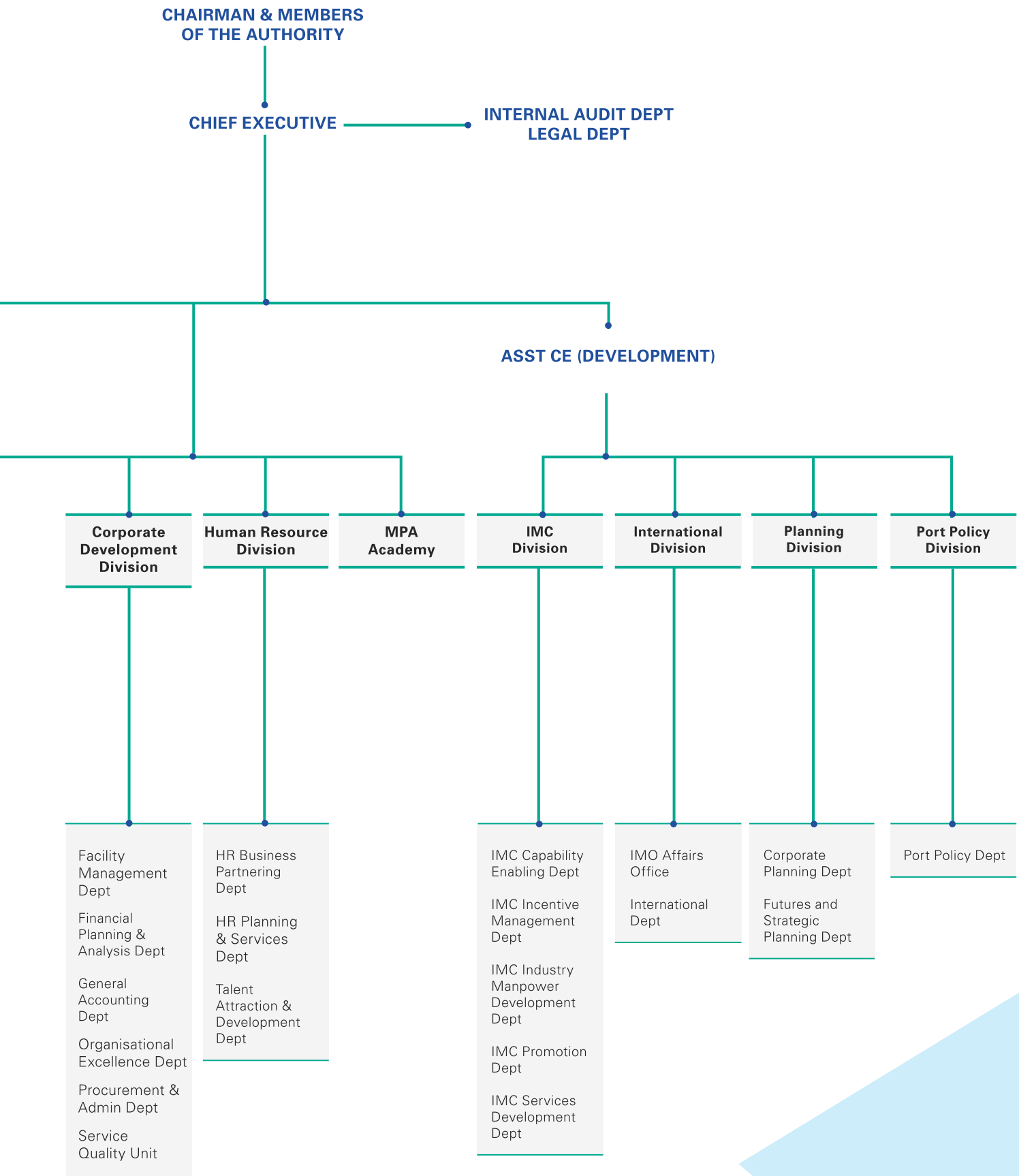
14. Ms Tan Beng Tee
Assistant Chief Executive (Development)

17. Mr Toh Ah Cheong
Executive Director
(Singapore Maritime Institute)

MPA'S ORGANISATION STRUCTURE

[GRI 102-18, 102-20]





ABOUT MPA [GRI 102-1, 102-2, 102-3, 102-4, 102-5, 102-6, 102-7]

Established as a statutory board under the Ministry of Transport (MOT) on 2 February 1996, MPA's mission is to develop Singapore as a premier global hub port, and international maritime centre (IMC), and to advance and safeguard Singapore's strategic maritime interests. MPA employs over 650 officers and is headquartered and operating solely in Singapore.

More information on MPA may be found on MPA's corporate website at www.mpa.gov.sg

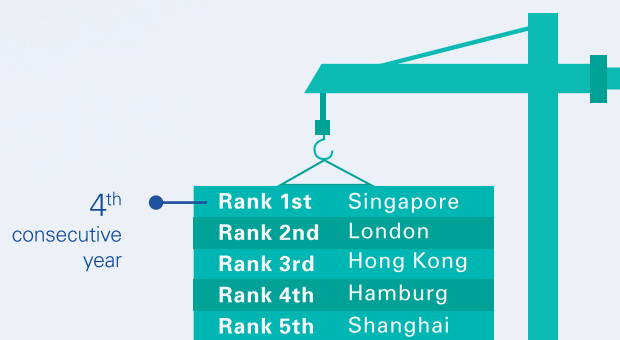
Maritime Singapore

Maritime Singapore is a key economic sector that contributes about 7% to Singapore's Gross Domestic Product, comprises more than 5,000 companies, and generates 170,000 jobs. MPA's forward-looking philosophy and pro-enterprise focus in engaging and partnering the industry has significantly promoted Maritime Singapore's growth. Launched in January 2018, the Sea Transport Industry Transformation Map, led by MPA, seeks to maintain Singapore's thriving maritime industry position as a world leader, and developing Singapore as a global maritime hub for Connectivity, Innovation and Talent.

Retaining Top Spot Internationally

1 Xinhua-Baltic International Shipping Centre Development Index Report

Source: 2017 Xinhua-Baltic ISC Development Index



2 Menon Economic Report: Leading Maritime Capitals of the World

Source: Menon Economics (2017)



3

29th time

Port of Singapore named
"Best Seaport in Asia"



2017 PERFORMANCE SUMMARY

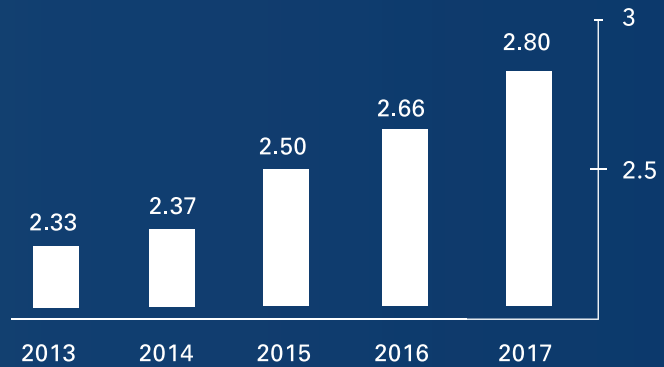
[GRI 203-1, 203-2, 302-1, 303-1, 305-2, 403-2, 404-1]

MARITIME PERFORMANCE



VESSEL ARRIVAL TONNAGE

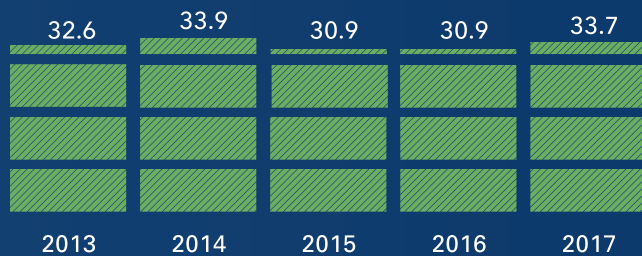
(billion gross tonnes)



CONTAINER THROUGHPUT

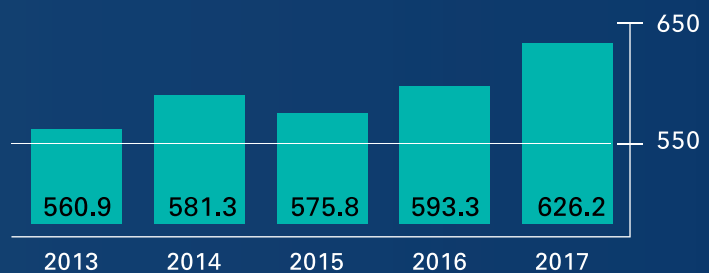
(million TEUs)

=100



CARGO THROUGHPUT

(million tonnes)



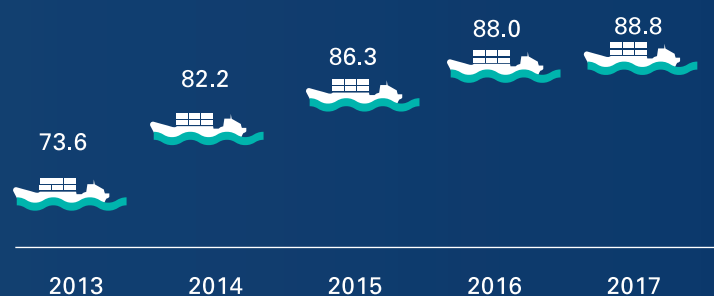
BUNKER THROUGHPUT

(million tonnes)



SINGAPORE REGISTRY OF SHIPS

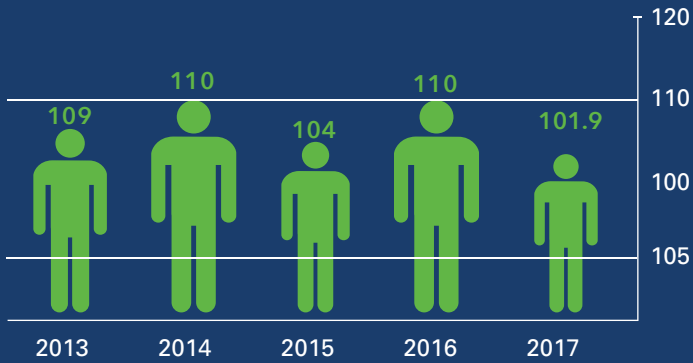
(million gross tonnes)



Our People

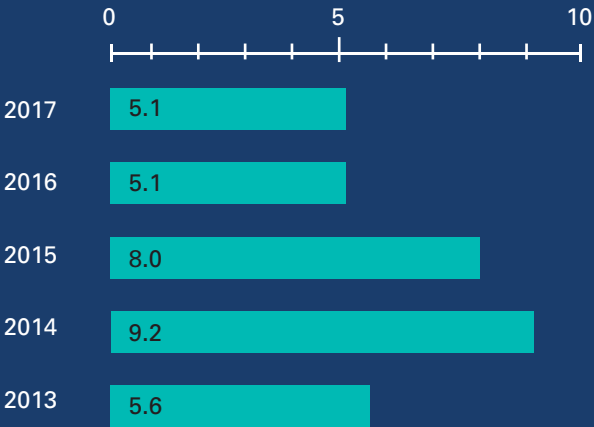
AVERAGE TRAINING HOURS

(hours/employee)



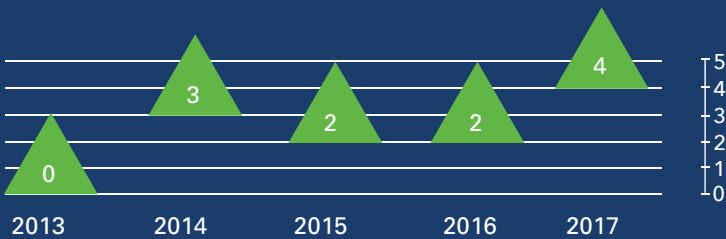
TURNOVER RATE

(%)



NUMBER OF WORKPLACE INCIDENTS

(Note: SITREP data collected from 2014)



NUMBER OF WORK-RELATED FATALITIES

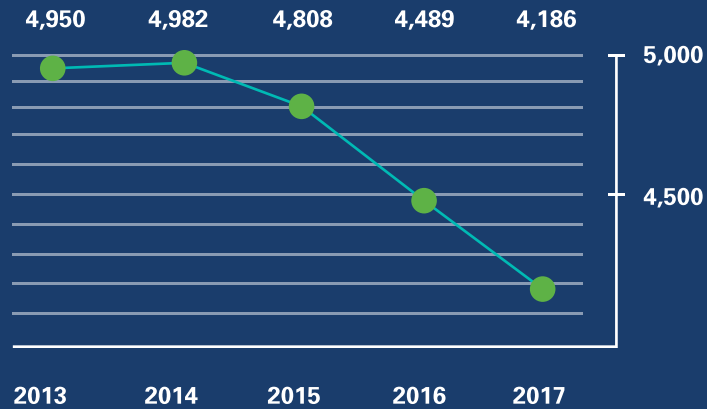


2013 - 2017

Environmental Sustainability

ELECTRICITY CONSUMPTION

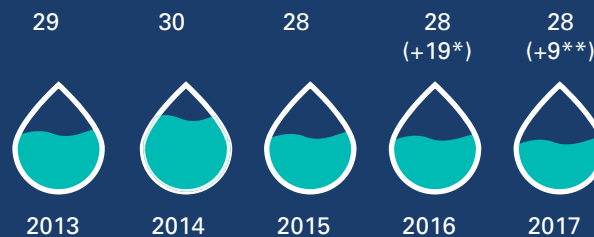
('000 kWh)



WATER CONSUMPTION

('000 cu m)

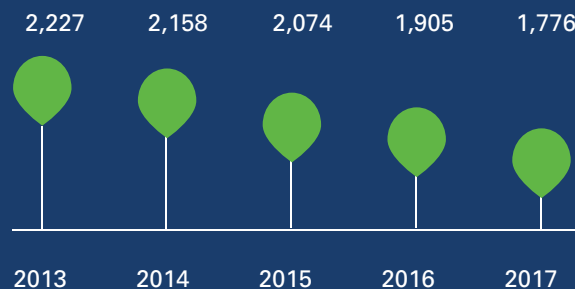
* 19,000 cu m of water was used for scheduled facade cleaning
 ** 9,000 cu m of water was used for scheduled facade cleaning



GHG EMISSIONS

(TCO₂)

(Note: Computed based on Singapore's yearly Grid Emission Factor (GEF) published by Energy Market Authority (EMA))



MAPPING KEY MATERIAL ISSUES

[GRI 102-11, 102-15, 102-29, 102-32, 102-46, 102-47, 103-1, 103-2]

MPA's Approach to Sustainability

Sustainability objectives have consistently been integrated into MPA's operations and strategic long-term plans as MPA seeks to develop Singapore's next-generation port, and strengthen our international maritime centre. This enables Singapore to remain well positioned as a thriving hub for maritime activities and businesses for the future.

Recognising that technology can be leveraged on to achieve more sustainable shipping, MPA is actively partnering with the industry on technological innovations to promote clean, efficient and sustainable shipping. With a view towards achieving a sustainable future for the maritime cluster, MPA began its Future Ready efforts in 2014. Our Future-Ready Framework, comprising six external and three internal thrusts, sets MPA's longer-term strategic direction while embedding key sustainability principles. These strategies have since been expanded, and have evolved into the Industry Transformation Map (ITM), which was developed in close consultation with the industry, unions and other government agencies. The ITM was launched in early January 2018 to further drive maritime industry transformation and value-add.

The MPA Sustainability Office was set up in 2014 to promote good practices, and sound governance in resource management, and environment sustainability within MPA, and the wider maritime industry in Singapore.

The Office reports directly to MPA's Chief Executive, and provides the Board with regular updates on the progress of sustainability initiatives and Key Performance Indicators (KPIs).

MPA has applied the AA1000 AccountAbility Principles Standard to identify and prioritise sustainability issues that are material to MPA and its stakeholders. The Global Reporting Initiative Sustainability Reporting Standards (GRI Standards), and the International Integrated Reporting <IR> Framework developed by the International Integrated Reporting Council (IIRC) were also applied to determine the key material issues.

MPA's key material issues were first identified in 2014. They were re-reviewed at MPA's Senior Management Meeting, chaired by the Chief Executive, held in February 2018, and found to still be relevant and valid for the 2017 reporting period.

MPA has further enhanced our sustainability reporting. In this report, our Future Ready thrusts and associated content chapters have been aligned to the UN Sustainable Development Goals (SDGs). Anchoring MPA's initiatives, and future development plans to the SDGs enables MPA to contribute effectively to the 2030 Agenda for Sustainable Development, an initiative to which Singapore has committed.

OVERVIEW OF 6 KEY MATERIAL ISSUES



Safe, Efficient and Sustainable Shipping

This material issue addresses the importance and impact of MPA's role as a driving force behind Singapore's port and maritime development. In developing Singapore as a premier global hub port and IMC, MPA must manage multiple economic, environmental and social risks and opportunities, and use its influence to drive positive change in the industry. MPA seeks to partner the industry and other agencies to enhance safety, security and environmental protection in port waters, facilitate port operations and growth, expand the cluster of maritime ancillary services and promote maritime R&D and manpower development.



Economic Contribution

This material issue addresses the importance and impact of MPA's role in contributing to Singapore's Future Economy. Presently, the maritime industry contributes 7% of Singapore's Gross Domestic Product (GDP) and employs over 170,000 people. The launch of the Sea Transport Industry Transformation Map (ITM) builds on MPA's strategic long-term plans to develop Singapore's next-generation port and strengthen our IMC. With the aim to grow the sector's value-add by \$4.5 billion and create more than 5,000 good jobs by 2025, MPA's significant role as industry champion is critical to the success and sustained prosperity of Singapore.



International Support and Community Engagement

This material issue addresses the importance of local and international partnerships to, and its impact on MPA by considering MPA's engagement with, and contributions to local communities, and initiatives to strengthen partnerships with the international maritime industry.



Financial Sustainability

This material issue addresses the importance and impact of MPA's economic performance. As a self-funded statutory board, maintaining a competitive business and sustainable revenue stream is critical to MPA's long-term financial viability.



Environmental Sustainability

This material issue addresses the importance and impact of MPA's operations on the environment through MPA's energy and water consumption, carbon emissions, and waste generation.



Our People and Culture

This material issue addresses the importance and impact of maintaining a skilled and productive workforce in MPA. In meeting its current and future needs, MPA seeks to build a workplace that is rewarding and engaging, and places strong emphasis on employee's learning and development.

[GRI 102-46, 102-47]

Future-Ready Framework	SDGs	Material Matters
1 Safe, Efficient & Sustainable Global Hub Port	       	
2 Vibrant IMC Eco-System		
3 Safeguard Strategic Maritime Interests & An Influential Voice	 	
4 Maritime Knowledge & Innovation Hub	   	
5 Quality Maritime Workforce		
6 Strong Maritime Singapore Identity	   	
7 Culture of Excellence	 	  
8 Strong Partnerships	 	 
9 Choice Employer		

MPA'S BUSINESS MODEL - FUTURE-READY FRAMEWORK

[GRI 103-2, 103-3]



A

Material Issues

- Safe, efficient, and sustainable shipping (external)
- Economic Contribution (external)
- International Support and Community Engagement (internal and external)
- Environmental Sustainability (internal and external)
- Financial Sustainability (internal)
- Our People and Culture (internal)



B

Input

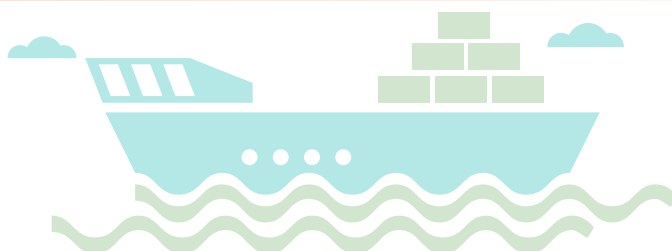
- Financial Capital: Ensure that MPA remains financially sustainable
- Manufactured Capital: Provide customer-centric services, and deliver operationally and technologically advanced solutions
- Intellectual Capital: Drive thought leadership in the maritime space
- Human Capital: Be a choice employer, and build a pipeline of talented manpower to support the Singapore maritime industry
- Social and Relationship Capital: Build strong partnerships with stakeholders
- Natural Capital: Optimise scarce resources



C

Initiatives

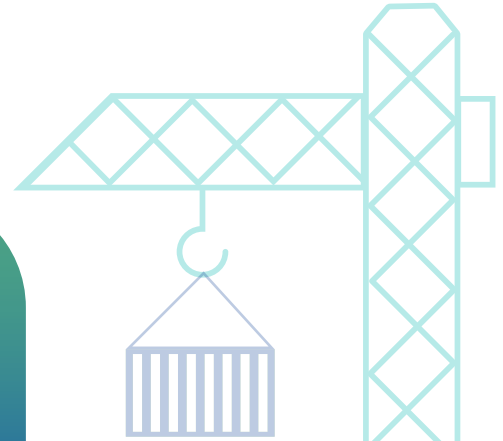
- Launch of Sea Transport Industry Transformation Map
- Administration of harbour pilot examination and licensing
- Process for dangerous goods declaration
- Process for vessel pre-arrival notification of security, and approval of application for vessels going to restricted/protected areas
- Vessel Traffic Information Service
- Administration of the Singapore Registry of Ships, and Service Enhancements
- Administration of Seafarers Management
- Investigation of accidents in Singapore port waters, and incidents involving Singapore ships
- Administration of safety and pollution-prevention requirements of ships in Singapore port waters, and Singapore ships, and enhancements to sustainable shipping schemes
- Promotion of LNG Bunkering
- Promoting maritime safety at international level through the launch of the Community of Practice on Maritime Safety
- Mandatory adoption of Mass Flow Meters
- Training of port inspectors
- Provision and supervision of maritime, port and simulator-based training services
- Assessment, certification, endorsement, and re-validation activities for seafarers
- Next-Generation Port 2030 Master Plan
- Provision of facilities management for MPA's properties
- Provision of maintenance management services for MPA's electronic and communication systems
- Provision of computer services to MPA for
 1. Systems and database administration
 2. Computer operations
 3. Helpdesk and technical support
 4. ICT security administration
- HR-related processes such as training, payroll, and recruitment





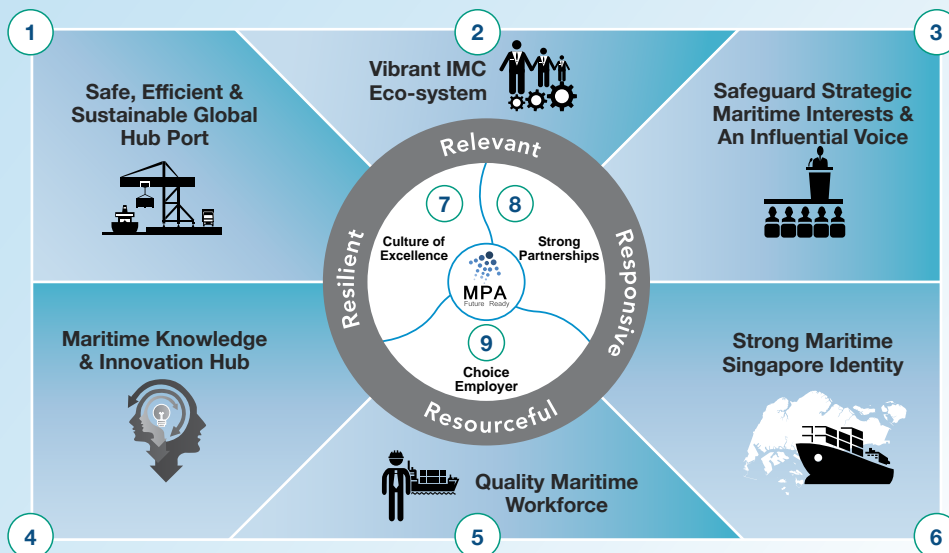
D Outcomes

- Safe, Efficient & Sustainable Global Hub Port
- Vibrant IMC Eco-system
- Safeguard Strategic Maritime Interests & An Influential Voice
- Maritime Knowledge & Innovation Hub
- Quality Maritime Workforce
- Strong Maritime Singapore Identity
- Culture of Excellence
- Strong Partnerships
- Choice Employer




E Key Performance Indicators (KPIs) (Tracked monthly, quarterly and annually)

- Get the basics right by establishing better safety and risk management practices (1,3,5)
- Drive higher productivity in our port (all)
- Promote environmental sustainability in our port (6)
- Lead in setting industry standards (all)
- Ensure adequate port infrastructure (1,2)
- Develop the Next-Generation Port (all)
- Anchor and grow key players in the Singapore maritime eco-system (all)
- Ensure a conducive environment for maritime businesses (all)
- Be an active voice in regional and international platforms (3)
- Strengthen relationships with international counterparts, and the maritime community (3,5)
- Ensure the effective implementation of relevant international regulations and conventions (all)
- Promote maritime thought leadership (3,5)
- Encourage research and development, and nurture a culture of innovation (all)
- Drive sectoral manpower strategies (all)
- Promote maritime careers by raising the profile of maritime careers to targeted groups (4,5)
- Reinforce Singapore's position as a choice venue for major maritime events (all)
- Enhance strategic outreach and engagement (all)



SAFE, EFFICIENT & SUSTAINABLE GLOBAL HUB PORT

[GRI 102-12, 102-13, 102-15,
203-1, 203-2]



Singapore is a premier global hub port. Being connected to 600 ports in over 120 countries, our port offers users reliable, value-added and cost-efficient marine services and facilities. To stay ahead of the competition while ensuring safety and security in port waters, Singapore capitalises on emerging technologies and invests in new port capabilities to boost productivity and efficiency, and provide greater value to customers.

EFFICIENCY

Staying Ahead of Competition

Celebrating the Singapore Flag

The Singapore flag has grown to become a quality flag of choice among many international ship owners and operators. The Singapore Register of Ships (SRS) now ranks among the five largest ship registries, and boasts one of the youngest fleets in the world.

Upholding the high safety and security standards of Singapore-flagged vessels, and maintaining a low detention record with the key Port State Control (PSC) regimes are vital to us. The two main regimes, the Tokyo Memorandum of Understanding (MoU) and the Paris MoU, consist of major maritime administrations that seek to eradicate substandard ships. They conduct routine checks on vessels calling at their ports, and detain substandard ships until their deficiencies are fully rectified.

To maintain our high standard, SRS actively monitors and audits Singapore-flagged ships. We work closely with maritime companies to better understand their operational needs and challenges. This close engagement with industry has been mutually beneficial. We are able to develop policies that are in sync with sector development while the maritime community is kept updated on new regulatory developments.

This industry partnership has helped SRS to grow a quality fleet. In 2017, SRS reached 88.9 million gross tonnage, a 1.02% increase from 2016. Despite the growth, the total

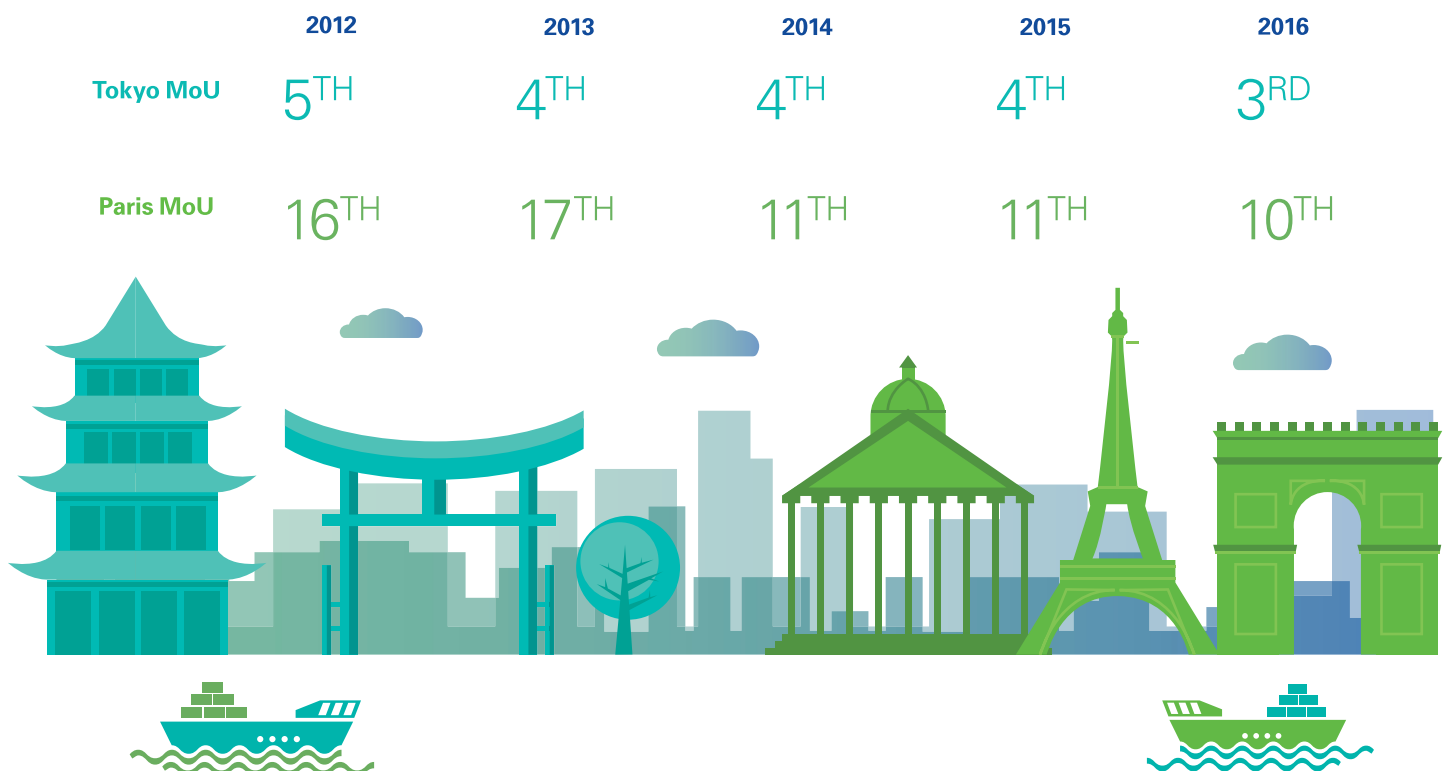


number of Singapore ships detained worldwide remained at 41 in 2017. Overall, SRS detention rates has stayed low at 0.78% for the Tokyo MoU, and 0.90% for the Paris MoU versus the average of 3.00% and 3.83% for the respective regimes.

Based on 2016 rankings, SRS improved its rankings from 4th to 3rd under the Tokyo MoU White List, and 11th to 10th under the Paris MoU White List.

The PSC White, Grey and Black Lists identify and rank the performance of all flags based on the total number of inspections and detentions over a three-year period. The White List represents high quality flags with a consistent low detention record.

SRS RANKING IN WHITE LIST



Staying Tops in Annual Marine Services Survey

The Port of Singapore is a global hub port offering an extensive and comprehensive array of marine services. To ensure that it remains competitive both regionally and internationally, MPA conducts the Annual Marine Services Survey to gauge the satisfaction levels of shipmasters and shipping agents on key marine services¹ being offered here. The survey allows us to gain a better understanding of the areas that were found lacking, and to make concrete improvements while maintaining and further strengthening areas found satisfactory.



Marine Surveyor at work

In 2016, the overall satisfaction level of shipmasters with the services provided at the Port of Singapore in 2016 remained high. The masters surveyed gave the port a mean satisfaction score of 4.5 out of 5, with 97% of them saying they were satisfied with the marine services provided.

According to the survey, Singapore had done better than other ports over the past three years in the areas of pilotage punctuality, bunkering service, tug service, and garbage collection service. This was likely due to our efforts in improving service in these areas in response to previous feedback from the shipmasters. Our efforts included widening the adoption of Mass Flow Meters (MFM) for marine fuel oil delivery in 2016, working with PSA Marine to increase the number of pilots, and extending the garbage collection hours.

For the way ahead, the survey highlighted possible areas of improvement, such as reducing congestion on the Very High Frequency (VHF) channels and improving operators' communication, increasing the number of pilots to improve service delivery, improving the accuracy of the quantity of bunkers delivered, and improving the capability and capacity of garbage barges to accept larger sizes and quantities of garbage. MPA will continue to work with our stakeholders to improve the marine services in the Port of Singapore.

Service Enhancements on the SRS

More than 4,600 ships flying the Singapore flag stand to benefit from service enhancements which were introduced from November 2017.

New 24/7 Hotline

Since 1 November 2017, owners, managers and operators of Singapore-registered ships requiring urgent assistance after office hours are able to call MPA's new 24/7 customer service hotline at (+65) 6-CALL-SRS (6-2255-777). The hotline was introduced following feedback from the industry that a hotline would be useful for contacting MPA officers outside office hours for urgent cases relating to crewing, registry and ship's technical matters.

e-Certs [SDG 12.5]

MPA previously authorised Recognised Organisations (ROs) to issue electronic certificates (e-Certs) to Singapore-registered ships. At the end of 2017, MPA started issuing e-Certs directly to Singapore-registered ships as well. e-Certs save time and costs as they reduce the need for hard copies, and allow for instantaneous and simultaneous transmissions of documents while reducing the risk of fraud.

Singapore is among the first Flag Administrations in Asia to issue e-Certs. Previously, hard copies of over two dozen certificates, such as Certificate of Registry, Safe Manning Certificate and Load Line Certificates, were kept on board ships as proof of compliance with the applicable regulations or conventions.

Expansion of Marinet [SDG 12.5]

MPA also expanded the Marinet to include two new online services, namely for ship registration application, and the appointment of manager form as well as application forms for various documents issued by SRS. The expansion will improve the timeliness of the issuance of certificates and declarations to vessels.

New Technologies for Ship Surveys [SDG 9.5]

Increasingly, new technologies, such as aerial drones armed with cameras and ship inspecting robots, are being used for ship surveys. These remote inspection methods are safer, and can save time and money for shipowners as they eliminate the need for traditional survey methods, such as erecting staging in the cargo tanks. Marine surveyors also do not have to risk their lives climbing high places or being exposed to adverse conditions to check for defects.

MPA has conducted several trials using drones to survey cargo tanks of ships, and is developing the acceptance criteria for the usage of such remote inspection techniques on board Singapore-registered ships. The acceptance criteria will be ready by the first quarter 2018.

¹ Vessel Traffic Information Service, Pilotage Service, Tug Service, Hydrographic Services, Bunkering Services, Water Supply Service, Garbage Collection Service, Port Safety and Security and MPA's e-Services

Quality Bunkering Services

The bunkering industry is an integral part of the global hub port. Over the past three decades, Singapore has established ourselves as the world's top bunkering port. A strong quality and standards eco-system and tools, such as standards and accreditation schemes incorporated into Singapore's regulations, has built trust and confidence in the sector. Bunker sales at the Singapore port remained strong in 2017 when the sales volume reached a record high of 50.6 million tonnes.

Using Technology in Bunker Deliveries

We are effectively leveraging on technology to deliver more timely and efficient bunkering services. With the successful implementation of MFM for Marine Fuel Oil bunker deliveries, MPA is extending its use to distillate fuel deliveries. MPA completed the MFM test-bedding programme for distillates on five bunker tankers in October 2017. As a result of the positive results yielded from the programme, MPA will be extending the mandatory use of MFM for distillates delivery from 1 July 2019. Such an implementation timeline would dovetail perfectly with our preparations for the 2020 global sulphur cap. The use of MFMs will provide greater assurance to both suppliers and customers on the quantity of bunker delivered, ensuring that Singapore remains a reputable port for bunkering.

To further improve our bunkering services, MPA is exploring the use of the electronic bunker delivery notes (e-BDN). MPA has completed our preliminary assessment of data transmission from one bunker tanker to MPA's server. MPA will be embarking on a pilot run to test another five bunker tankers in 3Q2018. The e-BDN will increase the productivity of all stakeholders involved in the supply chain, and minimise the possibility of human errors.



Quality Bunkering Services



Adoption of Mass Flow Meters

Singapore is "Best Seaport in Asia for 29th time"

The Port of Singapore was awarded the "Best Seaport in Asia" accolade for the 29th time at the 2017 Asia Freight, Logistics and Supply Chain Awards (AFLAS) held in Singapore on 29 June 2017. The Port of Singapore clinched the award for its leading performance on a range of criteria, including cost competitiveness, container shipping-friendly fee regime, provision of suitable container shipping-related infrastructures, timely and adequate investment in new infrastructure to meet future demand, and the facilitation of ancillary services.



MPA Chief Executive receiving the "Best Seaport" in Asia award

Next Generation Port at Tuas

Reclamation of Tuas Terminal Phases 1 and 2

Reclamation works for the Tuas Terminal Phase 1 project commenced in February 2015 and, is on track to be completed by end 2020. Phase 1 comprises the reclamation of 294 hectares of land, construction of wharf structure, and deepening of basins and Temasek Fairway. Reclamation under Phase 1 is progressing well. As of 31 December 2017, more than 65% of the 221 caissons were installed to form the wharf structure, which was ahead of schedule. When fully operational, Tuas Terminal Phase 1 will have 20 berths with an annual handling capacity of up to 20 million TEUs.

Preparations to commence reclamation works for the Tuas Terminal Phase 2 project is also on track. When fully operational, Tuas Terminal Phase 2 will add another 21 berths with an annual handling capacity of up to 21 million TEUs.



Tuas Terminal Phase 1 Reclamation Works

Next Generation Port 2030

2017 marked an important year for the Next Generation Port (NGP) 2030 when major strategies and decisions for the NGP development were formulated, particularly in the development of the overall Master Plan, and New Port System Roadmap. Under the NGP Master Plan, Tuas Terminal Phase 2 will be future-proofed such that an aboveground space development could be carried out above the container terminal in the future.

MPA is working with the relevant agencies on developing the Tuas Maritime Hub which consists of Tuas Terminal, and the Tuas Terminal Gateway and Aboveground Space development within the footprint of Tuas Terminal. In the development of Tuas Maritime Hub, environmental green initiatives are being considered to achieve safer and greener terminal working conditions with good wind ventilation, better air quality, and improved thermal comfort for both environmental and energy sustainability.

The MPA's NGP Office also organised two mission trips, one to China and Japan in July 2017, and the other to Germany and Netherlands in October 2017. The delegations comprised committee members and representatives from various agencies including A*STAR, Economic Development Board, and PSA Corporation. The main objective of the trips was for the delegations to gain insights from these major ports on the latest technology used in port operations, and their port master planning policies, which will help to shape the development plans of the NGP at Tuas. It also provided opportunities for international collaborations between Singapore and the host countries.

New Cognitive-Based System to Improve Maritime and Port Operations

[SDG 9.5, SDG 17.17]



As Singapore prepares for the move to the Mega Port at Tuas, we need to constantly innovate and embrace new technologies to meet future demand, and complement our limited resources and manpower.

Project SAFER (Sense-making Analytics For maritime Event Recognition) is a collaboration between MPA and IBM Research to develop and test-bed new analytics-based technologies to improve maritime and port operations in tandem with Singapore's steadily growing vessel traffic. It leverages on data collected through MPA's systems to develop a maritime sense-making system. It aims to automate, and reduce human error for critical tasks which previously relied heavily on manual efforts through these seven modules:

A Automated Movement Detection

Through cognitive analytics and advanced filtering, vessel movement is automatically identified, thereby reducing the workload of MPA officers, and increasing the accuracy of movement locations and timing.

C Pilot Boarding Detection

It enables MPA to automatically detect pilot boarding time, providing an efficient way of monitoring and validating pilotage service levels, reducing staff workload, and speeding up dispute resolution.



E Prohibited Area Analytics

It will aid MPA in enforcing safety and security by creating a virtual fence in port waters to identify and localise unauthorised entry into prohibited areas.



G Utilisation Detection and Prediction

It provides advance information on traffic density in high utilisation areas to help MPA officers to be proactive in ensuring safety in port waters.



B Infringement Analytics

It uses a targeted approach for detecting suspicious or abnormal vessel behaviour through machine learning-based vessel models.



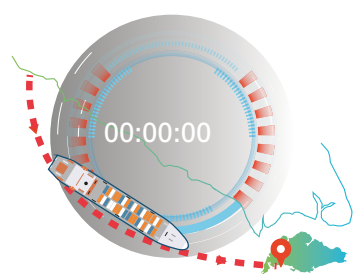
D Bunkering Analytics

Using advanced machine learning-based vessel models, illegal bunkering activities will be automatically detected and reported, helping MPA to weed out undesirable bunker suppliers, and further enhancing Singapore's reputation as a top bunkering port.

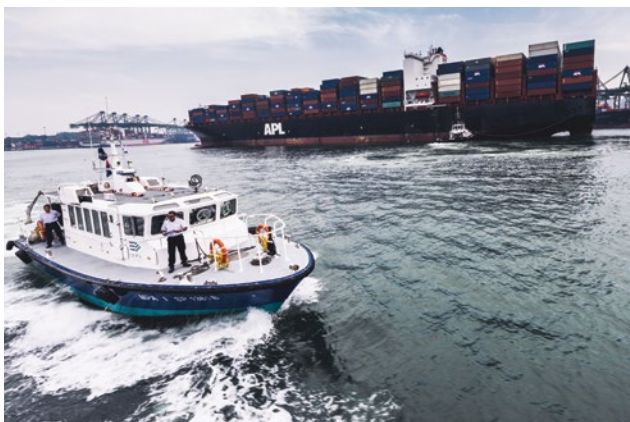


F Vessel Traffic Arrival Prediction

Through accurate prediction of vessel arrival time which will be updated continuously, Just-In-Time services will be facilitated, improving the productivity and efficiency of terminal operators, and maritime service providers.



SAFETY [GRI 416-2]



MPA Port Inspectors and Marine Surveyors perform enhanced checks during the festive seasons and school holidays to ensure port safety.

Keeping Singapore Waters Safe

The Port of Singapore, and the Singapore Strait continue to be safe. The number of major marine incidents in Singapore territorial waters remained low in 2017 at 0.003 per 1000 vessel movements.

Leveraging on Technology for Use in Port

[SDG 9.5, 11.2]

With Singapore situated along a key maritime trade route and as one of the world's busiest ports, MPA is leveraging on technology to further enhance safety for vessels, and the protection of the marine environment in Singapore.

Next-Generation Vessel Traffic Management System (VTMS) [SDG 9.5, 11.2]

The next-generation VTMS will leverage on innovative solutions, such as digital technology, automation, predictive and data analytics as well as smart algorithms, to detect possible collisions. It will enable the seamless exchange of information across our maritime eco-system. New functions, such as the transmission of predicted traffic, and other navigational information in digital form to vessels, and the use of advanced radio communication systems to exchange information between ship and shore, will be introduced.

In anticipation of smart shipping, our next-generation VTMS will also be capable of communicating with and handling unmanned vessels.

New Satellite Technology to Enhance Search and Rescue Capabilities

The Civil Aviation Authority of Singapore (CAAS) and MPA have invested in a new Medium-altitude Earth Orbit Search and Rescue (MEOSAR) ground system to enhance search and rescue capabilities in Singapore's maritime and aeronautical Search and Rescue Regions (SRRs).

The system comprises a ground segment plus a space segment which deploys Medium-altitude Earth Orbit (MEO) satellites. Distress signals emitted from the

emergency beacons activated by aircraft, ships or persons in distress will be received simultaneously by the MEO satellites, and relayed back to the ground segment.

The new MEOSAR ground system is an improvement over the current Low-altitude Earth Orbit Search and Rescue (LEOSAR) ground system. It has access to more satellites, and employs more advanced technologies, which enhance position accuracy for faster detection and location of distress parties. The MEOSAR ground system will be fully operational in 2018.

Countering Piracy in Regional Waters

[SDG 11.2, 16.A, 17.17]

Piracy and armed robbery against ships can disrupt international maritime transport. With a third of the world's shipping trade moving through the Straits of Malacca and Singapore annually, collective cooperation is needed to ensure that the Straits remain open, safe and secure for international shipping. On our part, Singapore is committed to combating piracy and armed robbery against ships to contribute to a safe and secure maritime network.

MPA and local enforcement agencies, the Police Coast Guard and the Republic of Singapore Navy, work with regional enforcement authorities and stakeholders to regularly share information, and conduct coordinated patrols to deter such incidents against ships. In addition, together with Indonesia, Malaysia and Thailand, Singapore continues to conduct sea and air maritime security patrols of the Straits.

MPA also actively and regularly engages the shipping community to disseminate information on and encourage the use of recommended practices for merchant vessels operating in piracy-prone areas. MPA, together with relevant stakeholders, has and will continue to organise events that promote dialogue between governments, naval forces, relevant international organisations and the maritime industry.

Furthermore, MPA will continue with safety broadcasts to ships transiting the Singapore Strait, strengthen inter-agency coordination for timely response to incidents, and bolster cooperation with regional governments and the international maritime community.

At the wider regional level, Singapore is a founding member of the Regional Co-operation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP), the first regional government-to-government initiative to promote cooperation to prevent piracy and armed robbery against ships in Asia. Singapore also hosts the ReCAAP Information Sharing Centre (ISC) that was established in 2006, and is the largest financial contributor to the Centre. The ISC's objectives include sharing information, building capacity, and fostering greater cooperation amongst ReCAAP members.

Singapore's Contributions to International Counter-Piracy Efforts

Beyond regional waters, as a responsible member of the international community, Singapore is contributing to the fight against piracy in the Gulf of Aden. Since 2009, Singapore has commanded the multinational Combined Task Force (CTF) 151 four times, and deploys task groups, comprising naval and air assets, to CTF 151 annually.

Additionally, in January 2017, MPA and ReCAAP ISC jointly organised the inaugural Meeting of Anti-Piracy Contact Points and Workshop on Piracy and Armed Robbery against Ships. The event was attended by about 55 participants from Africa, Asia and Europe as well as 133 industry representatives. Participants exchanged best practices on information sharing, and deepened ties and communications among anti-piracy contact points.



MPA and the ReCAAP ISC co-organised the inaugural Meeting of Anti-Piracy Contact Points and Workshop on Piracy and Armed Robbery against Ships. The organisations were represented by MPA's Chief Executive, and Mr Masafumi Kuroki, Executive Director of the ReCAAP ISC.



Participants of the inaugural Meeting of Anti-Piracy Contact Points and Workshop on Piracy and Armed Robbery against Ships held in Singapore in January 2017

Institutionalising Safety @ Sea Singapore

Safety@Sea Week 2017

As part of our long-term view of, and commitment to maritime safety, MPA continues to champion joint initiatives with the industry, promote the learning and sharing of best practices as well as foster a culture of safety. MPA's flagship maritime safety event is Safety@Sea Week.

Safety@Sea Week was launched on 31 July 2014, and the fourth edition of the annual event was held from 21 to 25 August 2017. Over five days, more than 1,000 people took part in 10 events, including a conference, workshops, industry visits, networking receptions, and a ferry rescue exercise observer programme. Speakers and industry experts from different segments of the maritime industry shared on various salient topics, including the role of the human element in safety culture, passenger/crew safety and training, safety services, and new developments in maritime safety.

Mr Niam Chiang Meng, Chairman of MPA, officiated the opening ceremony of International Safety@Sea Conference. The keynote speeches were delivered by Rear Admiral John P Nadeau of the United States Coast Guard, and Mr Mok Ick-Soo, President and CEO of Korea Ship Safety Technology Authority.

In Rear Admiral Nadeau's speech, he outlined the global trends impacting the pursuit of safety at sea. He noted that topical subjects, such as artificial intelligence, the Internet of Things, blockchain technology as well as the impact of new materials, and the rise of nano-technology, were having an impact on risk management and safety issues today. He also highlighted the importance of a good global infrastructure, and aligned interests in helping the industry to make substantial progress on safety issues.

Mr Mok spoke on the sheer scale of non-convention vessels. He stressed that these vessels, though not covered by international maritime conventions, were nevertheless an integral part of global maritime safety. He noted that the non-convention vessel fleet is over 40 times larger than the convention fleet. Because of its sheer size, Mr Mok said, raising standards in this sector was important.

At the conference, domain experts from Europe, Asia, and the United States also shared their knowledge and experience with delegates. Notable speakers included representatives from the Port of Rotterdam, Transport Safety Investigation Bureau, Singapore's Ministry of Transport, International Association of Independent Tanker Owners (INTERTANKO), Cruise Lines International, Singapore Maritime Academy, Shell, IBM, and Standard P&I Club.

Launch of Community of Practice on Maritime Safety [SDG 17.17]

To further enhance dialogue amongst like-minded stakeholders, Singapore launched the inaugural Community of Practice Forum (CoP Forum) on maritime safety on 23 August 2017. The CoP Forum aims to be a community of experts with a common purpose, and be a rich resource on maritime safety issues for members.

The inaugural CoP Forum was held in conjunction with Safety@Sea Week 2017, and focused on the subject of ferry safety. 15 maritime agencies, seven Classification Societies, and four NGOs took part. 13 papers were presented on three main topics, namely ferry incidents and lessons learnt, best practices on ferry safety, and working towards holistic changes in ferry safety.

Session moderators included Capt Ashok Mahapatra from the IMO, Mr Lars Robert Pederson from Baltic and International Maritime Council (BIMCO), and Prof Richard Lim, Chairman of the National Maritime Safety at Sea Council Singapore.

Numerous ideas and opinions were shared during the forum as participants brainstormed ideas and solutions to improve ferry safety. The CoP forum will be held biennially to give participating agencies time to translate shared ideas into meaningful outcomes which can then be shared at future CoPs. This will create a virtuous cycle of learning.

Continuing Contingency Planning and Emergency Response

MPA, together with other Singapore government agencies and organisations, has developed a system to respond to emergencies expeditiously while minimising casualties as well as economic and environmental damage. Exercises, ranging from tabletop exercises to inter-agency deployment exercises involving government, commercial service providers and the public, are carried out annually to test the readiness of personnel, and the efficiency of each procedure.

In 2017, MPA conducted four exercises to assess the readiness of responders.

Borderhealth Exercise

The Borderhealth Control Exercise was conducted on 23 March 2017 to test the Borderhealth Sea Checkpoint Screening Operation plan. The ground deployment exercise included the setting up of temperature scanners and various screening workstations, implementing infection control measures, and managing febrile passengers for hospital transfer. Representatives from The Raffles Medical Group, Immigration & Checkpoints Authority of Singapore (ICA), AETOS, and Singapore Cruise Centre Pte Ltd (SCCPL) took part in the exercise held at the International Passenger Terminal, Harbourfront Centre. Observing the exercise were personnel from Ministry of Health (MOH), National Environment Agency (NEA), and other government agencies.

Chemical Spill Exercise (Chemspill)

The multi-agency chemical spill exercise (Chemspill 2017) was conducted on 28 April 2017 in conjunction with the International Chemical and Oil Pollution Conference and Exhibition 2017. The exercise tested and demonstrated the readiness of responders from the various agencies tasked to tackle chemical spills in our waters. Over 150

personnel from 25 agencies participated in the exercise, which included ground deployment at a seaward location, and a tabletop exercise. Spill response teams deployed chemical protective gear, gas detectors, chemical containment booms, damage control equipment to seal leaks, and diving equipment for underwater damage assessment. An Unmanned Aerial Vehicle (UAV) was also deployed to provide situational images, and an overview of the operations.

Ferry Rescue Exercise (FEREX)

FEREX 2017 was carried out on 25 August 2017 in conjunction with the Safety@Sea Week to test the multi-agency response to a ferry mishap incident in Singapore's waters. The ground deployment exercise, involving more than 300 personnel from 17 agencies and companies, was observed by Senior Minister of State, Ministry of Transport and Ministry of Health, Dr Lam Pin Min, maritime safety agencies from 12 countries, ferry operators, International Ferry Safety Association, and participants from overseas maritime and port administrations attending the fourth Port Management Programme. The exercise included the deployment of a new lifesaving equipment, namely the Emergency Integrated Lifesaving Lanyard, to rescue a man overboard as well as a new mobile application to facilitate communication, and enhance situation awareness.



The annual FEREX serves to validate multi-agency responses in preparation for any potential ferry mishap in Singapore waters.

Joint Oil Spill Exercise (JOSE)

JOSE 2017 was conducted on 29 September 2017 to test the activation procedures, and the Oil Spill Contingency Plan for an oil spill in Singapore waters. The tabletop exercise was a multi-agency collaboration to discuss the operational response strategies to tackle a crude oil spill.

SUSTAINABILITY

[GRI 302-2, 302-4, 304-1, 304-2, 304-3, 305-1, 305-7, 306-3]

Enabling Use of Cleaner Fuel [SDG 7.3, 9.4]

Liquefied Natural Gas (LNG) Bunkering

As the world's largest bunkering hub, Singapore is committed to providing a broad range of fuel solutions, including LNG, to meet the future energy needs of the global shipping industry. This is particularly vital given the changing regulatory requirements on sulphur and greenhouse gas emissions.

Another \$12 million for LNG Bunkering

In December 2017, MPA announced the injection of another \$12 million to enable LNG bunkering in the Port of Singapore.

Half has been set aside to co-fund the building of up to two new LNG bunker vessels (LBVs) to facilitate the development of ship-to-ship LNG bunkering in the Port of Singapore. The rest will be used to top up MPA's existing co-funding programme to support the building of LNG-fuelled vessels. Launched in 2015, the initial funding for this programme has been fully utilised to support Keppel SMIT Towage Pte Ltd, Maju Maritime Pte Ltd, Sinanju Tankers Pte Ltd, and PSA Marine (Pte) Ltd.

With IMO's 0.5% global sulphur cap set to be implemented on 1 January 2020, LNG offers a viable and tested solution for shipowners. MPA is supporting future demand by promoting the development of ship-to-ship LNG bunkering in the Port of Singapore. The industry will then have greater confidence in the availability of LNG supply across key shipping routes.

Technical Reference 56 for LNG Bunkering

[SDG 9.4, 17.17]

The first Singapore Technical Reference (TR) 56 for LNG Bunkering was officially launched on 28 April 2017 by MPA, SPRING Singapore, and the Standards Development Organisation @ Singapore Chemical Industry Council (SDO@SCIC). This standard provides a safe, efficient, sustainable and transparent technical framework for conducting LNG bunkering operations in Singapore, thereby offering greater assurance to local and international LNG bunker buyers and suppliers.

Launch of Truck Loading Facility [SDG 9.4, 17.17]

MPA and Singapore LNG Corporation Pte Ltd (SLNG) also jointly launched Singapore's first LNG Truck Loading Facility on 12 April 2017, at the SLNG Terminal.

Located within the SLNG Terminal on Jurong Island, the single-bay facility is an important first step towards developing the LNG trucking business in Singapore, which will facilitate truck-to-ship LNG bunkering. The facility allows small quantities of LNG to be transported overland to just about any location where it may be needed. This includes industrial plants that could use natural gas for furnaces and burners but are not connected to the gas pipeline network, and locations in the port from which LNG fuel may be delivered to ships.

MPA will continue to work with our licensees, industry partners, and international counterparts as we progressively expand the scale of LNG bunkering in tandem with growing industry demand.



Inaugural Roundtable on Marine Biofuels as a Potential Alternative for Shipping [SDG 7.2]

The inaugural biofuel roundtable was held in Singapore on 21 September 2017 to drive discussions on the use of biofuels as a sustainable alternative fuel for shipping. Organised by MPA, BHP, and GoodFuels Marine, the closed-door event brought together owners of different ship types to network, share insights into the use of biofuels to meet increasingly stringent environmental regulations, and explore areas of collaboration. Nanyang Technological University's soon-to-be established Centre of Excellence focusing on maritime environment and energy, with support from MPA and the Singapore Maritime Institute (SMI), was also present to seek collaborative partnerships with shipowners to deepen Singapore's capabilities on the maritime environment and bio-energy fronts.

The roundtable comes at an opportune time in light of IMO's 0.5% global sulphur cap on marine fuels coming into effect from 2020 as well as IMO's longer term plan to lower carbon emissions for shipping. MPA welcomes dialogue from stakeholders, and will continue to work with relevant parties as we prepare the bunkering industry for the future.

Emphasising Environmental Sustainability



The Maritime Singapore Green Initiative (MSGI)

In 2011, MPA pledged to invest up to \$100 million over a five-year period to support the MSGI, which comprises the Green Ship Programme (GSP), the Green Port Programme (GPP) and the Green Technology Programme (GTP). These voluntary programmes are designed to recognise and incentivise maritime companies to adopt clean and green shipping practices, and go beyond the minimum mandated environmental sustainability requirements.

Five years later, the MSGI was enhanced and extended till end-2019. The GPP and GSP were enhanced, and two more programmes, the Green Energy Programme (GEP) and the Green Awareness Programme (GAP), were added.

Under the enhanced GPP, qualifying ocean-going ships that use type-approved abatement/scrubber technology or burn clean fuels or LNG during their entire port stay of five days or less within Singapore waters are given a 25% reduction in port dues.

The new GSP now recognises Singapore-flagged ships that use LNG, a cleaner and greener alternate fuel, as green ships. Singapore-flagged ships with such approved engine systems and/or technology adopted enjoy a 75% reduction of their initial registration fees (IRF) and 50% rebate on their Annual Tonnage Tax (ATT).

The GEP supports the adoption of alternative/cleaner marine fuels in the Port of Singapore while the GAP works to encourage the maritime industry to explore all possible avenues to promote sustainable shipping.

Under the GAP, MPA initiated a co-funding initiative to assist SGX-listed maritime companies in Singapore with their Sustainability Report using world standards such as, but not limited to, Global Reporting Initiative Guidelines. MPA will co-fund 50% of the qualifying costs, up to a cap of \$50,000 per company for reporting by 31 December 2018. The co-funding includes, but is not limited to, consultancy, assurance and certification costs.

Maritime companies were also invited to take the Maritime Singapore Green Pledge to demonstrate their commitment in promoting clean and sustainable shipping in Singapore.

Since its launch, the MSGI has garnered huge support from the maritime community. As of December 2017:

1. 108 companies, including shipping lines, salvage companies and offshore service providers, have signed the Green Pledge,
2. 436 Singapore-flagged ships have qualified for the GSP,
3. 4,408 vessel calls were given port dues concessions under GPP,
4. More than 50 Singapore-flagged ships have benefited from the GTP.

As a result, emissions from these improved ships have dropped by more than 250,000 tonnes of CO₂ annually.

SRS Forum 2017 [SDG 12.6]

The Singapore Registry of Ships (SRS) Forum was held on 17 November 2017 at Amara Hotel Singapore. Several initiatives were announced by Chief Executive of MPA, Mr Andrew Tan, during the Forum. About 250 senior maritime professionals attended.

Themed “Innovation in Challenging Times”, the Forum focused on how companies could leverage on innovative practices, such as blockchain and e-certification, to improve work processes.

To encourage more maritime companies to comply with the Singapore Stock Exchange’s (SGX) mandatory sustainability reporting requirements, an MoU with Global Compact Network Singapore (GCNS) was signed at the Forum. Mr Tan and Mr Wilson Ang, Executive Director of GCNS, signed the MoU.

The MoU will provide Singapore-incorporated maritime companies listed on SGX with training on sustainability reporting, organise a CEO/CFO Roundtable from which the discussion will be compiled into a Maritime Sustainability/Integrated Reporting Guidelines report, and launch an MPA-sponsored award in the GCNS Singapore Apex Corporate Sustainability Award. About 43 maritime companies are expected to benefit from the training.

The Forum also saw MPA’s Green Ship certificates presented to 78 Green Ships from 48 companies. Two companies were also recognised for contributing to the 89 millionth gross tonne milestone in the SRS tonnage.



SEC-MPA Singapore Environmental Achievement Award (Maritime)

The Singapore Environment Council (SEC)-MPA Singapore Environmental Achievement Award (SEAA) (Maritime) serves to recognise maritime companies that are at the forefront of sustainability efforts. MPA's sponsorship of the Maritime category reflects our commitment to promoting a Clean and Green Maritime Singapore.

In 2017, Orient Overseas Container Line (OOCL) won both the SEC-MPA SEAA (Maritime), and the City Developments Ltd (CDL) Outstanding SEAA which recognises the top SEAA performer. The company has strong environmental systems and procedures, and sets clear environmental targets. OOCL has reduced its resource consumption across many environmental parameters, and lowered its carbon emissions by 45%. Its use of solar panels has stopped 1,250 tonnes of CO₂ emissions from being released into the atmosphere.

OOCL has adopted new environmentally-friendly designs for its vessels, and uses innovative technology to reduce water and fuel consumption.



Managing Biodiversity in Singapore's waters

[SDG 11.4, 14.2]

As a responsible hub port and flag state, we seek to balance marine environment protection with the growth of our port and maritime industries. As a maritime nation, Singapore recognises the importance of our marine habitats. Our waters are home to 200 species of sponges, over 100 species of reef fish, and more than 250 species of hard corals, which make up over 30% of hard coral species found worldwide.

To sustain this wealth of marine biodiversity in our waters, we pursue a proactive environmental management strategy. Environmental impact assessments are conducted prior to development project commencement while environmentally sustainable measures are continually undertaken during the actual development to minimise any potential adverse environmental impact from the project.

More than 90% of corals from the south-western Sultan Shoal that had been relocated to the sea walls of Lazarus Island to protect them from the impact of the development of Tuas Terminal have survived.

Sisters' Islands Marine Park

With effect from 20 November 2017, the waters around Sisters' Islands, and along the Western reefs of both St John's Island and Pulau Tekukor, also known as Sisters' Islands Marine Park, have been demarcated for the conservation of marine organisms and designated as a marine park.

The Sisters' Islands Marine Park will be a platform for outreach, educational, conservation and research activities related to Singapore's native marine biodiversity. The location was chosen due to its variety of habitats, including coral reefs, sandy shores and seagrass areas.

The Park will protect Singapore's coral reefs, which support an eco-system inhabited by rare and endangered species of seahorses, clams, sponges, and other marine life. The Marine Park will provide a safe refuge for the teeming biodiversity around Singapore's Southern Islands and its surrounding waters, and safeguard our national heritage.

CHAPTER

02

VIBRANT IMC ECO-SYSTEM

[GRI 102-15, 203-1, 203-2]



BUILDING A WELL-CONNECTED AND VIBRANT IMC ECO-SYSTEM

Maritime Singapore is home to a vibrant eco-system of more than 5,000 local and international businesses. In addition to being a premier global hub port, Singapore is also a leading international maritime centre (IMC) – a status affirmed by Norwegian-based consultancy Menon Economics' The Leading Maritime Capitals of the World as well as the Xinhua-Baltic Exchange International Shipping Centre Development Index.

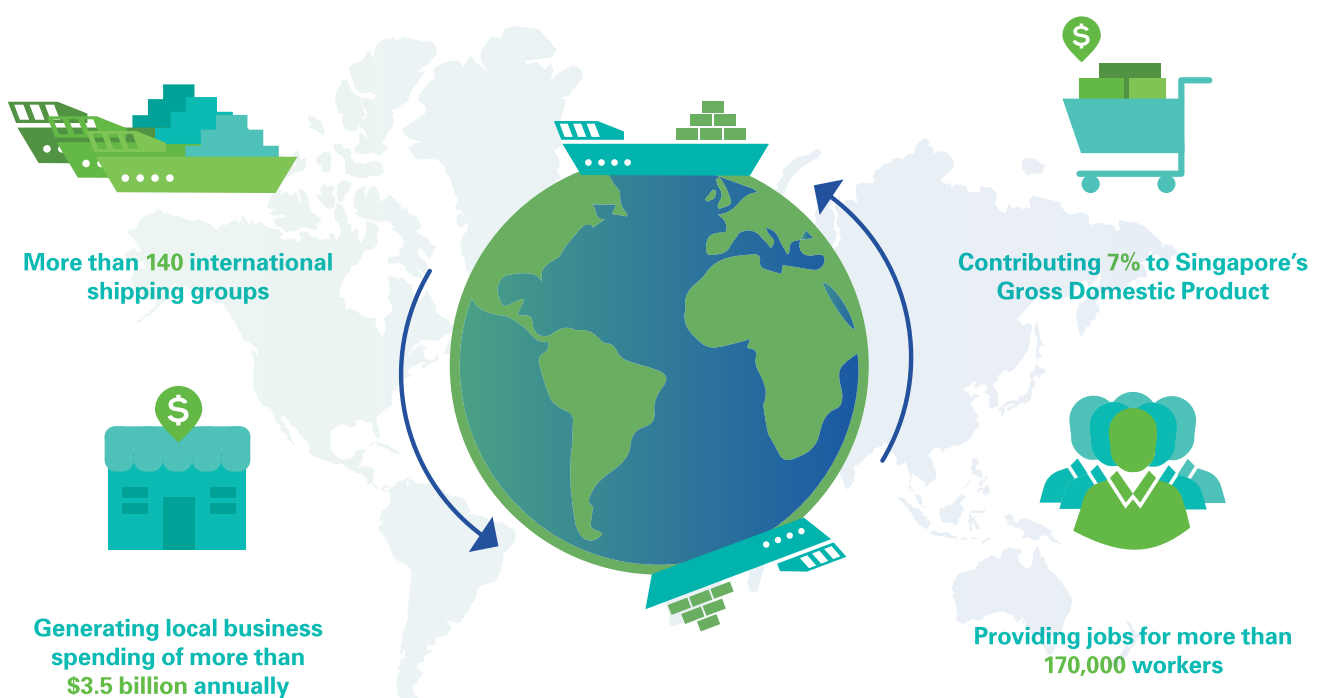
Today, Singapore has one of the highest concentrations of international shipping groups globally. More than 140 international shipping groups from around the world have established a presence in Singapore. Together, they generate a local business spending of more than \$3.5 billion annually. These groups cover a diverse range of sectors from container, dry bulk, and tanker to offshore and LNG shipping. With the support of local and international shipowners and operators, the Singapore Registry of Ships is the fifth largest in the world, with a total tonnage of 88.8 million GT in 2017.

Additionally, Singapore has grown to become a vibrant marketplace. It is home to not only shipping interests but also international commodity trading players, many of which have established their shipping operations here. The

presence of these international shipping and commodity trading groups coupled with Singapore's leading position as a global hub port, and major bunkering hub have, in turn, given rise to the development of a comprehensive range of maritime commercial and technical services. These include ship finance, marine insurance, ship broking, and marine surveying as well as maritime law and arbitration. Today, Singapore has over 20 leading shipbroking firms, 30 local and international law firms with a maritime practice, more than 20 banks offering ship finance, nine International Group Protection and Indemnity (IGP&I) clubs, and 19 Lloyd's Asia service companies that write marine and/or offshore energy risks.

In 2017, major shipping lines, including CMA-CGM and the Ocean Network Express (ONE), grew their presence in Singapore. CMA-CGM has established its Asia regional office, its global Navigation and Port Operations Centre, and its Asian digital activity hub in Singapore. It also entered into a container terminal joint venture with PSA. ONE chose Singapore as its global liner headquarters. Singapore also welcomed several new players from the 13-strong IGP&I Club – Steamship Mutual and West of England.

VIBRANT MARITIME ECO-SYSTEM OF MORE THAN 5,000 LOCAL AND INTERNATIONAL BUSINESSES



RECOGNISING THE INDUSTRY'S CONTRIBUTIONS

In recognition of organisations and individuals that have made significant contributions to Singapore as a premier global hub port and a leading IMC, MPA organised the ninth edition of the Singapore International Maritime Awards (IMA). In all, 52 maritime enterprises and 10 industry award winners were honoured for adding depth and vibrancy to Singapore's maritime eco-system. They included shipowners, maritime service providers, and IHLs.



Mrs Josephine Teo, then Senior Minister of State, Ministry of Transport, with the IMA 2017 Industry Award Winners

IDENTIFYING A FUTURE GROWTH STRATEGY

The Singapore Government is cognisant of the shifting global landscape, and has accelerated economic restructuring and industry transformation efforts. The Committee on the Future Economy (CFE) was formed and tasked to develop economic strategies as well as identify areas of growth that would position Singapore for the future. A key tenet is to champion a transition towards a manpower-lean economy with a strong Singaporean core. This is to shift Singapore towards a more sustainable economic growth path driven by productivity and innovation instead of relying on growing labour input in view of a shrinking local workforce.

Even as Singapore is widely recognised as a leading IMC, our nation has to address various challenges as well as capitalise on new growth opportunities in an evolving world. Against this backdrop, the IMC 2030 Advisory Committee was established in August 2016 to chart Singapore's next phase of development. Chaired by Mr Andreas Sohmen-Pao, Chairman of BW Group, the IMC 2030 Advisory Committee comprised 21 other global business leaders and experts from diverse sectors, such as maritime, finance, commodities trading, logistics, finance and technology. The Advisory Committee submitted the IMC 2030 Strategic Review report to the Singapore Government in September 2017.



Dr Lam Pin Min (seated centre), Senior Minister of State, Ministry of Transport and Ministry of Health, and Mr Niam Chiang Meng (seated second from right), Chairman of MPA, with members of the IMC 2030 Advisory Committee

The report reaffirmed that Singapore's global hub port, and IMC remain the twin engines of growth for Maritime Singapore. It also noted the Advisory Committee's vision for Maritime Singapore to be the Global Maritime Hub for Connectivity, Innovation and Talent, and recommended strengthening the existing cluster of maritime and related activities while creating new ones around Connectivity, Innovation and Talent.

Connectivity

Singapore should aim to further widen and deepen its IMC cluster by harnessing both physical and non-physical trade flows. To reinforce the network effects, Singapore will need to strengthen inter-linkages within its IMC cluster by further entrenching maritime players here and broadening the depth and range of activities (Refer to Box Story on Maritime Capital Forum), including the possible co-location of existing and new maritime-related ones. It will also have to strengthen links with adjacent industries

such as commodity trading, logistics, and e-commerce as well as with other complementary international maritime clusters. Towards this goal, it needs to strengthen business linkages, ramp up collaborations on research and development training and education, and encourage the development of new international standard and regulations that will benefit the whole industry.

Expanding Singapore's Sources of Ship Financing – Maritime Capital Forum

Aligned with the IMC 2030 Strategic Review report's recommendation of strengthening the existing cluster of maritime and related activities in Singapore, MPA, Singapore Maritime Foundation (SMF), and Singapore Shipping Association (SSA), together with private sector partners, Credit Lyonnais Securities Asia (CLSA), and Transport Capital, conceptualised the Maritime Capital Forum to elevate Singapore's profile as a choice location for maritime companies to source institutional financing. The Maritime Capital Forum is a two-day by-invitation-only event, and is scheduled to run annually for three consecutive years. The inaugural event was held on 16 and 17 November 2017 at the Fullerton Hotel, Singapore. Over 200 delegates, comprising representatives from maritime companies and various financial institutions including asset managers, equity funds, debt funds, private equity, family offices, and leasing firms, attended the first run.



The inaugural Maritime Capital Forum was held at the Fullerton Hotel on 16-17 November 2017 to connect maritime companies with institutional investors.

Innovation

Innovation should remain a key focus of Singapore's IMC to enable the development of future capabilities and solutions that build on emerging technologies, such as autonomous systems, robotics, data analytics, and artificial intelligence. The report supported the need for Singapore to develop an environment that would catalyse innovation as well as align public and private sector research and development efforts.

Talent

Talent remains a critical success factor, and Maritime Singapore will need to continue building a future-ready workforce with relevant skills, and a global mindset that anticipates the future needs of the industry.

MARITIME SINGAPORE – GLOBAL MARITIME HUB FOR CONNECTIVITY, INNOVATION & TALENT

PROPOSED STRATEGIES



1 Expand and deepen the maritime cluster

Continue to grow the number of shipping players



Capture more market share in shipbroking sectors



Advance Singapore's standing as an Asian insurance and maritime legal and arbitration hub



Expand the sources of financing and attract new players



Strengthen Singapore's port and develop opportunities related to the port eco-system



2 Strengthen inter-linkages and network effects

Promote physical clusters of maritime-related activities within Singapore



Enhance inter-linkages between Singapore's maritime cluster and adjacent industries (e.g. logistics and commodity trading)



Strengthen inter-linkages with other international maritime clusters



3 Develop a vibrant maritime innovation eco-system and promote digitalisation

Build a strong maritime cluster centred on strong alignment of innovation and R&D efforts between public and private sectors



Promote digitalisation of the maritime industry leveraging on Big Data, Internet-of-Things, and Intelligent Systems



4 Develop a multi-skilled maritime workforce with a global mindset

Strengthen quality of maritime education and training



Further enhance standards of professionalism of the maritime industry



Raise profile of the maritime industry to attract talent



5 Establish Singapore as a global maritime standard bearer

Position Singapore as a leader in existing and new areas of excellence such as port management, risk management, and safety, security and sustainability



Promote a regulatory environment that supports new innovation and standards



DRIVING INDUSTRY TRANSFORMATION

Under the \$4.5 billion Industry Transformation Programme driven by The Future Economy Council (FEC), the maritime sector was identified as one of the 23 key sectors to develop an Industry Transformation Map (ITM). The Sea Transport ITM aims to facilitate industry transformation through innovation, productivity, internationalisation, and the creation of quality jobs for future growth.

MPA, in partnership with the industry, unions and other government agencies, will build on our strategic long-term plans to develop Singapore's next-generation port, and strengthen our IMC. With the implementation of the Sea Transport ITM initiatives, we aim to grow the sector's value-add by \$4.5 billion, and create over 5,000 good jobs by 2025.

Industry Engagement at the Maritime Industry Transformation Series on 17 August

As part of our ongoing industry engagement efforts to develop an ITM for the Sea Transport sector, MPA and the Singapore Shipping Association (SSA) organised a kick-off session of the Maritime Industry Transformation Series on 17 August 2017. The objective was to update the industry on the ongoing development of the Sea Transport ITM, and gather feedback to refine the ITM initiatives. The ITM serves as a platform for all key stakeholders to adopt a collaborative mindset, and a coordinated approach to drive Singapore's next phase of growth.

In all, about 300 members from the industry, unions, and other government agencies participated in the kick-off event. A panel discussion comprising prominent industry experts and union representatives took questions from the floor, and shared their views on the transformative changes taking place, and the opportunities for the industry. The event was well received by the industry, and generated useful discussions and feedback for the development of the Sea Transport ITM.



Panelists from the industry, association and unions taking questions from the floor



Group photo of the panelists and moderator

CHAPTER

03

SAFEGUARD STRATEGIC MARITIME INTERESTS & AN INFLUENTIAL VOICE [GRI 102-12, 102-13]



Singapore is a small country highly dependent on international seaborne trade. As such, the safety, security, sustainability and efficiency of international shipping is important to us. We also recognise that the collective efforts of many nations and organisations are required in these aspects since shipping is global in nature. We are ready to play our part and contribute to international and regional efforts for the promotion of safe, secure, sustainable and efficient shipping.

In particular, Singapore aspires to have a strong presence and an influential voice in international maritime affairs to safeguard our maritime interests. As Singapore's lead maritime agency, MPA spearheads the nation's efforts to advance and safeguard these interests.

In the global arena, MPA actively participates in and holds leadership positions in key international bodies such as the International Maritime Organization (IMO), the International Hydrographic Organisation (IHO), the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA), the Port Authorities Roundtable, among others.

Regionally, MPA plays a leading role in key forums such as the Co-operative Mechanism on Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore (Co-operative Mechanism), the Regional Co-operation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP), the ASEAN Maritime Transport Working Group (MTWG), and the APEC Port Services Network (APSN).

ACTIVE MEMBER OF IMO [SDG17.16]

Singapore has been and remains actively involved in the IMO through leadership positions in various committees and working groups, and contributes to discussions on key issues.

Since becoming an IMO Council Member in 1993, Singapore has chaired the IMO Council, the then Sub-Committee on Bulk Liquids and Gases as well as the then Sub-Committee on Flag State Implementation. Singapore has also assumed the position of Vice-Chair of the Marine

Environment Protection Committee, and the Maritime Safety Committee. At present, Singapore serves as Vice-Chair for the Sub-Committee on Human Element, Training and Watchkeeping.

Our overarching position is that we advocate the universal and uniform implementation of IMO instruments. To date, Singapore has ratified and implemented every major IMO convention in force relating to ship safety and the prevention of pollution from ships.



Minister Khaw Boon Wan, Coordinating Minister for Infrastructure & Minister for Transport, addressing delegates of the 30th Regular Session of the IMO Assembly at the IMO Headquarters in London

Re-election to the IMO Council for the 2018-2019 biennium

Singapore was re-elected to the IMO Council for a 13th consecutive term. We are gratified to note that our nation once again secured the highest number of votes in Category C¹. As a Council member, Singapore will continue

to work with the IMO and its Member States to advance the efforts of the international maritime community in navigational safety, promote efficiency and sustainable shipping, and protect the marine environment.



Minister Khaw Boon Wan, Coordinating Minister for Infrastructure & Minister for Transport, and MPA's Chief Executive receiving guests at the Singapore Reception held on 29 November 2017

¹ The IMO Council comprises 40 members across three categories. In electing the 40 members, the Assembly observes the following criteria: Category A for 10 States with the largest interest in providing international shipping services, Category B for 10 States with the largest interest in international seaborne trade, and Category C for 20 States not elected under A or B, which have special interests in maritime transport or navigation, and whose election to the Council will ensure the representation of all major geographic areas of the world.

MAINTAINING AN INFLUENTIAL VOICE ON THE GLOBAL STAGE [SDG17.3, 17.16]

Under the IMO's Protection of Vital Shipping Lanes initiative, Singapore, together with Indonesia and Malaysia, established the Co-operative Mechanism in 2007 to keep the Straits safe and open for international shipping. The Mechanism is a platform that allows the littoral and the user States, and major stakeholders of the Straits of Malacca and Singapore (SOMS) to collectively address key issues concerning the Straits, and undertake initiatives to enhance safety of navigation and marine environmental protection. The Co-operative Mechanism's framework comprises three components, which work towards these goals. The three are the:

Co-operation Forum (CF)

The CF is the main avenue for user States, the shipping industry, and other stakeholders to be invited to meet and hold open discussions with the littoral States. It serves to promote general dialogue, and the exchange of views amongst the international maritime community on issues of common interest in SOMS.

Aids to Navigation Fund (ANF)

The purpose of the ANF is to receive financial contributions from the international maritime community for the provision and maintenance of critical aids to navigation in the SOMS. In 2017, the ANF was used to finance, *inter alia*, the maintenance and replacement works carried out on the 51 critical aids to navigation in the SOMS as well as a work performance audit conducted by the Malacca Strait Council of Japan (MSC). It was also used for a technical study on the Batu Berhanti light buoy undertaken by the MSC. Singapore concluded its chairmanship of the ANF Committee at the end of 2017. We will continue to work with Malaysia, which in 2018 took over for a three-year term.

Project Co-ordination Committee (PCC)

Under the PCC's auspices, Singapore concluded Straits Project 9 – Ship Traffic Management System in the SOMS. The project, carried out in collaboration with Norway, conducted a test bed for new traffic management concepts. Aligned with the IMO's e-Navigation initiative, the concepts seek to optimise sea traffic flow in the approaches to, and the passage through, the SOMS. The project focused on enhancing shared situational awareness and cooperative decision-making between a ship's bridge team and shore-based VTS personnel. Three sea trials were conducted. The results from the trials demonstrated the feasibility of the ship-shore systems that were developed.

In addition, Singapore is currently co-leading Straits Project 13, New Study for Safety of Navigation in the SOMS, with the MSC. The project will study possible measures to enhance navigational safety in the SOMS, and will complement ongoing maritime safety initiatives, including the second phase of a joint hydrographic survey of the SOMS to be undertaken by the three littoral States and the MSC. A Memorandum of Understanding for the implementation of the survey was signed at the 10th CF in October 2017.

In addition to the Co-operative Mechanism, Singapore complies fully with the IMO's International Ship and Port Facility Security (ISPS) Code, and was among the first nations to do so. As part of our continuing support of regional initiatives, Singapore participated in the 15th ASEAN-Japan Port Security Experts Meeting, held in December 2017, to share best practices in port security operations.



MPA's Chief Executive with all heads of delegation at Port Authorities Roundtable 2017

Port Authorities Roundtable

The Port Authorities Roundtable (PAR), initiated and inaugurated by MPA in 2015, facilitates the exchange of ideas, and the learning of best practices. It remains a key platform for leaders of port authorities to share and discuss openly so as to address issues of common interests, and seek mutually beneficial collaboration opportunities in today's evolving maritime landscape.

Since its inception, it has been held annually. The 2nd PAR was hosted by the Port of Rotterdam Authority in 2016 while the 3rd edition in 2017 was hosted by the Ningbo Municipal Administration Bureau. In 2018, the Port of Long Beach will be the host.

PAR2017@Ningbo saw 14 organisations at the event, including debut participants, Port and Urban Projects Bureau, Kobe City Government, Port and Harbour Bureau, City of Yokohama, Port of Le Havre, and Port of Dalian Authority.



Delegates of PAR 2017 discussing opportunities for sharing and collaboration

Topics discussed included cooperation among ports to enhance cybersecurity responses, building sustainable ports for the future as well as the integration of port resources to improve efficiency. Addressing these topics is particularly opportune as the maritime industry contends with emerging and on-going challenges related to these issues.

In the light of recent cybersecurity attacks, MPA proposed the formation of a Port Authorities Focal Point Correspondence Network comprising PAR members to facilitate early reporting of maritime cybersecurity incidents so that members can effectively prepare and respond to imminent cyber attacks. PAR2017@Ningbo participants gave the proposal a hearty thumbs-up.

To strengthen the network of Liquefied Natural Gas (LNG) bunker-ready ports and to bolster efforts towards enabling the uptake of LNG as marine fuel, the Port of Ningbo-Zhoushan, the Port of Marseille Fos, and the Port of Vancouver joined MPA and seven other organisations to participate in an international LNG bunkering port focus group. The Port of Ningbo-Zhoushan, the first Chinese port to join the focus group, formalised its entry at a signing ceremony held on the sidelines of the roundtable event. As a result, the network now comprises 11 ports and maritime administrations across Asia, Europe and North America.

ENGAGING MARITIME THOUGHT LEADERS

[SDG17.16, 17.17]

Future-Ready Shipping Conference 2017

MPA partnered with the IMO to organise the second edition of Future-Ready Shipping Conference (FRS) in Singapore on 25-26 September 2017. Themed “Enabling Maritime Technology Collaboration: Bridging Gaps; Strengthening Partnerships”, the Conference brought together more than 240 maritime leaders and professionals to identify priority areas for international action, and exchange best practices in maritime technology transfer and capacity building. During the Conference, participants shared their insights on the future of low-carbon shipping, factors that will drive the move towards low-carbon shipping, risk and barriers as well as the types of collaboration needed for shipping’s transition to low-carbon.

The Conference also witnessed the entry of two new members, Bureau Veritas and the Port of Rotterdam, to the IMO-GloMEEP² Global Industry Alliance (GIA). The GIA brings together like-minded industry players to collectively address barriers to the uptake and implementation of energy-efficient technologies and operational measures.

Rounding things up, MPA published a monograph detailing the discussions at the Conference which was distributed to all IMO Member States at the 30th Regular Session of the IMO Assembly in December 2017.



MPA's Chief Executive and Dr Stefan Micallef, Director, Marine Environment Division, IMO with the speakers and moderators who participated in FRS 2017



Participants at the opening of the Conference on 25 September 2017

² Refers to the GEF-UNDP-IMO Global Maritime Energy Efficiency Partnerships (GloMEEP) Project that supports 10 Lead Pilot Countries in addressing emissions from ships

Inaugural Singapore and Japan Port Seminar

On 3 April 2017, MPA signed a Memorandum of Cooperation with Japan's Ports and Harbours Bureau of the Ministry of Land, Infrastructure, Transport, and Tourism of Japan (MLIT) to further bilateral cooperation in a wide range of areas including port planning, management and technological development.

Among the activities under the MOC was the inaugural Singapore and Japan Port Seminar, held on 28 August 2017. The Seminar, graced by the Japanese Minister of Land, Infrastructure, Transport and Tourism, Keiichi Ishii,

featured discussions from the public and private sectors on the future of LNG bunkering and upcoming port developments.

Also under the MOC umbrella, Singapore and Japan is undertaking a joint feasibility study on LNG bunkering for car carriers plying between Japan and Singapore. The study will focus on the technical details such as fuel tank capacities, and refuelling requirements to assess the feasibility of running LNG-fuelled car carriers between the two countries.



MPA and MLIT delegates at the inaugural Singapore and Japan Port Seminar held on 28 August 2017

CHAPTER

04

MARITIME KNOWLEDGE & INNOVATION HUB

[GRI 203-1, 203-2]





MPA seeks to develop Singapore as a centre of excellence for maritime research and development (R&D) and technology. Such excellence is vital in reinforcing the competitive edge of our maritime cluster, which is central to Singapore's growth as a leading international maritime centre, and global hub port.

Enhancing Innovation and Productivity

The Sea Transport Industry Transformation Map (ITM), announced in January 2018, builds on MPA's strategic long-term plans to develop Singapore's next-generation port, and strengthen the international maritime centre (IMC). Two key thrusts under the Sea Transport ITM are to catalyse innovation, and drive productivity improvements.

ADVANCING INNOVATION AND R&D IN THE MARITIME INDUSTRY

Existing collaborations between MPA and local terminal operators have already resulted in several innovation projects, such as PSA's development of cost-effective Automated Guided Vehicles (AGVs), and automated wharf and yard operations as well as Jurong Port's (JP) productivity-enhancing projects at its cement and general cargo terminals.

Strongly demonstrating our unswerving commitment to advancing innovation and building technological capabilities, MPA signed five Memorandums of Understanding (MoUs) with local and international partners during the opening of Singapore Maritime Technology Conference (SMTC) 2017. These MoUs will catalyse research, innovation as well as the pilot adoption of emerging technologies while enhancing information flow and connectivity within the maritime community. They are:

1. MPA-PSA Port Technology Research & Development Programme

[SDG 9.5, 17.17] [GRI 203-1, 203-2]

The MPA-PSA MoU was renewed for the third term for another three years. Enhancing collaboration in the research and test-bedding of new technologies for the future Tuas Terminal, the extended MoU represented a combined \$30 million commitment from both parties to



Signing of MPA-PSA MoU

further boost the MPA-PSA Port Technology Research & Development Programme, and to step up R&D and capability development in the areas of digitalisation, connected community systems, and automation and robotics.

PSA had also set up the PSA Living Lab in 2016 to enable technology solution providers and start-ups to collaborate with PSA to develop ideas and test-bed integrated systems in a "live" port environment. The enhanced Programme will focus on test-bedding and applying technologies, such as artificial intelligence, data analytics, emulation, Internet of Things (IoT), cloud computing, blockchain, augmented reality, and video analytics, to build collaborative business platforms, optimise operations, and develop smart port equipment, systems and automation. The Programme will also support the PSA unboxEd initiative to nurture start-ups creating logistics technology solutions. These

initiatives will drive innovation and productivity growth for the future Tuas Terminal, which will be able to handle up to 65 million twenty-foot equivalent units (TEUs).

2. MPA-Jurong Port Green Port and Productivity Solutions Programme [SDG 17.17] [GRI 203-2]

MPA and Jurong Port (JP) signed a new MoU on the Next Generation Multi-Purpose Port Programme, expanding its scope to include Terminal Innovation and Productivity, Sustainable Technologies, Data Analytics and IoT, and Terminal Safety and Security. Both MPA and JP have each allocated \$8 million to the joint programme. In October 2017, JP also established its JP Living Lab to support bedding, and the co-development of new technologies for multi-purpose terminals. The joint programme and JP Living Lab will promote digital efforts for multi-purpose port operations, test innovative ideas, and deploy leading-edge technologies to enhance the productivity of JP as a multi-purpose port and one of the world's largest common-user cement terminal.



Signing of MPA-Jurong Port MoU

3. MPA-Singapore Technologies Electronics' MoU on Maritime R&D and Innovation

This MoU aims to enhance port and shipping operations, and develop technology standards with industry partners.



Signing of MPA-ST Electronics MoU

4. MPA-Lloyd's Register MoU on Maritime Technologies R&D

This MoU will build upon strong existing collaborations on ship stability and safety, and optimised design, and extend into big data and intelligent systems for real-time condition monitoring, unmanned systems and robotics for operations, maintenance and inspections, and emerging areas, such as metal additive manufacturing.

5. MPA, Alpha Ori, Lloyd's Register and NUS Technology Centre for Offshore and Marine (TCOMS) MoU

Under the MoU, a Centre of Innovation for joint research in the areas of data analytics for smart shipping, the use of robotics and unmanned systems in port and shipping operations, maintenance and inspections in hazardous zones, and maritime cybersecurity will be established.

Another collaboration is between MPA and IBM. Project Sense-making Analytics For maritime Event Recognition (SAFER) aims to develop and test new analytics-based technologies for improving maritime and port operations to support the increasing vessel traffic in Singapore. This will develop MPA's digital strategies through the use of data analytics, and machine learning technologies to optimise our port operations and enforcement to meet existing as well as future demands.

Smart Port Challenge [SDG 17.17] [GRI 203-2]

The Smart Port Challenge (SPC) 2017 was a six-month programme to promote maritime start-ups and digital innovation of the maritime industry, as part of MPA's industry transformation efforts. Its main objective was to collaborate with maritime corporates, start-ups and venture capital communities to generate innovative ideas and solutions leveraging on digital technology, such as IoT, data analytics, block-chain, and artificial intelligence technology, to enhance the safety, efficiency, and productivity of our port and maritime services.

The Challenge followed a process similar to that adopted by start-ups, incubators and accelerators – from formulating challenge statements to finding funding support, and achieving product realisation.

For 2017, 12 co-creators took part in three challenge areas, namely:

- Smart Port (three co-creators),
- Smart Shipping (five), and
- Smart Maritime Logistics (four).

A total of 18 mentors were also identified to mentor the selected start-ups. The Challenge received 81 proposals, from which 12 start-ups were selected for Demo Day. A total of seven projects have since been chosen as start-ups which will be collaborating with various maritime corporates.

Among them was Brightree, which will use its developed communications platform to provide a unified digital platform for the remote monitoring of vessel location, and the digitisation of crew reports and vessel operation records for BatamFast Ferry. Another start-up, Glee Trees, with support from Singapore Shipping Association (SSA), will use its proprietary Robotic Process Automation (RPA) software to develop a tool that will improve productivity in the ship agency sector, and transform the roles of ship agents for higher-value jobs in future.



Smart Port Challenge 2017



Launch of Smart Port Challenge 2017

GLOBAL TECHNOLOGY FACILITATION AND CAPACITY BUILDING

Singapore Maritime Technology Conference 2017

[SDG 17.6]

In conjunction with Singapore Maritime Week 2017, Singapore Maritime Technology Conference (SMTC) 2017 was held from 26 to 28 April. The conference and exhibition profiled and showcased prominent maritime and port industry trends and technological developments through 80 presentations from 14 countries. Over 450 participants from 20 countries attended the event.



Alpha Ori Exhibition Booth at Singapore Maritime Technology Conference 2017

Focusing on the digital potential in marine, and innovation in smart ships and ports, green shipping and clean fuels, and cyber security, the conference addressed the industry applications of these emerging technologies in cargo handling. It also provided a platform for discussing the benefits of and return on investment (ROI) for such technologies, and the measures needed for an effective transformational technology strategy.

The conference featured a technical track on International Port-Maritime Technology Conference (MTEC 2017) as well as an SMTC industry track. The industry track centred on digitisation in the maritime industry with the theme "Smart Technologies and Digital Transformation" while the technical track delved into the areas of e-Navigation, Digital and Autonomous Shipping, Port-Ship Interface Optimisation, Renewable and Alternate Sources of Energy, and Ocean Space Technologies. The e-Navigation forum was held on the first day of SMTC.



E-Navigation Forum

Maritime Energy Sustainability Development Centre of Excellence

Nanyang Technological University (NTU) and the Singapore Maritime Institute (SMI) launched a \$15 million research centre in November 2017 to develop innovative and sustainable solutions for Singapore's maritime industry. The Maritime Energy and Sustainable Development (MESD) Centre of Excellence will focus on future port and shipping applications in three key areas – energy management, emissions management, and sustainable maritime operations.

MPA Townhall – Leading the Change through Innovation

The MPA Townhall, held on 14 July 2017, had the theme "Leading the Change through Innovation". It engaged MPA staff members through a host of interesting and informative events and features, including an Innovation Carnival with an innovation exhibition, a game booth offering prizes to be won, a Virtual Reality challenge, and a technology innovation photo-wall.

GLOBAL LEADERSHIP TRAINING

MPA Academy, the training arm of the Maritime and Port Authority of Singapore (MPA), was repositioned in 2014 as a full-fledged academy with a focus on global maritime leadership development. Since then, the Academy has organised several runs of its three flagship programmes, namely the Advanced Maritime Leaders' Programme (AMLP), Maritime Public Leaders' Programme (MPLP), and Port Management Programme (PMP).

Among the three, the AMLP is the Academy's apex programme on transformational leadership. In 2017, it was held during SMW, and attended by 19 senior maritime leaders heading maritime and port administrations in 18 countries. The 7th MPLP was also held in 2017 for 20 senior maritime administration officials of Director-level or equivalent from 18 countries. Another 15 port masters, harbour masters and middle management personnel from maritime and port administrations across 14 countries took part in the 4th Port Management Programme held in 2017.



MPA Academy held the 4th PMP from 21 August to 25 August 2017 for port masters, harbour masters and middle managers from maritime and port authorities.



Maritime officials from the PMP gained useful insights into the working practices of building and operating a world-class port along one of the world's busiest waterways.



AMLP participants gained practical insights from prominent industry leaders and domain experts who shared their knowledge on leadership and global maritime trends.



17 TCTP participants from around the world took part in a workshop called "Development of maritime energy efficiency and emissions strategies and their implementation".



2nd AMLP saw a gathering of C-suite maritime and port administrators from 18 countries.

Support IMO's training needs as a Council Member

MPA has been providing training to the international maritime community under the Singapore-International Maritime Organization (IMO) Third Country Training Programme (TCTP) since 1998. To date, MPA has trained more than 1,900 officials from over 80 countries from Asia, Africa, the Americas, the Caribbean, the Middle East and the Pacific Islands.

In 2017, three workshops were organised, namely:

- A train-the-trainer course for simulator trainers and ECDIS instructors for the Pacific Islands,
- A regional workshop on assessing, authorising and monitoring the recognised organisations (RO) Code, and
- A workshop on the development of maritime energy efficiency, emissions strategies, and their implementation, which was held in conjunction with the Future Ready Shipping Conference in Singapore.

Through these efforts, Singapore hopes to enhance IMO Member States' capacities to implement international maritime regulations and standards.

CHAPTER

05

QUALITY MARITIME WORKFORCE

[GRI 203-2, 404-2]



Having a skilled maritime workforce is essential for Singapore to meet the needs of the industry, and place our nation above our competitors. Mindful of the accelerating pace of industry transformation, MPA continues to commit resources to ensure that our workforce remains future ready, and well equipped with the relevant skillsets. Through close partnerships with our industry players, unions, Institutes of Higher Learning (IHLs), and relevant government agencies, MPA has developed, enhanced as well as supported a diverse suite of maritime education and training programmes designed to provide multiple entry points and career pathways for individuals interested in a maritime career.

BOOSTING THE FUTURE READINESS OF OUR MARITIME WORKFORCE

[SDG 4.4, 4.7, 8.5, 8.6]

A quality future-ready workforce is critical to sustaining Maritime Singapore's competitiveness. Central to this is the Maritime Cluster Fund for Manpower Development (MCF-MD). Through MCF-MD, MPA works closely with our industry partners, the Labour Movement, and the IHLs to develop manpower pipelines so that new talent can be channelled in continuously to meet the growing needs of the industry. To encourage skills deepening, the MCF-MD provides co-funding support not only to students but also local maritime employees seeking to upskill or reskill through courses, structured training, and experiential learning.

Given the way business models are currently evolving, the demand for highly skilled employees with smart technologies knowledge will grow. MPA thus enhanced the MCF-MD to cover a wider coverage of supportable topics, such as technical training in IT skills, data analytics, green technology with maritime applications as well as soft skills like negotiation, communication, and leadership.

Besides developing a multi-skilled workforce, ensuring our maritime employees possess a global mindset is also vital. To encourage maritime companies to continue

offering meaningful overseas training attachment opportunities to local employees, the MCF-MD was enhanced to extend the maximum supportable duration for such attachments from six to 12 months. The MPA Global Internship Award (MPA GIA) is another programme which exposes high-achieving students to internships with international maritime companies in both their Singapore and overseas offices. (Refer to box story on MPA GIA) With these enhancements, more than 6,000 people benefited from the MCF-MD in 2017.

As the maritime industry transitions into an innovation-driven economy, new skills and competencies will be needed in its workforce to drive this industry transformation. MPA supports skills deepening through the SkillsFuture Study Awards for the Sea Transport Sector. The Awards encourage early to mid-career Singaporeans working in the maritime sector to develop and deepen the specialist skills needed. In 2017, more than 60 Singaporeans were awarded the SkillsFuture Study Awards for the Sea Transport Sector.

BUILDING CLEAR CAREER PATHWAYS AND MARITIME TALENT POOL [SDG 8.3]

To help build deep skills, support employment and employability as well as provide an understanding of what is needed to enter key maritime careers, the Skills Framework for Sea Transport was developed. The framework is a joint effort between SkillsFuture Singapore and MPA, following consultations with more than 50 industry stakeholders, unions and IHLs. Launched by then Senior Minister of State, Ministry of Transport, Josephine Teo at the International Maritime Awards 2017, the framework is an important component of the Jobs and Skills pillar of the Sea Transport Industry Transformation Map.

The Skills Framework provides an overview of the career pathways and skills required for 48 different jobs in the Sea Transport Sector, and is targeted at new entrants as well as existing employees in the maritime industry. It provides transparency on the competencies and career pathways for occupations in the sector. The framework helps maritime companies, and training service providers to ensure their training programmes are and remain relevant.



Adapted from the Skills Framework for Sea Transport, the infographic above highlights some of the desired attributes and skills in demand by Singapore's maritime industry.

In line with the Ministry of Manpower's Human Resource Industry Manpower Plan (HR IMP) rollout, MPA is collaborating with Singapore Polytechnic (sector coordination lead for maritime) to reach out to maritime companies to adopt good HR development practices such as compensation benchmarks, and competency frameworks, and to improve HR processes. The Skills Framework serves as a guide for maritime companies seeking to enhance their HR processes.

In addition to the Skills Framework, the Tripartite Maritime Manpower Taskforce for Seafaring developed the Maritime Apprenticeship Scheme to help companies and jobseekers find a better job fit before long-term

employment. Launched in April 2017, the scheme aims to strengthen the employability of Singaporeans by providing them with an avenue to pick up vocational skills through a month-long shipboard work trial. Upon completion, and if found suitable, candidates can be formally employed to undergo further training and certification to become steersmen, engine drivers, tug masters, and even Certificate of Competency (Special Limit) Officers.

MPA will continue to work with our industry partners to review our manpower programmes and initiatives to ensure that they remain relevant to the industry even as jobs and skills evolve.

Profiling the Maritime Sector as an Exciting Place to Work in and Attract Bright Young Local Undergraduates – MPA Global Internship Award

The MPA Global Internship Award (MPA GIA) 2017 managed to set a new record with 39 recipients and 27 participating companies.

The MPA GIA programme was launched in 2013 to provide local undergraduates with the opportunity to gain practical insights on the global maritime industry. Recipients of the MPA GIA are given experiential opportunities for internships at the local and overseas offices of maritime companies, covering sectors such as shipping, technical

management, shipbroking, offshore, finance and marine insurance.

As the Singapore economy transforms, workers with cross-disciplinary skills will be in greater demand. In addition to maritime-related courses, the MPA GIA had gradually expanded its pool of applications to include students from diverse disciplines such as law, engineering, economics, finance, and computing.



GIA award recipients, their company sponsors and the Sea Transport Sectoral Tripartite Committee members at the MPA Global Internship Award (MPA GIA) 2017 presentation ceremony.

STRONG MARITIME SINGAPORE IDENTITY

WE ARE MARITIME SINGAPORE

HIND THE RITIME

DEDICATION to building a quality maritime workforce that can steer Singapore into an **INTERNATIONAL** Maritime Centre

LOSE COLLABORATION with partners in education and training programs to help existing employees upgrade skills and achieve career growth

170,000 WORKERS = **1.5X** of entire population of the Payoh District

H QUALITY WORKFORCE

ates - Skill Future Earn and Learn Program (ELP) is a one-year work-study programme for selected fresh polytechnic graduates to jumpstart careers in the maritime sector. This program is able for students pursuing other sectors as well.

seers - Maritime Career Conversion Scheme (MCCS) and MPA enable companies to onboard adults with no maritime background into the me sector by co-funding their fees and wages.



SHIP
CAPTAIN



VESSEL TRAFFIC
OFFICER



PROJECT
ENGINEER



MARITIME
LAWYER

STRENGTHENING MARITIME SINGAPORE IDENTITY

As the maritime industry champion, MPA strives to build a strong Maritime Singapore identity. Our aim is to raise Maritime Singapore's international profile, and strengthen Singapore's global influence in the international maritime community. Ultimately, the local maritime scene thrives on a sterling Maritime Singapore brand. To recruit the next generation of young maritime talents, MPA also

recognises the importance of increasing awareness and generating interest amongst the young in Singapore's vibrant maritime industry. Through events such as the MPA Learning Journeys, and Clean up on Kayak, along with our Singapore Maritime Gallery, MPA delivers key messages tailored to engage young audiences within various target groups.



Mrs Josephine Teo, then Senior Minister of State, Ministry of Transport, MaritimeONE partners and Union Leaders at the Opening Ceremony of SMW 2017



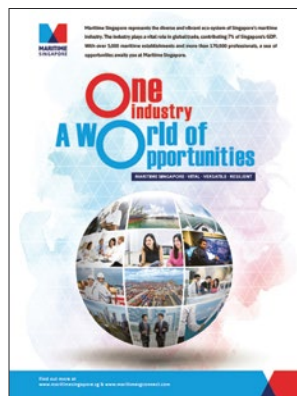
MPA Facebook page

Brand [GRI 417-1]

To raise the awareness of Maritime Singapore amongst the general public, and the industry, MPA continually reaches out to them via a variety of communication platforms. In 2017, MPA produced our first ever television commercial to drive across the message that Maritime Singapore boasts a diverse eco-system. Throughout the year, Maritime Singapore content was promoted on digital, traditional and out-of-home (OOH) media. As part of our engagement efforts targeted at the youths and young adults, MPA also produced marketing materials in the form of mobile gamifications to highlight Maritime Singapore's technologically advanced standing. In addition, a marketing campaign to establish brand resonance with the public was run successfully. Within the year, MPA also embarked on a public perception survey to assess the public's situational awareness of the industry and help us to improve our future engagement and communication efforts.

To enhance the public's awareness, understanding and perception of Maritime Singapore, MPA launched a slew of brand-enhancing initiatives, including media profiling of maritime careers as well as advertising in both traditional media and OOH placements. Our magazine, *Singapore Nautilus*, which bagged two Tabbie Awards in 2016, publishes up-to-date, relevant and engaging content, to keep the industry current with the latest issues.

In addition to creating the Maritime Singapore microsite, which is both a public engagement platform, and a vital



Maritime Singapore Ad



Singapore Nautilus by MPA

source of industry information, MPA has also enhanced our social media outreach efforts. The number of followers across our various social media platforms has increased significantly over the years.

To target youths, MPA uses our Instagram account to highlight our ongoing engagement activities. Besides producing and uploading more videos showcasing key aspects of Singapore's maritime industry on our YouTube channel, MPA has also been actively leveraging on our LinkedIn platform since 2016.

Singapore Maritime Week (SMW)

MPA spearheads the annual SMW to showcase Singapore's vibrant maritime cluster to the general public, and the international maritime community. Recognised for its thought leadership, and as a leading international maritime show, the number of visitors at SMW has climbed steadily since its 2006 inception. In addition, other maritime nations have emulated its content and format.

Themed "Navigating Through Challenging Times", SMW 2017 had a record number of 34 events, and was attended by 42,000 participants, including high-level delegates such as port authorities, CEOs, industry leaders, and maritime experts.

At events such as Sea Asia 2017, Singapore Maritime Lecture, and the Singapore Maritime Technology Conference, business leaders discussed the critical challenges arising from a slowdown in global trade growth, the prevailing trend towards mega alliances and consolidations as well as emerging opportunities for technology deployment in the industry. 21 co-located event organisers also partnered with SMW to address topics such as the container and commodities market

outlook, finance, sustainability, security, and emerging risks.

SMW 2017 also featured various public outreach events to generate public interest in the maritime sector. A week-long SMW 2017 Exhibition titled "We are Maritime Singapore" was held at Marina Square. The exhibition drew a sizeable 15,100 visitors who got to experience and understand the capabilities of Singapore's port, marine engineering, and maritime services sectors via onsite simulators and interactive panels. In addition, members of the public were given virtual access to the Port Operations Control Centre, and the Automated Crane Operations Centre for the first time ever through a 360° virtual reality (VR) video. The VR video took them on a virtual tour of these two restricted facilities.

For the first time, SMW 2017 also reached out to the local community through arts and music with the staging of the "Sea Dreams" musical concert at the Vivocity Amphitheatre over two days. Close to 1,400 attended. The Amazing Maritime Challenge also drew a record number of 1,200 registrations.



Mrs Josephine Teo, then Senior Minister of State, Ministry of Transport at the 11th Singapore Maritime Lecture



MaritimeONE Partners flagging off the Amazing Maritime Challenge



Interactive displays at SMW 2017 Exhibition



Performances at "Sea Dreams" musical concert

Singapore Maritime Gallery (SMG)

Located at Marina South Pier, the SMG was first opened on 12 September 2012 by the then-Minister for Transport, Mr Lui Tuck Yew. The 1,000 sq m Gallery is a key engagement tool for MPA to showcase the development of Maritime Singapore from an entrepôt port to a global hub port, and an international maritime centre.

The maritime industry has developed and progressed significantly since SMG was first opened. The SMG was refreshed to offer visitors an updated perspective of Maritime Singapore in an even more engaging manner. In addition to explaining our Maritime Singapore history, it also features how Singapore is preparing for the way ahead by investing in future capacity through the Tuas Next Generation Port (NGP). With a capacity of up to 65 million TEUs, the Tuas NGP will enable Singapore to leverage on cutting-edge technologies and keep on delivering best-in-class services.

The newly refreshed SMG was officially opened by then Senior Minister of State, Ministry of Transport, Josephine Teo, on 17 April 2017. More than 100 people attended, including our MaritimeOne partners, stakeholders, agencies as well as individuals that had contributed to the gallery refresh.



The refreshed Singapore Maritime Gallery



Children learning more about Maritime through fun and play



Tour of the Singapore Maritime Gallery



Exhibits at the Singapore Maritime Gallery



Public having a first-hand experience in vessel navigation at the ship bridge simulator

COMMUNITY ENGAGEMENT

Singapore Maritime Dialogue

Organised by MPA with the support of MaritimeONE partners (Singapore Maritime Foundation, Association of Singapore Marine Industries, and Singapore Shipping Association), Singapore Maritime Dialogue is an outreach event that aims to heighten awareness and interest among students about Singapore's maritime industry, and the wide range of maritime education and career options available to them.

With the Navigating through Challenging Times theme in mind, about 180 participants discussed the present

efforts undertaken by both the public and the private sectors to navigate through the challenges faced by the maritime industry with Guest-of-Honour, Dr Lam Pin Min, Senior Minister of State for Ministry of Transport and Ministry of Health, and panel members comprising senior maritime leaders and professionals. Prior to the Dialogue, participants attended an exclusive port tour hosted by PSA where they witnessed operations at the terminals, and learnt how everyday things are being handled and shipped.



Dr Lam Pin Min, Senior Minister of State for Ministry of Transport and Ministry of Health leading the panel discussion alongside panel members comprising senior maritime leaders and professionals



Dr Lam Pin Min, Senior Minister of State for Ministry of Transport and Ministry of Health giving opening remarks at the Singapore Maritime Dialogue

Clean-Up on Kayak

To raise public awareness of Singapore as a bustling yet responsible and sustainable port city, MPA launched the Clean-up on Kayak initiative with the support of local non-governmental organisations (NGOs). This initiative is part of the Maritime Environmentalist Partnership (MEP)

programme. Held on 30 September 2017 in conjunction with the International Coastal Clean-up Day, it involved 100 volunteers on kayaks who collected debris in Singapore waters, and another 20 who remained on land to sort and record the marine litter for data analysis.



Clean-up on kayak initiative supported by NGOs



Clean-up on kayak group photo

Coral Monitoring Volunteer Engagement Sessions

Together with DHI Singapore and National Parks Board, MPA put together and continues to support the Coral Monitoring Volunteer Engagement Sessions, an outreach

platform where diver volunteers help to raise public awareness on the importance of our marine environment.



Coral Monitoring



Coral Monitoring Volunteers

MPA Learning Journeys

To raise awareness of Maritime Singapore amongst local educators and students from Secondary and High Schools, Institutes of Technical Education, Junior Colleges, Polytechnics and Universities, MPA Learning Journeys was launched as an outreach platform. Through this MPA signature outreach programme, both local educators and their students can better understand the industry through facilitated visits to restricted maritime facilities such as Raffles Lighthouse, Integrated Simulation Centre, and the port terminals. MPA has also introduced the Sea Tour so that participants can gain a deeper understanding of operations out at sea.



Students on Sea Tour



Students at Raffles Lighthouse



Students on MPA Learning Journeys



Participants at Raffles Lighthouse

SHINE Festival - Collaboration with National Youth Council (NYC)

The SHINE Festival, organised by the NYC is an annual outreach event held as part of the Youth Month celebrations. The Festival seeks to showcase talents, promote talent development, and highlight inspiring youth leaders and role models.

To raise awareness of Singapore's maritime industry amongst youths, MPA collaborated with NYC and participated in the 12th edition of the SHINE Festival that

was held from 30 June to 2 July 2017. Other than learning interesting facts about our lighthouses through an interactive and educational dart game, participants also got to ballot for tickets to go on a special edition sea tour to Raffles Lighthouse. MPA's outreach programmes and events were also promoted through customised publicity flyers and other giveaways.



Raising awareness at SHINE Festival



Public participating in "Guess the Correct Lighthouse" contest

Maritime Outreach Fund (MOF)

The MOF is a funding initiative aimed at promoting interest in and understanding of our sector through maritime-themed projects. Its main objective is to raise awareness of Maritime Singapore among youths, and be the go-to platform for individuals and organisations to develop and showcase projects, thereby promoting greater community

ownership of the maritime industry. Since its inception, the fund has supported close to 35 projects ranging from film commissions, book publications, school competitions as well as exhibitions.

CULTURE OF EXCELLENCE

A man with glasses, wearing a grey suit, white shirt, and a patterned tie, is smiling and pointing his right hand towards a presentation screen. The screen displays text about the International Maritime Centre (IMC). The background is dark with blue and green accents.

International Maritime Centre (IMC) is
and stable political
7% to Singapore's
Singapore is home to
international
national shipown
ed boost efforts to grow
cluding shipbrokers and
ship financiers.

In driving Singapore's next phase of growth as a global maritime hub, MPA understands that a culture of excellence is the lynchpin to sustaining organisational excellence, and remaining agile and adaptable in an ever-changing landscape that creates new opportunities, and raises fresh challenges.

At MPA, our culture of excellence has been carefully designed and built upon service, innovation and operational distinction. At the same time, our sustainability strategy is underpinned by our sound and robust financial, environmental, social and governance policies.

ENSURING FINANCIAL SUSTAINABILITY [SDG 9.1]

To ensure MPA's continued long-term financial sustainability, we conduct regular reviews and benchmarking of fees and charges to ensure that Singapore's rates remain competitive, equitable, simple, and sustainable.

Port Dues Concession for Container Vessels, Bulk Carriers and Offshore Support Vessels

In view of the continued challenges facing the shipping, bulk and offshore marine industry, MPA has extended various port dues concessions until 30 June 2018 to help the industry defray costs in the short term, namely:

- Additional 10% port dues concession on port dues payable by ocean-going container vessels carrying out cargo works with port stays of not more than five days (granted on remaining port dues payable after the port dues concession for Green Port Programme, if applicable, and the existing 20% port dues concession for container vessels,
- 10% concession on port dues payable by bulk carriers carrying out cargo works with port stays of not more than five days, and
- Incremental concessionary rate of \$0.50/day for Offshore Support Vessels (OSVs) from 90 days to 180 days.

Extension of Maritime Welfare Fee (MWF) Concession

The MWF concession of a 100% waiver for vessels with port stays of not more than five days was part of an economic relief measure to help the shipping industry for five years from 1 October 2012 till 30 September 2017. MPA has extended this measure by another 27 months till 31 December 2019 to help the industry defray costs in the short term. From 1 January 2020 to 31 December 2022, vessels with port stays of not more than five days will enjoy a 50% concession on the MWF.

In addition, MPA will continue to grant the following temporary economic relief measures for another six months till 30 June 2018:

- Additional 10% concession on port dues payable by container vessels carrying out cargo works with port stays of not more than five days,
- 10% concession on port dues payable by bulk carriers carrying out cargo works with port stays of not more than five days, and
- Incremental concessionary rate of \$0.50/day for Offshore Support Vessels from the current 90 days to 180 days.

Enhancements to the Annual Administrative Fee (AAF) Scheme

The AAF Scheme was introduced on 1 January 2014 to provide an alternative payment mode for all Singapore-registered owners for registration and crewing related services. Three years later, the AAF scheme was enhanced following a review, replacing the single flat fee of \$600 with a three-tiered fee based on the size of the ship.

Then on 1 July 2017, MPA further enhanced the AAF scheme to include:

- **The Expansion of the Applicable Service Coverage:**

The list of services covered under the AAF includes Seafarer Certification Services, such as issuing certificates of competency, certificates of proficiency, and type rating certificates. Existing Singapore ships currently enrolled in the AAF scheme will get to enjoy these benefits at no additional cost, and

- **The Tanker Endorsement Fee (TEF):**

Owners/operators of Singapore-registered tankers can also sign up for the optional TEF at an additional flat fee of \$120 per ship for applications and issuance of tanker endorsements.

ENVIRONMENTAL SUSTAINABILITY

[SDG 12.4, 12.5] [GRI 302-1, 302-3, 302-4, 303-1, 305-1, 305-2, 305-4, 305-5, 306-2]

Eco-Office

As a testament to MPA's continued efforts to raise awareness and cultivate eco-friendly habits within the workplace, MPA achieved Eco-Office re-certification for all our three office locations, PSA Building, Tanjong Pagar Complex, and PSA Vista. The certification is awarded by the Singapore Environment Council.



To raise staff awareness of Eco-Office practices, a series of 10 email blasts, each with a theme from one of the Eight Effective Habits, was conducted throughout 2017. New staff are also made aware of MPA's environmental goals and plans during the quarterly foundation programme. Eco-related staff activities are regularly organised, such as the Wallet-making Upcycling Workshop, and the Eco-friendly Candle-Making Workshop.



MPA staff engaging in Eco-related Staff Activities

MPA also retained its five-star Happy Toilet Programme rating for the eight toilets at Tanjong Pagar Complex, and PSA Vista after a re-certification audit by the Restroom Association of Singapore.

Implementation of Integrated Facilities Management (IFM) and Update to Emergency Response Plan

To streamline communications and enhance daily operations management, an IFM manager was appointed to manage facilities within MPA from July 2017. All emergency response plans were also reviewed and updated in the year.

Public Sector Taking the Lead in Environmental Sustainability

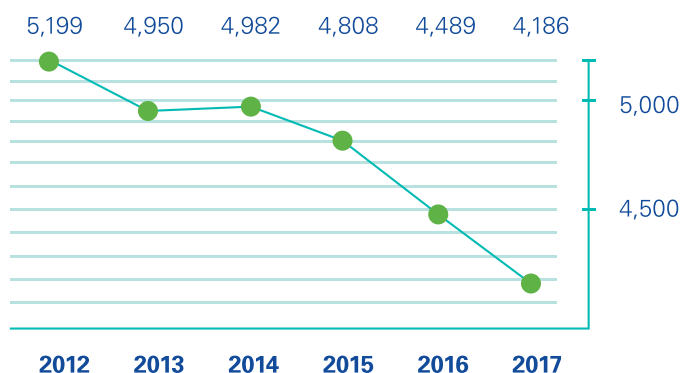
In measuring our sustainability performance, MPA takes guidance from the Public Sector Taking the Lead in Environmental Sustainability (PSTLES) initiative 2.0 targets, led by the Energy Efficiency Programme Office. Annually till 2020, MPA aims to reduce energy and water consumption by 3% and 1% respectively, and remains on track to meet PSTLES targets.



ENERGY AND EMISSIONS

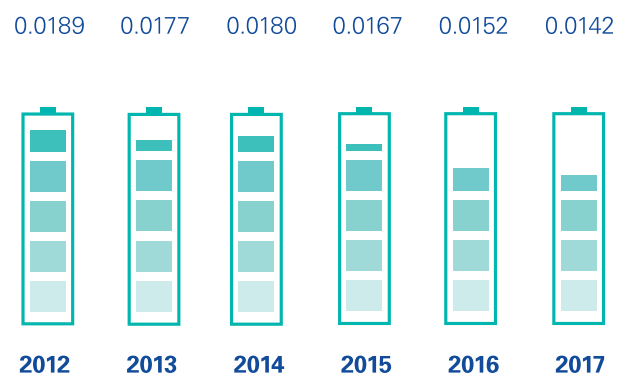
ELECTRICITY CONSUMPTION

('000 kWh)



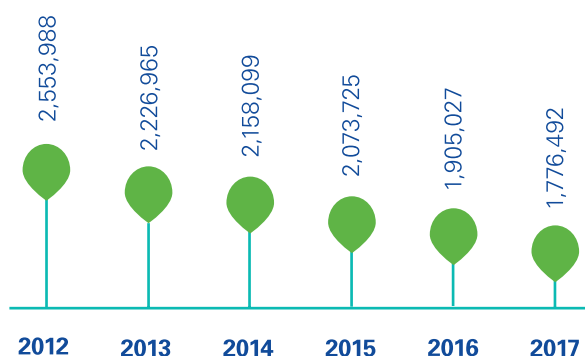
ENERGY INTENSITY

(kWh/\$)



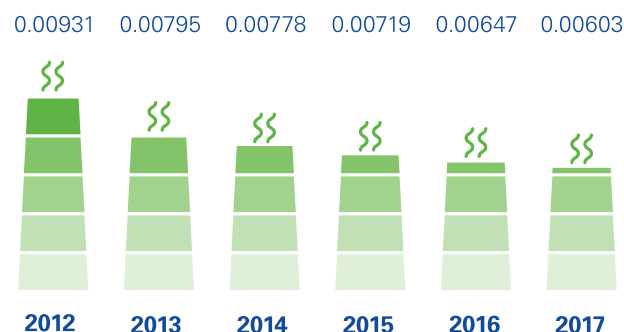
GHG EMISSIONS (SCOPE 2)

(kgCO₂)*



GHG EMISSIONS INTENSITY

(kgCO₂/\$)



* Calculated based on Yearly Electricity Grid Emission Factor published by the Energy Market Authority (EMA)

LED lights have been progressively implemented to replace lighting due for replacement, and for new offices and infrastructure projects at MPA. Besides lowering energy cost, the replacement and maintenance costs of bulbs/parts have been reduced as the LED lights require minimal maintenance, and have a longer lifespan than conventional lighting.

LED lighting replacements were conducted at Sultan Shoal Lighthouse and Changi Point Ferry Terminal (CPFT)

pontoon in 2017. Air-conditioning systems at all MPA offices and Operational Centres are large Air Handling Units (AHU) that uses Chilled Water. For operational centres where air-conditioning is required after office hours, MPA has implemented standalone independent Variable Refrigerant Volume (VRV) HVAC Systems which offer high levels of energy efficiency and flexibility. As a result, electricity consumption dropped by 7% between 2016 and 2017 for the second consecutive year.

Smart Lighting Trial

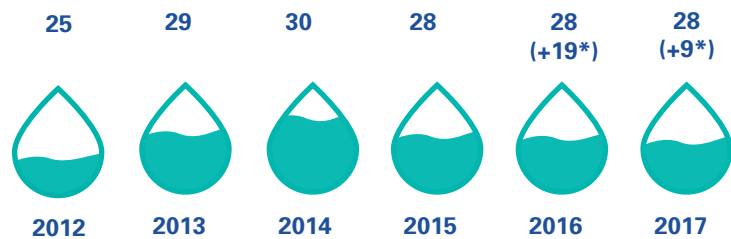
To enhance energy optimisation and operational efficiency, a pilot project on intelligent office lighting system was conducted at Level 18 of PSA Building. During the trial, common office lights were pre-scheduled to be switched off during lunchtime, and after a pre-determined time in the evening after office hours. Should staff request lighting extensions, alternate common corridor lights are programmed to be switched on, thus reducing electricity wastage during off-peak periods. The estimated electricity savings from the trial was 7.5%. These findings are being used to propose future smart office solutions.



WATER

WATER CONSUMPTION

('000 cu m)



* Water used for façade cleaning

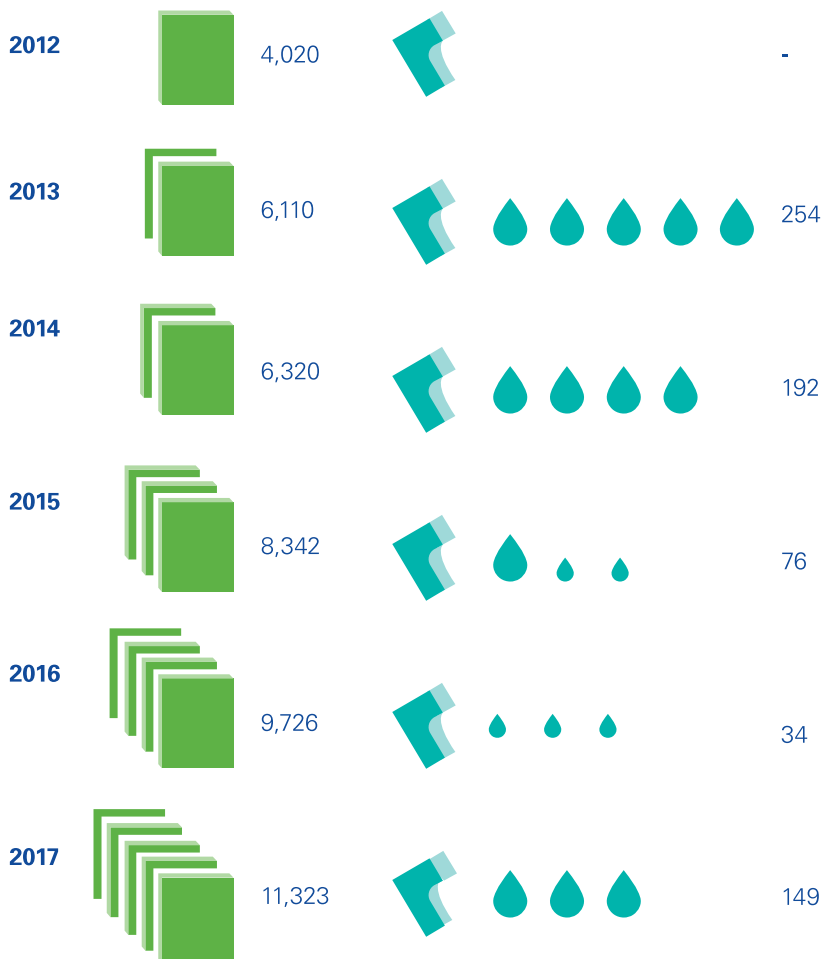
Water is supplied by the Public Utilities Board (PUB). Water consumption remained largely constant year-on-year, with water-saving technologies such as motion-sensor taps and dual-flushing cisterns widely installed in washrooms.



RECYCLING

WEIGHT OF PAPER COLLECTED (KG)

PRINTER INK CARTRIDGES COLLECTED



Paper recycling has risen by 16% annually from 2015 – with 11,323kg of paper collected in 2017. Comparatively, 11,245kg of copier papers (4,424 reams) was bought in 2017. Continuing with MPA's efforts to effectively reduce and manage waste, 34 recycling bins (15 for paper, 10 for cans, seven for plastic bottles and two for toner cartridges) are placed at the various office premises in PSA Building, Tanjong Pagar Complex, and PSA Vista. 17 bins collect used paper for shredding. Staff actively reduce paper usage where possible. Double-sided printing is set as the default for printers, and the use of envelopes for internal mail has been reduced. Two organisation-wide projects, e-Procurement and e-Registry, have been developed to further reduce paper documentation while ensuring proper records keeping.

ADVANCING LEADERSHIP IN SUSTAINABILITY REPORTING

Engaging the Industry – Sustainability Reporting Co-Funding Scheme

MPA is supporting SGX-listed maritime companies on developing their first sustainability report following SGX's introduction of sustainability reporting for all listed companies on a comply-or-explain basis. In line with this, MPA has awarded 10 companies with the Sustainability Reporting Co-Funding Grant. MPA will co-fund 50% of the qualifying costs, on a reimbursement basis, incurred for the respective companies' sustainability reporting, up to a cap of \$50,000 per company.



Among those awarded, two companies – Jason Marine Group Ltd and CH Offshore Ltd – had made significant progress on their respective sustainability journeys in 2017. Each company has published its first Sustainability Report that was incorporated into its Financial Year 2017 Annual Report. Both sustainability reports were based on the Global Reporting Initiative (GRI) Standards. PACC Offshore Services Holdings Ltd (POSH) also published its inaugural Sustainability Report in early 2018.

On his company's sustainability reporting experience, Jason Marine's Executive Chairman, Mr Foo Chew Tuck, said: "The reporting is a company-wide effort that requires the involvement of every function and level in the organisation. The process of putting together the report has given us a better comprehension of the GRI framework, and how it integrates all the management systems in our organisation for managing and coordinating sustainability efforts. In essence, it provides a holistic way of consolidating information and outcomes from Enterprise Resource Management (ERM), Business Continuity Management, Quality Management Systems, and other risks assessments through an integrated approach to ensuring a coordinated effort towards a sustainable future for all stakeholders."

Partnering with Global Compact Network Singapore

A Memorandum of Understanding (MoU) was signed between Global Compact Network Singapore (GCNS) and MPA on 17 November 2017 to promote corporate sustainability in the maritime industry. The initiatives under the MoU include the provision of training on sustainability reporting, and a C-suite level roundtable that would be conducted in 2018 and 2019. About 43 maritime companies are expected to benefit from the training. The MoU was signed by MPA's Chief Executive, Mr Andrew Tan, and Executive Director of GCNS, Mr Wilson Ang.



MoU signed between MPA's Chief Executive and Executive Director of GCNS

Advancing Sustainability Best Practices at an International Level

In 2017, MPA was awarded our first international award for sustainability. In recognition of our efforts, we were awarded the Golden Peacock Award by the Institute of Directors (IOD), a non-profit apex association of company directors in India. A case study on MPA's major sustainability initiatives was also published in the Winners' Digest, a conference publication covering Success Stories on Sustainability, released at IOD's 17th London Global Convention on Corporate Governance & Sustainability in October 2017.

At the 2017 International Galaxy Awards organised by MerComm Inc, MPA also won the:



**Gold Winner for Annual Reports
– Online: Sustainability Report**



**Bronze Winner for Annual Reports
– Print: Sustainability Report**



MPA's strategic Future Ready business model, based on the Integrated Reporting framework of the IIRC International Integrated Reporting Council, was also featured in the Singapore Institute of Directors' Corporate Governance Guide for Boards and Board Committees.

Sustainability Sharing

Recognising the benefits of sustainability reporting for organisations, MPA actively shares our sustainability journey with fellow Public Sector agencies and Institutes of Higher Learning.

MPA's Director (Corporate Development) and Chief Financial Officer, Ms Yvonne Chan, also represented MPA as a panellist at the annual Global Compact Network Singapore Summit 2017 to examine and discuss how companies which were prepared to take bold sustainability-related actions were likely to be rewarded with greater business success.



Ms Yvonne Chan, Director (Corporate Development)/
Chief Financial Officer at the panel session

FIRST VALUES [SDG 16.5] [GRI 102-16, 102-17, 102-25, 102-34, 205-1, 205-2, 205-3]

MPA officers carry out their duties ethically at all times and in every situation, guided by MPA's core FIRST values of Forward Thinking, Integrity, Respect, Service Excellence, and Teamwork. These values are contained in MPA's Ethics Policy and Code for Business and Personal Conduct.

MPA Values Week

Held annually, MPA Values Week is a week-long initiative to celebrate our corporate values. Values Week 2017 was successfully held in February 2017. Activities organised included:



Innovation Learning Journey to Singapore Civil Defence Force



Exhibit on FIRST Champions and Service Stars



Corporate Governance Briefing



Brain-Friendly Workplace! Workshop



FIRST Values Week 2017



Service Excellence Day
Launch of Service Competency Framework
Star in Service and FIRST Values Award presentation



Site Visit to Tele-centre for Senior Management (above)
Learning Visit to ICA for Middle Managers & HODs (below)



Castles Can Fly™ programme

Strengthening Innovation Culture

Ideathon creates a platform and opportunities for staff to come together to build innovative ideas on a chosen theme using MPA's STEER innovation process of Scan, Translate, Evaluate, Execute and Review. A judging panel, comprising MPA's Directors, hears the teams pitch ideas. Ideathons are also organised as a follow-up to innovation learning journeys experienced by staff.

Three Ideathons were conducted in 2017, with the following themes:

- Designing of a New Generation Patrol Craft (a follow-up from an Innovation Learning Journey to Singapore Civil Service Defence Force)



- Going digital by default – creating a self-service transactional culture in MPA. How do we do it? (a follow-up from a Learning Journey to Immigration & Checkpoints Authority)



- How do we transform the iSuggest system to a fully-automated integrated portal of ideas in MPA?



Zero Tolerance for Corruption

MPA expects all our officers to practise the highest standards of ethical behaviour, and professional conduct, which are aligned with the Public Service's shared values. All our officers acknowledge and submit the MPA Code of Ethics form annually, and declare any potential conflict of interest to the Human Resource Division. Stringent internal controls, and segregation of duties also ensure that all our people, including Board Members, abstain from decision-making where there is a conflict of interest.

All new MPA Board Members are presented with the Code of Personal and Business Conduct for MPA Board Members as part of their Welcome Package. The package also includes a link to the MPA Act which details Board roles and responsibilities.

Robust whistle-blowing procedures, with a dedicated whistle-blowing channel ethics@mpa.gov.sg manned by the Internal Audit Department, are in place to promote responsible and secure whistleblowing from both MPA officers and members of the public without fear of reprisal. As at 31 December 2017, no critical concerns on ethics and integrity were raised to the Board.



SUSTAINING ORGANISATIONAL EXCELLENCE

Excellence in Public Service Awards

The Excellence in Public Service Awards (ExPSA) recognises public officers and agencies for service and organisational excellence. At the 19 May 2017 ExPSA Ceremony, MPA received the Public Service Premier Award – the highest accolade given to public agencies for the achievement of Business Excellence standards which includes the Singapore Quality Award (SQA) and four Class-level standards: the Singapore Quality Class, Innovation Class, Service Class, and People Developer.



MPA's Chief Executive received the award from DPM Teo Chee Hean, Coordinating Minister for National Security and Minister-in-charge of the Civil Service, on MPA's behalf.

Business Excellence Sharing post-SQA

As a follow-up to winning the Singapore Quality Award, MPA hosted a sharing session on 3 March 2017 for 35 participants from public and private agencies at the Business Excellence (BE) Award Winners Sharing Conference.



Participants viewing MPA's Port Operations Control Centre at PSA Vista

MPA also hosted another sharing session on 4 October 2017 with SIM Innovation and Quality Management Group (IQMG). MPA's Director (Corporate Development) and Chief Financial Officer, Ms Yvonne Chan, shared on MPA's SQA journey with the participants. After the session, Capt Lim Cheng Hai, Vessel Traffic Management Controller, took the participants on a tour around the Port Operations Control Centre.



Ms Yvonne Chan, Director (Corporate Development)/ Chief Financial Officer receiving a token of appreciation for hosting the sharing session on MPA's behalf

CORPORATE GOVERNANCE

[GRI 102-11, 102-18, 102-19, 102-20, 102-22, 102-24, 102-26, 102-29, 102-30, 102-31, 102-32, 102-33, 102-35, 102-36, 102-37, 102-38, 102-39]

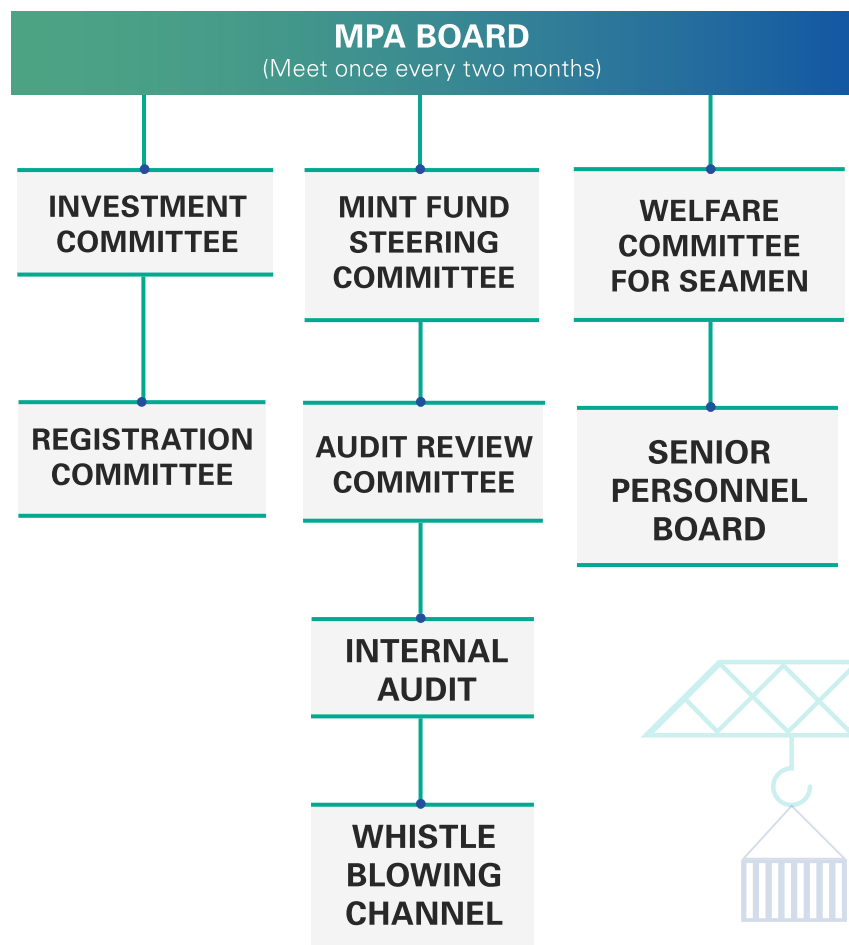
Organisation and Structure

MPA is an autonomous agency instituted by Parliament under the MPA Act. MPA's Board, headed by a non-executive Chairman, sets the broad strategic directions to realise MPA's mission and fulfil its role. Board Members are independently appointed by the Minister of Transport for a three-year term, and include the MPA Chief Executive, senior officials from the public sector, and industry representatives from across the maritime sector. The latest three-year term of the MPA Board began on 2 February 2018.

Bi-monthly Board Meetings are held for the Board to deliberate and approve key matters relating to governance, operations, policy, and sustainability, covering the key material issues addressed in this report.

MPA's 15 Divisions, headed by their respective Divisional Directors, are responsible for managing the various functions in day-to-day operations. MPA's Senior Management team, comprising the Chief Executive, his direct reports comprising the Assistant Chief Executives (ACEs) as well as the Divisional Directors, is accountable to MPA's Board Chairman and to the Permanent Secretary of the Ministry of Transport.

MPA BOARD AND BOARD COMMITTEES



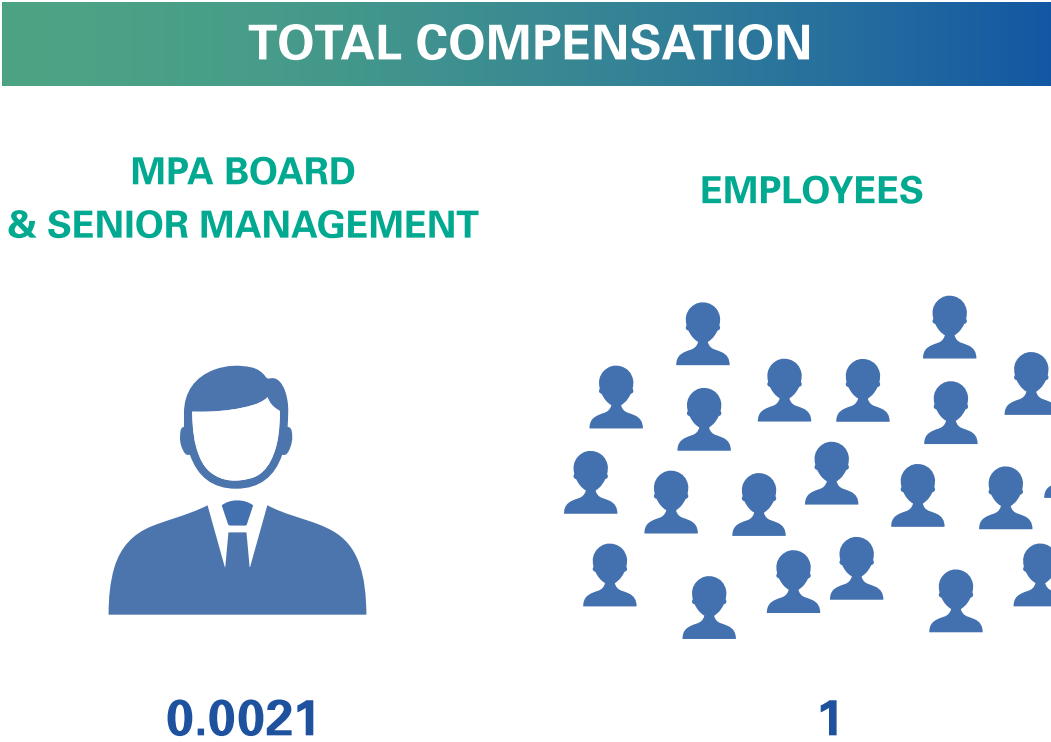
Disclosure on Compensation

The remuneration for MPA Board and senior management are pegged to Public Service Division’s guidelines, where the process to determine remuneration is government-prescribed.

In 2017, the ratio of total compensation of the MPA Board and executive senior management to that of all employees was 0.0021. There has been minimal change in the annual total compensation of the two groups since 2013.

Risk Management Process

In 2017, MPA embarked on a strategic review of our ERM framework and processes to ensure that we are staying on track to achieving our mission objectives. Following the review, MPA enhanced our risk and management process, and re-assessed strategic risks which have evolved amidst the dynamic operating and strategic environment.



Continuing Strategic Risks

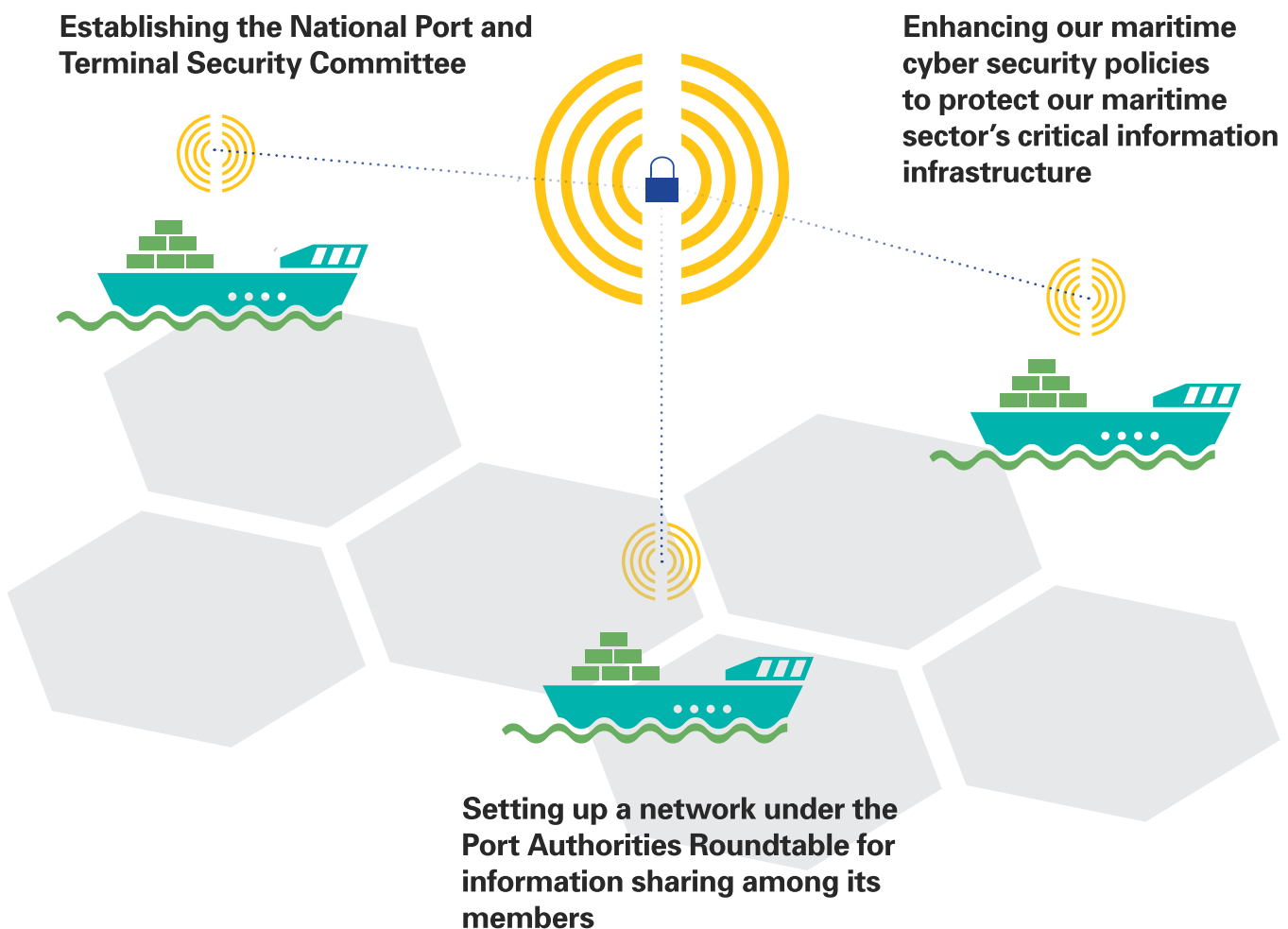
Enhancing maritime safety and security remains a key priority. MPA has stepped up control measures to mitigate enterprise risks such as piracy/sea robberies and terrorist attacks.

Various initiatives to instil a safety-first culture within the industry have also been rolled out. These include the International Safety@Sea Conference, and the Community of Practice Forum on maritime safety, which enhance our engagement with local and international industry partners. Also, with like-minded maritime partners such as the Norwegian Coastal Administration, MPA co-organised the e-Navigation Forum during Singapore Maritime Week 2017. Such platforms have raised awareness, and provided opportunities for the industry to share knowledge and best practices.

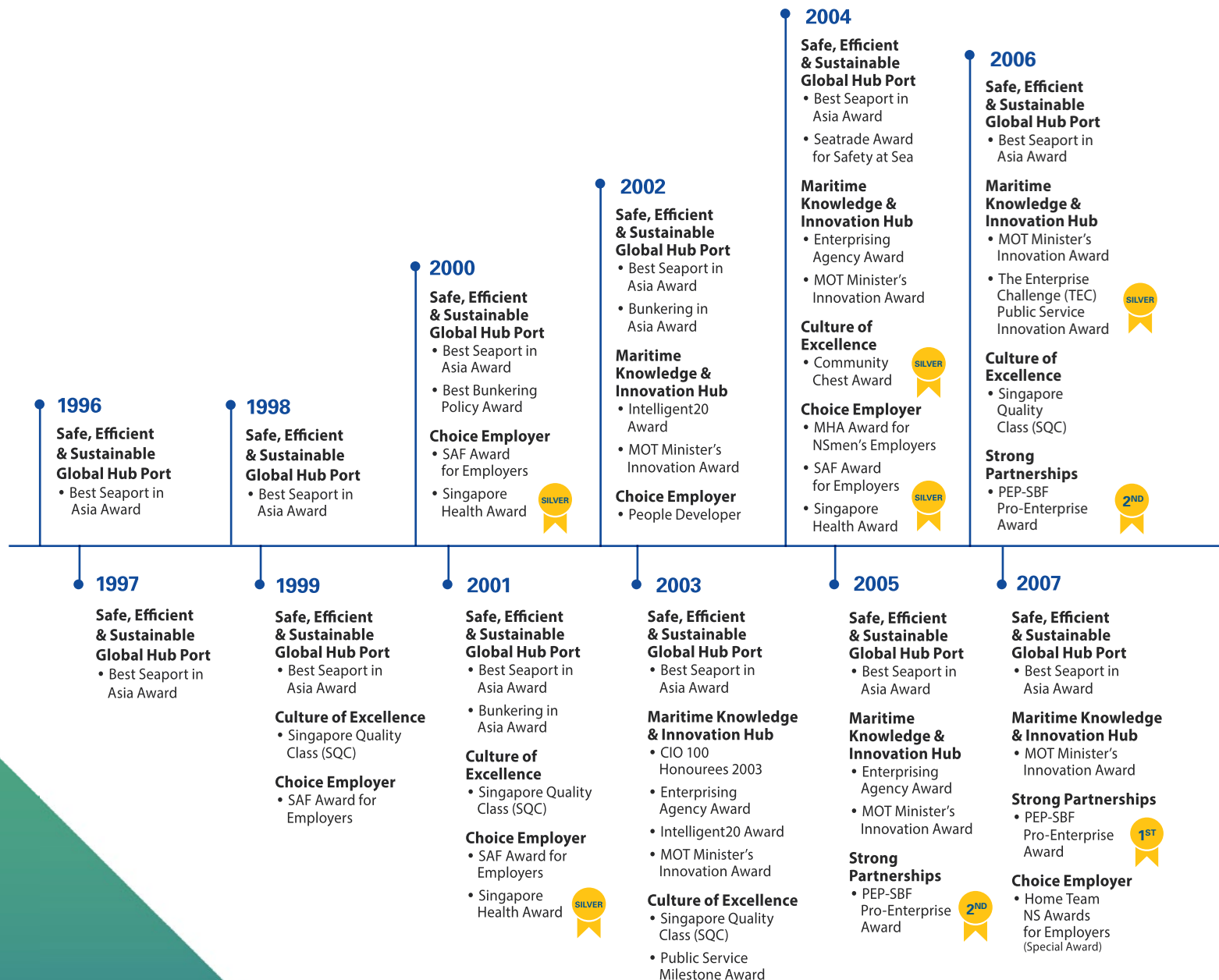
As the sectoral lead for maritime cybersecurity, MPA is spearheading various efforts to build a cyber-resilient Maritime Singapore, including:

For Now and the Future

To reinforce our robust culture of risk management, MPA continues to build our staff's risk knowledge and competencies through training, and communicating key risk issues as well as sharing lessons learnt through the *Risk Digest*, a regular newsletter published by MPA's Internal Audit Department.



MPA'S AWARDS MILESTONE 1996 - 2017



2008**Safe, Efficient & Sustainable Global Hub Port**

- Best Seaport in Asia Award
- Best Seaport (ASEAN)
- Environment Protection Award (Joint award with NewEarth Pte Ltd)
- Port Authority Award (Seatrade Asia Award)

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Strong Maritime Singapore Identity

- Convention of the Year Award

Strong Partnerships

- PEP-SBF Pro-Enterprise Award

**Choice Employer**

- May Day Model Partnership Award
- Singapore Health Award

**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 (MiDAs) League
- Singapore Health Award

**2012****Safe, Efficient & Sustainable Global Hub Port**

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

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Quality Maritime Workforce

- The International Committee on Seafarers' Welfare (ICSW) 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

**2014****Safe, Efficient & Sustainable Global Hub Port**

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT VFM 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 (Runner-up)
- Restroom Association of Singapore 4-star Happy Toilet Certification
- Team Symposium 2014 (2 Silver & 1 Bronze Awards)

Strong Partnerships

- PEP-SBF Pro-Enterprise Award

**Choice Employer**

- May Day Model Partnership Award

2016**Safe, Efficient & Sustainable Global Hub Port**

- Best Seaport In Asia Award
- Green Ports Award System (GPAS)
- Top 50 Engineering Feats @ IES-SG50 Award

Maritime Knowledge & Innovation Hub

- CAPAM International Innovations Awards (IIA) (one of the semi-finalists)
- MOT Minister's Innovation Award
- MOT VFM Achievement Award

Strong Maritime Identity

- 2016 ARC Awards

Culture of Excellence

- 6th Asia Best CSR Practices Awards 2016
- ASEAN Corporate Sustainability Summit and Awards (ACSSA) 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

2009**Safe, Efficient & Sustainable Global Hub Port**

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award

Strong Maritime Singapore Identity

- Trade Conference of the Year Award

Culture of Excellence

- Singapore Quality Class (SQC)

Strong Partnerships

- PEP-SBF Pro-Enterprise Award

**Choice Employer**

- May Day Model Partnership 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

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 VFM Achievement Award

Culture of Excellence

- Singapore Quality Class (SQC) Star

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 VFM Achievement Award

Strong Maritime Singapore Identity

- 29th International ARC Awards
- Gold Tabbie Award

Culture of Excellence

- Eco-Office Re-certification
- Happy Toilet Re-certification
- International Convention on Quality Control Circle (ICQCC) 2015 (Bronze Award)
- PEP-SBF Pro-Enterprise Award
- PS21 ExCEL Awards - Most Innovative Project/Policy (Bronze)
- PS21 Star Service Team Award
- Singapore Innovation Class
- Singapore Service Class
- Singapore Sustainability Awards 2015 (Large Enterprise)
- Singapore Environmental Achievement Awards (SEAA) 2015
- Singapore Apex CSR Awards (Small and Medium Organisations Category)
- Special Events Platinum Award
- Team Excellence Symposium 2015 (2 Gold & 4 Silver Awards)

Strong Partnerships

- PEP-SBF Pro-Enterprise Award

**Choice Employer**

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

2017**Safe, Efficient & Sustainable Global Hub Port**

- Best Seaport in Asia Award

Maritime Knowledge & Innovation Hub

- MOT Minister's Innovation Award
- MOT VFM Achievement Award

Strong Maritime Identity

- 2017 Galaxy Awards
- 23rd Annual Communicator Awards

Culture of Excellence

- ComChest Corporate Gold Award
- Eco-Office Re-certification
- European Society for Quality Research (ESQR) Quality Achievements Awards 2017
- Golden Peacock Global Award for Sustainability
- International Best Practice Award Competition (IBPC) Organisation-Wide Innovation Award
- 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
- Public Sector Pro-Enterprise Initiative Award



AWARDS RECEIVED IN 2017

International Best Practice Award Competition (IBPC) Organisation-Wide Innovation Award

26 Apr 2017

The International Best Practice Award Competition (IBPC) was founded by the Centre for Organisational Excellence Research (COER), the developers of the Business Performance Improvement Resource and the TRADE Best Practice Benchmarking methodology. The awards are supported by the Global Benchmarking Network to encourage the sharing of work practices to help organisations to quickly raise their performance and improve business results.

For the first time, IBPC introduced a new award called the "IBPC Organisation-Wide Innovation Award". This award recognises organisations that:

- 1) embraced best practice learning and combined this learning with their own ideas and creativity to become highly innovative.
- 2) excelled in inculcating an innovation culture throughout all facets of their operation from the leadership to employees and covering all stakeholders leading to innovative processes, products and services.

MPA emerged as runner-up in the 5th International Best Practice Award Competition (IBPC)'s 1st Organisation-Wide Innovation Award. The 5th IBPC was held in Mumbai, India from 25 to 26 April 2017.

Public Service Premier Award

19 May 2017

Agencies which attain this cluster of the business excellence standards achieve a base level of excellence, marking a significant milestone in the start of their journey towards organisational excellence.

MPA received the Public Service Premier Award, which is the highest accolade given to public agencies for the achievement of Business Excellence standards which includes the Singapore Quality Award (SQA) and four Class level standards: the Singapore Quality Class, Innovation Class, Service Class and People Developer, at the Excellence in Public Service Awards (ExPSA) Ceremony.

PS21 Star Service Team Award

19 May 2017

The PS21 Star Service Team Award recognises officers that have come together to deliver excellent service and in doing so, improve the lives of fellow Singaporeans. This award promotes the spirit of teamwork and encourages officers to collaborate for better service outcomes. MPA's International Maritime Centre team won the award.

Public Sector Pro-Enterprise Initiative

1 Jun 2017

The Pro-Enterprise Panel (PEP) believes that your interactions with businesses – either directly or indirectly – in your daily work, together with your understanding of how the government rules and regulations, can be changed to make them more pro-enterprise.

Ideas can be related to outdated rules, onerous regulatory requirements, or cumbersome regulatory processes who do not exist today but will be created in the future. Your pro-enterprise initiative can help more businesses to start and grow, creating more jobs and opportunities for Singaporeans.

The winning entries are:

- 1) Integrated Application/Assessment System for Classification as Shipyard or Offshore Marine Facilities
- 2) Hub Port Systems Integration to Improve Service Delivery
- 3) Electronic Tax Incentive System for Productivity and Efficiency

European Society for Quality Research (ESQR) Quality Achievements Awards 2017

4 Jun 2017

The European Society for Quality Research (ESQR)'s Quality Achievements Awards 2017, run by the European Society for Quality Research, recognise the organisations, companies, public administrations and individuals that have demonstrated outstanding commitment, support and efforts to endorse and improve achievements in quality management.

Best Seaport - Asia Award

29 Jun 2017

The Asia Freight, Logistics and Supply Chain Awards (AFLAS), organised by freight and logistics publication Asia Cargo News, honour organisations for demonstrating leadership as well as consistency in service quality, innovation, customer relationship management and reliability.

Singapore has been named the "Best Seaport in Asia" for the 29th time at the 2017 Asia Freight, Logistics and Supply Chain Awards (AFLAS) ceremony. The Port of Singapore clinched the award for its "leading performance on a range of criteria".

MPA ISO 9001:2008 Corporate Re-certification

30 Jun 2017

The ISO 9001:2008 is a standard that sets out the requirements for a quality management system. This certification is conducted by accredited Certification Body auditors to provide independent assessment that MPA has demonstrated consistent and effective operation of our quality system that meets the requirements of the ISO 9001:2008.

MPA successfully completed the ISO 9001:2008 Corporate Re-certification audit.

Minister's Innovation Award 2017

21 Aug 2017

The Minister's Innovation Award was inaugurated in 2002 to promote and reward innovation in MOT and our Statutory Boards.

The projects are as follow:

Distinguished Award

- 1) SAFER:
Sense-making Analytics For maritime Event Recognition

Merit Award

- 2) Enhancement of the collision warning in the Vessel Traffic Information System (VTIS)

Special Mention

- 3) Seamless Service Through Intelligent Hub Port Systems
- 4) Pilotage Service Level Monitoring and Forecasting

MOT VFM Achievement Awards

21 Aug 2017

The award recognises the Value For Money (VFM) efforts of the MOT Statutory Boards as well as to incentivise MOT Statutory Boards to source for projects with the potential to achieve VFM in their organisations.

The projects are as follow:

Distinguished Award

- 1) Pre-installation of Geotextile Materials on Caissons

Merit Award

- 2) Annual Admin Fee: Prescription for Singapore Registered Ships Billing Pains
- 3) Data Analytics for Fact Based Decision Making for Accounts Payable Operations

- 4) Enhanced Ship Detention Investigation Process

Special Mention

- 5) Inter-agency Approach Towards Shipyard and Offshore Marine Waterfront Facility Applications
- 6) New Online Marinet Services for Certificates Issued by the Singapore Registry of Ships
- 7) Maritime Sector Incentive Processes Streamlined via e-Tax Incentive System

23rd Annual Communicator Awards

Sep 2017

The Communicator Awards is the leading international awards programme recognising big ideas in marketing and communications and with over 6,000 entries from companies and agencies of all sizes, it is one of the largest awards of its kind in the world. The Award of Excellence, the highest honour, is given to those entrants whose ability to communicate positions them as the best in the field.

The Communicator Awards is sanctioned and judged by the Academy of Interactive & Visual Arts.

MPA's 20th anniversary commemorative book entitled "Past.Present.In Progress. Future" won the Award of Excellence at the international 23rd Annual Communicator Awards (2017) under the 'Annual Report - General Corporation/Business' category.

ComChest Corporate Gold Award

13 Oct 2017

The ComChest Corporate Gold Awards are presented to organisations that have made significant outright donations to Community Chest.

MPA received the Corporate Gold Award for our donations to Community Chest.

2017 Galaxy Awards

19 Oct 2017

Organised by MerComm Inc, the international Galaxy Awards celebrates the best entries in marketing communications.

MPA won the following awards:

- Bronze Winner for category "Annual Reports – Print: Sustainability Report"
- Gold Winner for category "Annual Reports – Online: Sustainability Report"

Golden Peacock Global Award for Sustainability

25 Oct 2017

Organised by the Institute of Directors, a registered non-profit apex association of company directors in India, the Golden Peacock Global Award for Sustainability was instituted in 2007, aimed at stimulating and helping organisations accelerate the pace of stakeholder-oriented improvement. It is a powerful self-assessment process and a way to build an organisations' brand equity on sustainability.

MPA was awarded the Golden Peacock Award for Sustainability in recognition of its continued efforts in Sustainability MPA's 2016 Sustainability/Integrated Report was amongst the first few reports worldwide that reported in accordance with the new GRI Standards. Dean (MPAA)/Director (Sustainability Office) received the award at the London Global Convention from Chief Minister of Andhra Pradesh State, India with Minister of State for Housing & Planning, UK and Deputy Mayor of London. It was MPA's first international award for sustainability.

PEP-SBF Pro-Enterprise Award

10 Nov 2017

The Pro-Enterprise Panel - Singapore Business Federation (PEP-SBF) Awards 2017 recognises the efforts of government agencies in their commitment to stay pro-enterprise as well as the contributions of businesses in providing useful feedback and suggestions to improve the business environment.

The Pro-Enterprise Ranking (PER) Survey comprises five components and measures the effectiveness of current initiatives to build a pro-enterprise regulatory environment in Singapore.

MPA was 2nd in the survey.

Public Sector Pro-Enterprise Initiative Award

10 Nov 2017

This award recognises public officers and teams who have been proactive in initiating pro-enterprise changes that have improved service delivery and reduced business compliance costs.

Gold Award

Integrated Application/Assessment System for Classification as Shipyard or Offshore Marine Facilities

Silver Award

Hub Port Systems Integration to Improve Service Delivery

Implementation of Electronic Certificates

Eco-Office Re-Certification

1 Dec 2017

The Eco-Office is awarded by the Singapore Environment Council (SEC), and its objective is to raise awareness and cultivate environment-friendly practices and habits within the workplace.

MPA has successfully achieved the Eco-Office re-certification for all three MPA office locations, i.e. PSAB, TPC and POCC Vista. The certification is valid for a three-year period from 2018 to 2020.



CHAPTER

08

STRONG PARTNERSHIPS

MPA recognises that our close partnership with our key stakeholders – industry players and associations, unions, and Institutes of Higher Learning (IHLs) – plays a vital role in achieving port-organisational excellence. This strong collaborative relationship is key to sustaining and enriching Maritime Singapore as a global maritime hub of choice. [GRI 102-16]

STAKEHOLDER ENGAGEMENT

Our partnerships with our business partners are built on a strong foundation, which is continually reinforced through ongoing communication with them. MPA actively engages our key stakeholders, which include maritime enterprises, port service providers, IHLs, suppliers and employees. This is clear from our extensive array of Stakeholder Engagement Activities.

As a testament to our unswerving commitment to engaging our stakeholders, Singapore has been named the leading maritime hub, and the top international shipping centre by the Menon Economics study and Baltic Exchange-Xinhua Index respectively. These accolades testify to our pro-business stance as we continue on our unflagging and conscientious efforts to forge bonds with and strengthen ties to our business partners.

PEP-SBF Pro-Enterprise Award

Our efforts have borne positive results as evidenced by our standings in the Pro-Enterprise Ranking (PER) Survey. The PER Survey captures the businesses' perception of how supportive regulatory agencies and regulations are of entrepreneurship and innovation.

In 2017, MPA achieved 2nd position with a score of 77.39%, ranking highest in both the Pro-Enterprise Orientation and Compliance Costs components.

MPA also received one Gold and two Silver Public Sector Pro-Enterprise Initiative Awards at the Pro-Enterprise Panel (PEP), and Singapore Business Federation (SBF) awards ceremony held on 10 November 2017.

Our pro-business enterprise culture means we are business friendly, forward-looking, and support innovation, new business models, and technological improvements.



MPA's Chief Executive received the award on MPA's behalf.

Day of Seafarers 2017 [GRI 102-12]

The Day of Seafarers 2017 was held on 25 June. It is a celebration designated by the International Maritime Organization (IMO) to recognise the unique contributions made by seafarers from all over the world to international seaborne trade, the world economy, and civil society as a whole. The theme for 2017 was "Seafarers Matter".

To celebrate the Day, MPA partnered with the Singapore Maritime Officers' Union (SMOU), the Singapore Organisation

of Seaman (SOS), and the seafarer missions in Singapore to send gift hampers filled with local goodies to visiting seafarers. MPA also provided an annual grant of \$150,000 to support the good and tireless work of the various seafarers' missions in Singapore, which partner with MPA in providing welfare services and support to seafarers on ships calling at the Port of Singapore.



MPA's Director (Shipping)/Director of Marine, with seafarers at the Mission to Seafarers Singapore International Drop-In Centre



Captain Frederick Francis, Vice-Chairman of the Mission to Seafarers Singapore, received the cheque on behalf of the seafarers' missions in Singapore.

BUILDING CUSTOMER RELATIONSHIPS

MPA continually identifies and leverages on current trends, and new technologies to enhance the customer experience, and provide greater value to customers.

Implementation of Cashless Payments at MPA Counters

With the widespread acceptance of contactless payment, the high penetration of credit and debit cards as well as a good level of mobile readiness, MPA provides cashless payment options to enhance payment convenience to our customers. This move aligns with Singapore's move towards a cashless society as part of the Smart Nation initiative.

MPA began cashless payments at our One-Stop Document Centre (OSDC), and Shipping Counter from 1 January 2018. To ensure that our customers have a seamless transition, additional modes of payments were introduced at the counters via electronic means such as NETs, EZ-Link, debit and credit cards. Other Near-Field Communication-based payments, including Apple Pay, Samsung Pay, Mastercard PayPass, and Visa Paywave, were introduced. With effect from 1 April 2018, the Integrated Simulation Centre of Singapore (ISC) has also implemented cashless payments.

Building Connections with MPA Customer Archetypes Workshops [SDG 17.17]

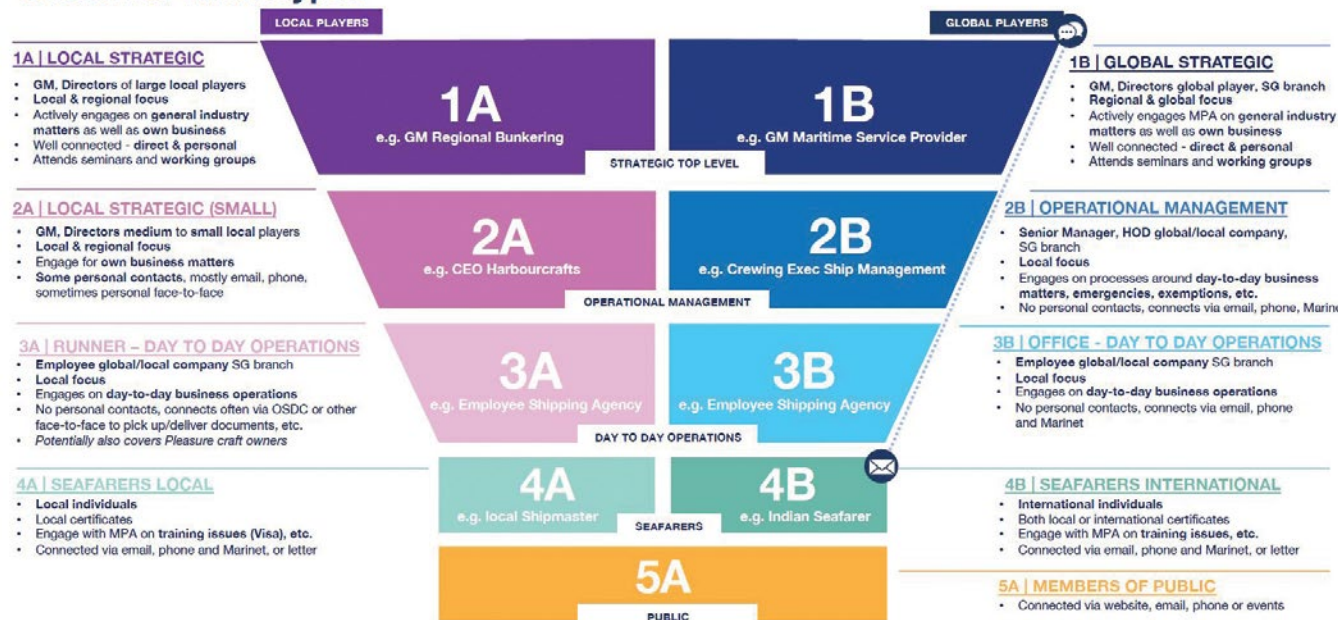
Following the launch of the Service Competency Framework at the 2017 Service Excellence Day, MPA embarked on a collaborative project with Civil Service College (CSC) to develop nine MPA Customer Archetypes. "Voice of Customer" interviews, observations, and ethnographic interviews were conducted with our customers and officers to identify the various MPA customer archetypes/profiles

for our key job functions. These archetypes were further developed, and became the foundation for a one-day training workshop for Frontline Service and Enforcement Officers to develop a deeper understanding of their customers' needs and expectations through customer journey mapping/empathy mapping. To ensure that this is sustained, quarterly workshops will be organised in 2018.



MPA staff participating in MPA Customer Archetypes Training Workshop

Customer Archetypes



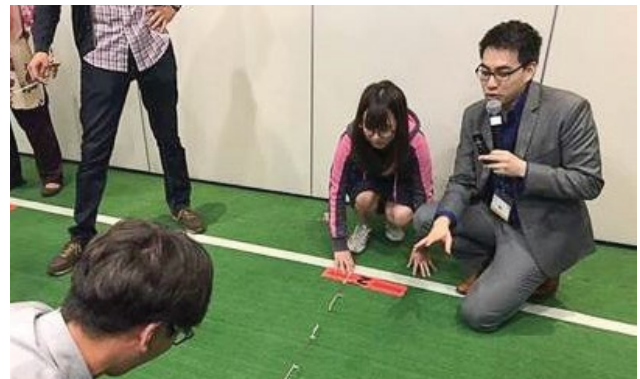
MPA's Customer Archetypes Framework

SUSTAINING SERVICE EXCELLENCE

MPA understands the importance of serving our customers well. Good customer service is often a result of a positive and deep commitment to service excellence among an organisation's people. Hence, MPA also values and strives towards driving service excellence among our people. From New Joiners to Senior and Middle Managers, programmes are lined up to train our staff to understand our customers more, and to deepen our culture of Service Excellence.

Implementation of "Anchored To Serve" – Service Values Workshop for MPA New Joiners

To further nurture our culture of Service Excellence, MPA introduced the "Anchored to Serve" Service Values Workshop as part of the on-boarding programme for New Joiners. The inaugural workshop was conducted on 12 October 2017, and was extremely well received by participants. During the workshop, the participants underwent experiential learning to explore the guiding mind-sets and behaviours that create and enhance a culture of Service Excellence.



Staff fully engaged in workshop activities

Service Visioning Masterclass for Senior and Middle Managers

As part of leadership service role modelling, MPA worked in collaboration with CSC to organise a customised Service Masterclass for our Senior Management and Middle Managers on 30 and 31 August 2017. Jeff Kober, CEO for World Class Benchmarking, conducted the masterclass. He is a consultant associated with the Disney Institute, and the author of books, including *Lead With Your Customer*, and *The Wonderful World of Customer Service at Disney*. His masterclass focused on translating MPA's Service Vision into action. Participants tapped into Jeff's extensive knowledge of customer experience to develop ideas and initiatives to advance MPA's Service Excellence journey.



MPA's Senior and Middle Management leading by example at Service Visioning Masterclasses.

SUPPLIER MANAGEMENT

[GRI 102-9, 308-1, 308-2, 407-1, 408-1, 409-1, 414-1, 414-2]

MPA's key suppliers include consultants and contractors implementing our projects, and supporting our key activities. We collaborate with them to create synergies, and produce positive outcomes, and sound solutions which benefit both MPA and the maritime industry. Suppliers also play an important role as MPA's partners as they shape and sustain Maritime Singapore's eco-system.

MPA's procurement activities adhere to the three key principles for Government Procurement, namely:

- **Transparency:** An open and transparent procurement regime is adhered to across all stages of the procurement lifecycle. All participating suppliers in a tender have access to the same information pertaining to the project, such as objectives and selection criteria,
- **Open and Fair Competition:** To encourage suppliers to give their best offers, MPA maintains an open and competitive environment by giving all suppliers equitable opportunities to compete on a level playing field, and
- **Value for Money:** Value for money is derived from the optimal balance of benefits and costs on the basis of total cost of ownership. MPA seeks to procure from suppliers who best fit our requirements, with the best value so as to optimise our resources.

STRATEGIC PARTNERSHIPS WITH MARITIME INSTITUTES AND CENTRES OF EXCELLENCE

[SDG 17.17] [GRI 203-1, 404-2]

Our training arm, MPA Academy, recognises the importance of fostering strong partnerships with established maritime institutes, and centres of excellence to build upon each other's strengths. In its 12th year of continuous run, the Academy hosted 15 students from the World Maritime University's Master of Science in Maritime Affairs, with specialisation in port management from 10 countries. The students came here for a field study visit in 2017 to promote the international exchange and transfer of maritime ideas and knowledge. This partnership further strengthened both organisations' work in global maritime leadership development, training and capacity building.

MPA has been providing technical cooperation to developing countries with Japan Coast Guard under the Japan-Singapore Partnership Programme for the 21st Century. The Singapore Cooperation Programme and Japan International Cooperation Agency are the programme's co-sponsors. In 2017, MPA and Japan Coast Guard jointly conducted the 10th Maritime Safety Management course for 24 senior officials from the

Integrating Sustainability into the Supply Chain

[SDG 12.7]

All our business partners, consultants, suppliers and contractors must adhere to appropriate safety measures, and undertake fair employment practices. There are no significant negative environmental and social impact identified in MPA's supply chain.

MPA also constantly looks for ways to be environmentally friendly in our procurement; we no longer purchase disposable cups and stirrers for staff pantries. However, since disposable cups are still required for meeting rooms for visitors, we now use CornWare, not styrofoam, cups.

The paper used for our copiers, and many of our publications and collaterals are certified as having come from environmentally-responsibly managed forests, e.g. Programme for the Endorsement of Forest Certification (PEFC), and Forest Stewardship Council (FSC) certified.

Our office diaries have undated pages so that balance stock can be used for the following year. For 2018, MPA appealed to staff to forgo using diaries if they are not needed. This resulted in a 13% drop in the number of office diaries purchased.

Departments are also reminded to adopt environmentally-friendly practices for events. For example, caterers must provide CornWare utensils, cups and plates.



World Maritime University students on field study visit



Senior Officials participating in 10th Maritime Safety Management Course

maritime administrations of Bangladesh, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Sri Lanka, Timor-Leste and Vietnam at the MPA Academy. The course enhanced the participants' awareness of maritime safety management.

As our alumni community continues to grow, MPA Academy organises gatherings and events to provide our alumni with meaningful, intellectual and networking opportunities. In 2017, MPA held a reception at the Maritime Safety Committee 98th Session at the IMO Headquarters in London during the Republic of Singapore's Candidature to the IMO Council. Her Excellency Foo Chi Hsia, Singapore's High Commissioner to the United Kingdom, hosted the reception. MPA Academy invited our alumni who were attending the meeting to the reception, where they renewed friendships and made new ones.

To extend our outreach to the alumni, the Academy also launched a biannual e-Newsletter called *Horizon* in 2017. *Horizon* highlights and showcases the work of the Academy, and features stories and interviews with our alumni, and maritime personalities.

Aside from our training programmes, MPA Academy regularly organises thought leadership public lectures by prominent maritime industry leaders and academics to create greater awareness of the industry. In 2017, the Academy organised five talks covering a wide range of topics including container terminal operations and planning, port automation, shipping alliances, cybersecurity, connectivity, logistics, e-commerce, and leveraging on technology in the ports.

To enhance awareness and discussion about key issues facing the industry, MPA Academy organised an Insight Series Talk on cyber threats and challenges facing Singapore for the industry and staff, where Mr Tan Tong Hai, Chief Executive Officer of StarHub, shared about the cyber threats and challenges facing Singapore from a telco perspective.



StarHub's Chief Executive Officer Mr Tan Tong Hai speaking at the talk

MPA Academy also invited Lazada's Group Chief Operating Officer, Mr Pierre Poignant, to speak on "The Rapid Rise of e-Commerce and the Opportunities and Challenges for Shipping" at the Academy's Insight Series. He talked about the next phase of e-commerce, and how shipping and e-commerce needed to go hand in hand in this disruptive era.



Lazada's Group Chief Operating Officer, Mr Pierre Poignant, speaking at MPA Academy's Insight Series

In 2014, MPA Academy initiated a scheme to appoint maritime leaders, and experienced maritime professionals as adjunct fellows and trainers to lecture at the Academy's flagship programmes, and to conduct training courses and workshops for MPA staff. In 2017, MPA Academy appointed Mr Tan Puay Hin, Chief Executive of the Singapore Logistics Association, and Mr Ooi Boon Hoe, Chief Executive Officer of Jurong Port, as Senior Adjunct Fellows to the Academy. The Academy also appointed Mr Chua Kee Thiam, Special Advisor of CrimsonLogic Pte Ltd, as an Adjunct Fellow to the MPA Academy. Our fellows bring with them many years of valuable expertise and experience in a wide range of areas like terminal operations and technology in the port.



Mr Tan Puay Hin receiving a token of appreciation after his lecture

Mr Chua conducted his inaugural lecture for MPA staff on "Leveraging on Technology" where he shared his knowledge and experiences on how PSA has leveraged on technology to enhance its container terminal operations. Mr Tan shared his experiences with MPA staff at two lectures, explaining the key considerations in container terminal planning from the perspective of a terminal operator, and the benefits of port automation in Singapore.

FY2017 STAKEHOLDER ENGAGEMENT ACTIVITIES [GRI 102-21, 102-40, 102-42, 102-43, 102-44]

MPA identifies and selects stakeholder groups based on both MPA's impacts on these groups, as well as the impacts that these groups have on MPA.

STAKEHOLDER CATEGORY	STAKEHOLDERS	TOPICS DISCUSSED
Maritime Enterprise	Ship Owners/ Operators/ Agencies, Ship Management Companies	<ul style="list-style-type: none"> Platform for industry to share insights and participate in dialogues on topical maritime issues Develop action plans to move goods through our port in a reliable and efficient manner Work with relevant agencies and organisations to facilitate and foster growth in Singapore's shipping finance sector Share best practices on sustainable and quality shipping with the maritime community Share future trends and developments for ship operations and manpower Cascade information and consult on possible new safety and marine environment regulations and standards that may be developed and come into force
	Maritime service providers	<ul style="list-style-type: none"> Platform for industry to share insights and participate in dialogues on topical maritime issues Work with service providers to develop Maritime Singapore into a premium one-stop centre that offers a comprehensive and sophisticated suite of services Profile and showcase Singapore's international standing in maritime and port technology and R&D
Non-Enterprise	Shipmasters	<ul style="list-style-type: none"> Ensure prompt and reliable vessel traffic information service and navigational aids
	Seafarers	<ul style="list-style-type: none"> Administer welfare schemes and activities and conciliation services for members of the mercantile marine (persons or vessels employed in commerce) Ensure continuity of Singaporean seafarer manpower pipeline and administering and reviewing the manpower schemes to support Maritime Singapore Cascade information and consult on possible new employment regulations and standards that may be developed and come into force
	Pleasure/ Harbour Craft Owners	<ul style="list-style-type: none"> Maintain the quality and standards of SRS Ensure adequate and fair manning conditions on Singapore-registered ships Improve maritime safety through professional and proficient investigations and marine incidents Coordinate marine environmental issues affecting MPA Engage harbour craft industry and discuss issues specific to the industry

PLATFORMS	FREQUENCY
<ul style="list-style-type: none"> • Singapore Maritime Lecture • Safety@Sea Week 2017 • 11th Singapore Maritime Lecture • Maritime Cyber Security Network (MCSN) • Sustainability Workshop • Port State Control Seminar 2017 • MPA-SSA Meetings • SRS Forum <ul style="list-style-type: none"> • Pre-and-Post briefings on main IMO committee meetings (Marine Environment Protection Committee (MEPC) and Maritime Safety Committee (MSC)) • International Conference on Ballast Water Management (ICBWM) • Sea Asia 2017 	Annually Bi-Annually Quarterly
<ul style="list-style-type: none"> • Singapore Maritime Lecture • Safety Working Group Meetings • Launch of TR 56 technical reference for LNG bunkering • IMC 2030 Advisory Committee Meeting • Dialogue Session with Liferrafts Servicing Station (FSC) <ul style="list-style-type: none"> • International Chemical and Oil Pollution Conference and Exhibition • Singapore Maritime Technology Conference & Exhibition 	Annually Quarterly Ad-hoc
<ul style="list-style-type: none"> • Safety briefings to Regional Ferry Masters and Officers 	Semi-Annually
<ul style="list-style-type: none"> • Graduation Ceremony for Certificate of Competency (Special Limit) Officers and Tugmasters • Visits to Special Limit Cadets • International Sportsweek for Seafarers • IMO Day of the Seafarer • Bowling and Futsal Tournaments for Seafarers • Appreciation Dinner for Seafarers and Partners <ul style="list-style-type: none"> • Tripartite Maritime Manpower Taskforce for Seafaring • MPA Seafarer Welfare Committee • MPA Singapore Stranded Seafarers Fund Committee • Maritime Labour Convention Tripartite Working Group 	Annually Bi-Annually Ad-hoc
<ul style="list-style-type: none"> • Safety Briefings to Pleasure Craft Community • Electronic Chart System workshop and training for Harbour & Pleasure craft owners and operator (May 2017) <ul style="list-style-type: none"> • MPA-Harbour Craft Safety Working Group Meeting • Harbour Craft Tea Session 2017 	Annually Semi-annually Quarterly Ad-hoc

[GRI 102-21, 102-40, 102-42, 102-43, 102-44]

STAKEHOLDER CATEGORY	STAKEHOLDERS	TOPICS DISCUSSED
Partner	Port Terminal Operators	<ul style="list-style-type: none"> • Develop and promote Singapore as a global hub port • Maintain a navigationally safe, efficient and environmentally friendly port • Formulate international policies and strategic plans to promote and safeguard Singapore's strategic maritime interests
	Service providers for port services	<ul style="list-style-type: none"> • Ensure efficient management and planning of resources for prompt and efficient services in port
Local Communities	Government agencies	<ul style="list-style-type: none"> • Collaborate with government agencies to share ideas and build long-term relationships
	Institutes of higher learning	<ul style="list-style-type: none"> • Reach out to students on maritime education • Collaborate with IHLs to further maritime R&D initiatives and thought leadership
	Unions and private organisations	<ul style="list-style-type: none"> • Seek input and feedback on MPA's plans and initiatives such as establishing a quality maritime workforce and sustainability issues
	Public	<ul style="list-style-type: none"> • Champion maritime interest and educate the general public about the maritime industry
Business partners/ Vendors	Contractors and suppliers	<ul style="list-style-type: none"> • Ensure the efficient provision of services such as garbage collection, patrol launches, dredging, infrastructure development and soil investigation
Internal	Employees	<ul style="list-style-type: none"> • Enforce environment, health and safety practices in MPA • Facilitate individual and team performance • Ensure high standards of business conduct and ethics • Encourage professional development

PLATFORMS		FREQUENCY
<ul style="list-style-type: none"> Maritime Industry Transformation Series Kick Off Session 	<ul style="list-style-type: none"> Management Lunch Meetings with Port Terminal Operators 	Ongoing Quarterly
<ul style="list-style-type: none"> PSA Pilot Attachment Programme for Vessel Traffic Officers Hydrographic Surveyors' Dialogue 2017 Engagements with Marinas Joint Oil Spill Exercise 2017 Planning Team 	<ul style="list-style-type: none"> Norway-Singapore LNG Bunkering Forum Bunker Forum Bunker Surveying Dialogue Session TR48 Feedback Session for Bunker Surveyors, Craft Operators and Suppliers 	Annually Semi-annually Quarterly Ad-hoc
<ul style="list-style-type: none"> ASEAN Transport Ministers' Meeting Technology Showcase 	<ul style="list-style-type: none"> MOT & MPA Joint Study Trip to Norway and The Netherland 	Ad-hoc
<ul style="list-style-type: none"> Maritime Boundary Delimitation Workshop Maritime Economics Essay Competition 2017 	<ul style="list-style-type: none"> Maritime Youth Club Partnerships Singapore Maritime Dialogue 	Ad-hoc
<ul style="list-style-type: none"> IMO Subcommittee on Navigation, Communications and search and rescue (NCSR) 		Annually
<ul style="list-style-type: none"> Singapore Maritime Trails SMW MPA Learning Journeys Amazing Maritime Challenge 2017 	<ul style="list-style-type: none"> Job Fairs for Harbour Craft Industry SMW 2017 Exhibition 	Annually Semi-annually Ad-hoc
<ul style="list-style-type: none"> Coordination meeting with HDB/JTC's soil disposal team 	<ul style="list-style-type: none"> Interview with Capital 95.8FM on Garbage Disposal and Clean Waters 	Ad-hoc
<ul style="list-style-type: none"> MPA Townhall WoW week Staff Appreciation Day Fun-Fit Friday 	<ul style="list-style-type: none"> Employee Engagement Survey Results Briefing Exhibits on FIRST Champions and Service Stars (Values Week) 	Annually Semi-annually Quarterly Ad-hoc

CHAPTER

09

CHOICE EMPLOYER

MPA
ACADEMY
SINGAPORE

HOLDING STATEMENT
[WITHIN 1 HOUR]
1- WHAT HAPPENED? WHERE WHEN?
STICK TO THE FACTS.
WHAT HAVE YOU DONE?
WHAT YOU PLAN TO DO [next 24H]
WHEN WILL BE RE...
MORE...

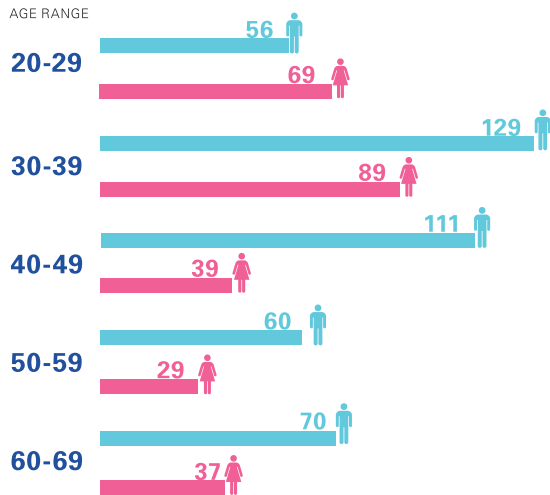
Maritime Singapore is evolving on many fronts. With new technologies, such as Artificial Intelligence, Autonomous Systems and Robotics, coming into play, the maritime industry and ports are changing the way we work. As the industry transforms itself, active steps have also been taken to ensure that MPA continues to be future ready.

OUR PEOPLE [SDG 8.5] [GRI 102-7, 102-8]

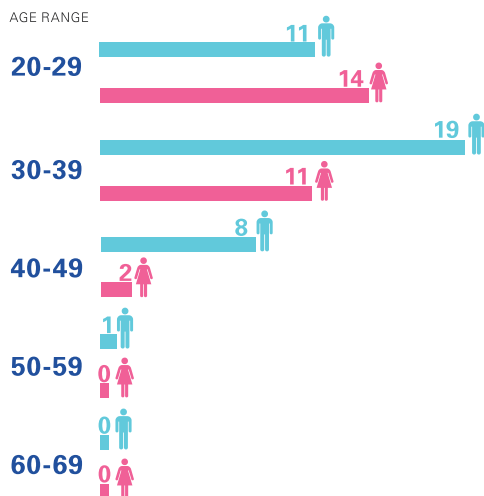
MPA conducts recruitment on a fair, merit-based, and non-discriminatory basis.

2017 EMPLOYEE DEMOGRAPHICS

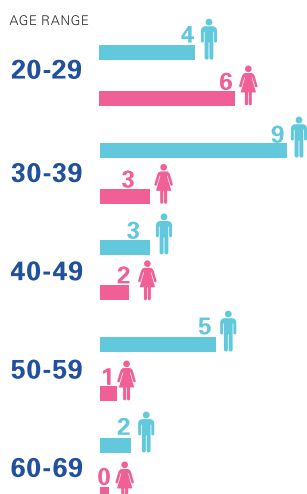
Employee Age Profile [GRI 405-1]



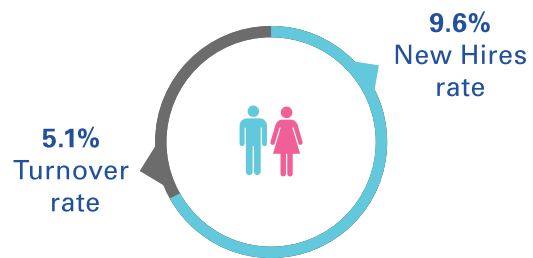
New Hires [GRI 401-1]



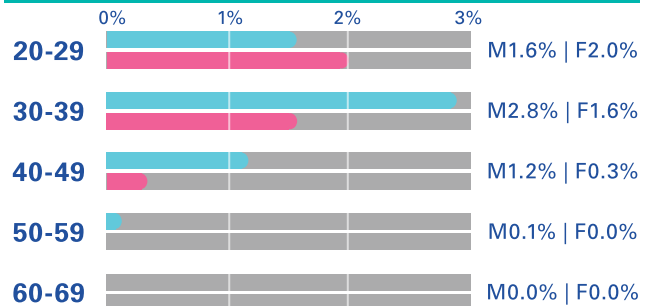
Turnover [GRI 401-1]



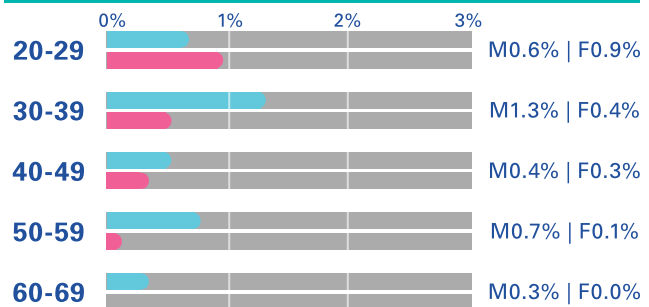
Overall New Hires & Turnover



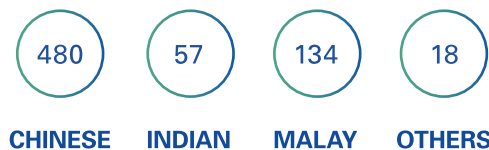
Rate of New Hires by Gender & Age Group [GRI 401-1]



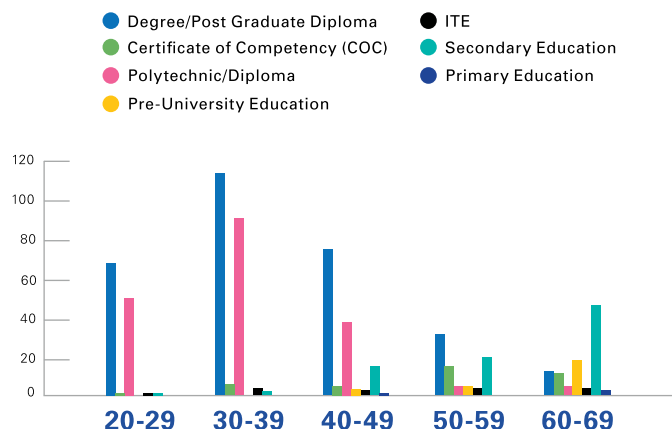
Rate of Employee Turnover by Gender & Age Group [GRI 401-1]



Employee Strength by Ethnicity [GRI 405-1]



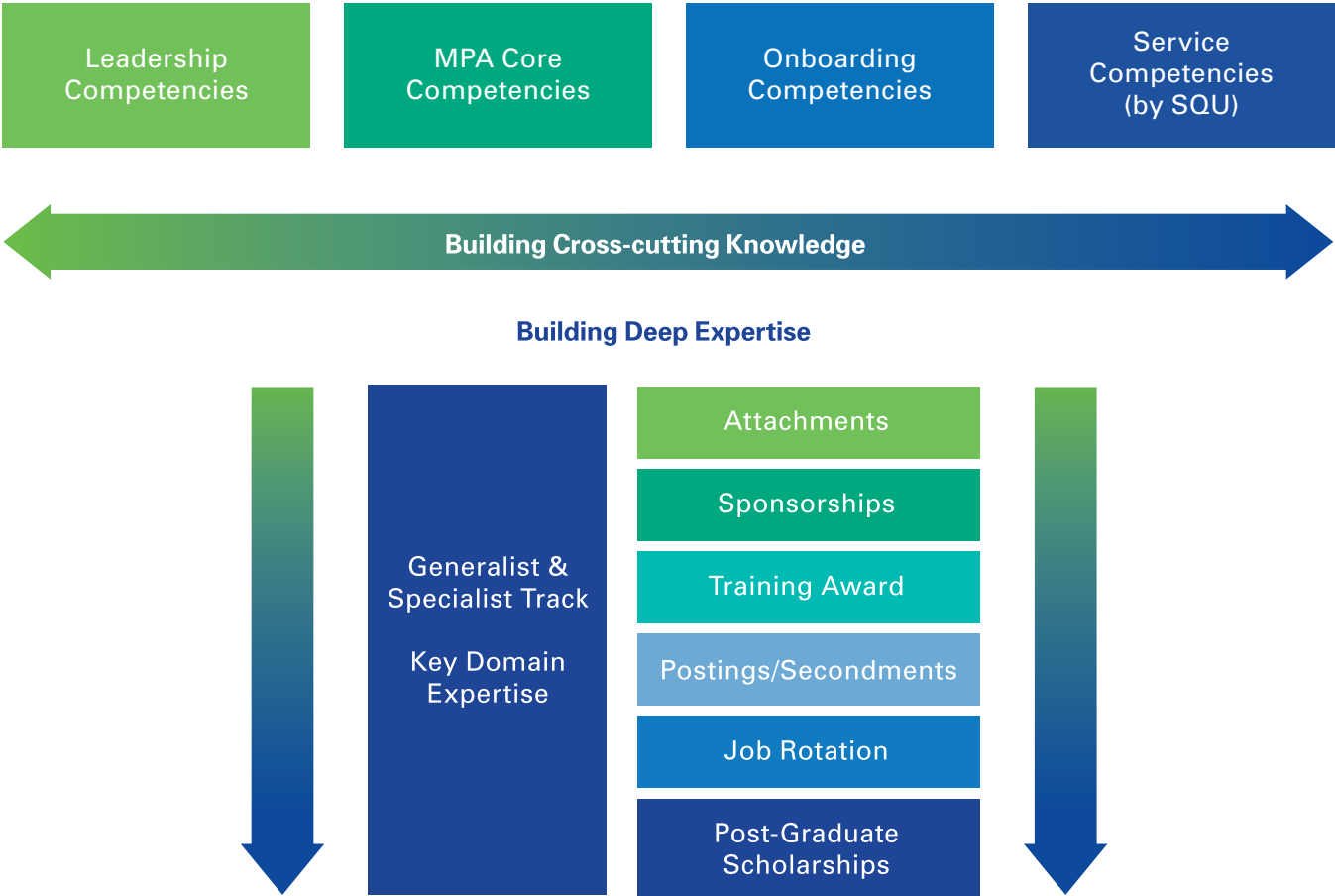
Workforce by Education & by Age group [GRI 405-1]



RIGHT PEOPLE
[GRI 404-2, 404-3]

As Maritime Singapore is evolving on many fronts, our people need to remain relevant and resilient to stay ahead in this ever-changing landscape. MPA’s Learning and Development Framework focuses on building both cross-cutting capabilities that can be applied

across various functions as well as specialised areas of expertise. By exposing our staff to a wide spectrum of learning and development opportunities, we are building a strong learning culture to encourage our people to keep developing themselves professionally.



Building Cross-cutting Knowledge

Our **leadership programmes** cater to every leadership level. In 2017, we focused on creating personal awareness, understanding team dynamics, and finding ways to engage a millennial workforce in light of the changing demands of our workforce.

The **360 Feedback Exercise** was introduced to provide feedback from multiple sources to our Senior Management and their deputies so that they can better understand their leadership styles. Professional executive coaches also coached our leaders one-on-one to help them reflect upon, and improve their leadership styles.

Another programme launched in 2017 was the **Managers Programme**, which caters to middle managers. It enables them to gain in-depth management skills such as leading change, resilience, and developmental coaching.

In addition to these new programmes, our existing development programmes were refined to ensure they remain relevant and address the needs of our people. For example, the Supervisors Programme is targeted at first-time supervisors. Based on feedback from previous participants, subsequent runs were enhanced to better meet learning objectives, and focus on two key learning outcomes:

- Practise conducting conversations that facilitate two-way feedback, and
- Managing conflicts.

MPA Core Competency Programmes are also conducted to address the training gaps staff had identified during the year-end appraisals.

Online learning platform and application **Lynda.com** was introduced in 2017 to support anytime, anywhere learning. This initiative was introduced to cater to a significant portion of our staff. One-third of our workforce are in either shift or field work, and less able to attend classroom-based training courses. Lynda.com also caters to the on-demand learning preferences of the new generation. So far, 200 or 30% of our staff are on this pilot platform, and have access to its massive library of courses in business, innovation, creativity, and other fields of mastery.



Building Deep Expertise

Recognising that our people are our primary asset, we continue to build on our areas of key domain knowledge. The **Training Award**, introduced in 2017, is a special full sponsorship programme for employees to acquire formal qualifications or competencies of immediate and critical importance to MPA, such as maritime cyber security, and data analytics. Acquiring different competencies allows opportunities for internal career mobility, and talent retention within MPA.

Beyond formal learning platforms, our staff can choose from an extensive range of developmental opportunities, including overseas trips, job rotations, industry attachments, stints on cross-functional project teams, and secondments to other government agencies.

Personal Career Development Planning

We encourage staff to take ownership of their personal career growth, and nurture their development by providing the framework for them to achieve their aspirations. The career development plan was introduced in 2017 to facilitate career conversations between staff and their supervisors. This plan allows staff to document their career goals, strengths, and development actions for ongoing reference and discussions with their supervisors. They are encouraged to reflect upon their current competencies as well as the areas of development which they would like to grow or deepen their knowledge in. To enable constructive career discussions, supervisors are also provided Career Conversations and Crucial Conversations training to help others realise their interests and aspirations in MPA.

In-house Training and Documentation of Institutional Knowledge

MPA Academy, our training arm, plays a key role in coordinating and driving our staff's technical training to enhance their competencies and be better equipped to perform their jobs. In 2017, MPA Academy conducted technical courses for our marine surveyors, vessel traffic officers and supervisors, port inspectors, marine officers, port chemists, engineers, and hydrographers.

In 2017, new courses were also organised, including:

- IMO Model Course 6.09 for officers from the MPA Shipping Division,
- Workshop on the Implementation of the IMO Member State Audit Scheme (IMSAS) for MPA Operations staff, and
- A course on Public Sector Standard Conditions of Contract Claims Management Essentials for Construction Works, which was necessary for MPA's upcoming construction projects.

The academy also organised the Cyber Security Awareness Course for all MPA staff to raise the awareness of info communications security, and the adoption of appropriate cyber security measures.

To document institutional knowledge, the Academy has started conducting oral history interviews with key maritime pioneers and personalities to capture and archive their invaluable experiences in building Maritime Singapore. In 2017, we completed three oral history interviews of key maritime personalities, whose insights provide an intimate account of maritime milestones and events.

In addition, the Academy has been working with MPA's line divisions to write case studies on major incidents and projects. The two case studies completed in 2017 were on the *Evoikos* incident in 1997, which was the largest oil spill in Singapore's history, and the Pasir Panjang Terminal Phases 3 & 4 Reclamation Works.



ENGAGED PEOPLE [GRI 102-43, 102-44]

Guided by our engagement framework of **WeShare**, **WeChat**, **WeCelebrate**, **WeAppreciate**, MPA continues to actively engage our workforce through a suite of events.

WeShare

To communicate and update employees on MPA's key HR initiatives for the year, an annual MPA Townhall is held in July to engage employees in a frank and open discussion, check on our progress as well as celebrate our

achievements. *HR Connects*, our electronic newsletter, was also introduced to keep our employees updated on the key initiatives of various divisions.



Q&A Session with Senior Management at MPA Townhall 2017



Revving up for MPA Workplace Launch 2017

In 2017, the Workplace mobile application was launched in MPA. This interactive and collaborative platform encourages casual social updates from all MPA staff, and aims to create an online buzz of the latest updates within MPA – thus building a closer MPA community.

WeChat

To foster a culture of open communication, MPA encourages employees to raise ground issues, and propose ways of resolving these issues to MPA leaders. Regular dialogues are held between our leaders and our employees across all levels. These sessions provide a platform for our top management to share successes and useful insights, and to hear the real problems experienced by our staff.

In addition to the quarterly field trips, the MPA Service Day was initiated in 2017 to allow Senior Management to be attached to officers in their daily work environment. These trips provide ground staff with opportunities to meet our leaders as well as receive recognition from senior management for their efforts. These also allow our leaders to understand the daily operations in MPA so as to spot issues and address challenges.



MPA's Senior Management team being briefed on the checks which our Port Inspectors conduct



MPA's Chief Executive getting first-hand experience on the equipment used by our Port Chemists



MPA's Chief Executive chatting with staff over breakfast

WeCelebrate

Social events and activities are organised regularly, in collaboration with the Staff Engagement Committee, to encourage staff bonding between departments, and across the whole organisation.

Festive Celebrations during Chinese New Year, Hari Raya Puasa, Deepavali, and New Year are organised to foster an appreciation of the cultural diversity of our multiracial workforce, and to build closer bonds within the MPA family.



As the year draws to a close, MPA comes together as one to mark a year of achievements, and take some time off to wind down over lunch during the Annual Year End Celebration.



Thumbs up at Year-End Celebration 2017

Driving an Active Lifestyle

To encourage our people to have an active lifestyle, Fun-Fit Fridays are organised for staff to enjoy an afternoon of fun and exercise.



Happy faces at Bounce on Fun-Fit Friday



Punching it up at Piloxing at Fun-Fit Friday

In addition, our staff-led Interest Groups cover a wide spectrum of activities, such as Baking, Bowling, Photography, Running, and Yoga. About 66% of MPA staff are involved in these activities.

Work-Life Harmony Framework

MPA looks after the physical, emotional, and social well-being of our employees. Every year, MPA celebrates the Well-On-Work Life Week (WoW) to highlight the importance of work-life harmony. Staff are encouraged to go for a complimentary on-site health screening, amidst

other fun-filled activities planned out for them, such as movie screenings, charity flea markets, lunch-time outings as well as the Juniors@Work programme where staff can bring their children to MPA for a day of activities, and to tour the office.



Charity Flea Market during WoW Week 2017, proceeds go to MPA-adopted charities



Kids get in on the fun at Juniors@Work.

MPA Dinner & Dance

The MPA Dinner & Dance is held at the end of each year to allow staff to mingle and celebrate a year of hard work. Awards, such as the Long Service Awards and the

National Day Award Medals, are presented at the event to staff to celebrate their service and commitment to MPA.



Staff having a ball at Dinner & Dance 2017

WeAppreciate

Staff are recognised for their efforts and contributions at both formal and informal events. At the quarterly Appreciation Hour, staff are recognised, both individually and as groups, for demonstrating exemplary values or work contributions on various platforms. MPA Chief Executive, Mr Andrew Tan, hands out the awards personally to recognise staff for jobs well done. Individuals who

Senior Management also recognise and show their appreciation for our staff's dedication and contribution at the half-yearly Staff Appreciation Day. On this day, Senior Management walk the ground, and visit every workstation to present individual tokens of appreciation to staff.



have demonstrated MPA's Forward Thinking, Integrity, Respect, Service Excellence and Teamwork (FIRST) values in their work are presented with a FIRST values awards. Individuals who have demonstrated that they are ready to take on higher responsibilities receive their promotions at the Promotion Ceremony.



Staff and their tokens of appreciation from the Senior Management Team on Appreciation Day

COMMITMENT TO CHARITY EFFORTS

Adoption of Two Charities

As part of Corporate Social Responsibility, MPA has adopted The Salvation Army Prison Support Services – Kids In Play Programme (KIP), and REACH Community Services Society – Family Services Centre for two years from 1 January 2017 to 31 December 2018.

Children's Day Goodie Bag Distribution for REACH Community Services Society

A first-ever charity event held on Children's Day with our adopted charity – REACH Community Services Society. For this event, our staff could either sponsor, pack or

MPA has a CARE Team that champions initiatives to promote staff volunteerism and fund-raising in support of our adopted charities. The key events include:

distribute the goodie bags for the children. They gave their wholehearted support to this event, making it a resounding success.



MPA staff volunteers for Goodie Bag Distribution



MPA's Chief Executive with Volunteers at REACH Community Services Society

MPA Family Day 2017

Our adopted beneficiaries – KIP and REACH Community Services Society – Family Services Centre joined in the fun at MPA's annual Family Day 2017 at the Singapore Zoo. At this event, a cheque was presented to Mr Ho

Siew-Cheong, Chief Executive for REACH Community Services Society, and Mr Marcus Moo, Director of Social and Community Services, The Salvation Army.



MPA's Chief Executive presenting the cheque to MPA's adopted beneficiaries

The Salvation Army Christmas Kettling

For the first time, MPA participated in the Christmas Kettling organised by The Salvation Army in Singapore. Our staff contributed their time to garner donations for

the Christmas Kettle at Far East Plaza, and help the underprivileged.

MOT Family Charity Outreach 2017

The Ministry of Transport (MOT) and its statutory boards, the Civil Aviation Authority of Singapore (CAAS), Land Transport Authority (LTA), MPA, and Public Transport Council (PTC) raised \$1 million for Community Chest through the MOT Family Charity Outreach programme this year.

The Outreach has been held annually since 2010, and has benefited from the strong commitment and contributions

of everyone in the MOT Family. Through the programme, the MOT Family has contributed a total of more than \$6 million to Community Chest.

2017's event was organised by CAAS, and children from Metta School and APSN Katong School went for a fun-filled and educational tour of SIA Training Centre.



MOT Family doing our part for charity

ComChest Special Event Gold Award

The ComChest Corporate Gold Awards are presented to organisations that have made significant outright donations to Community Chest.

MPA received the Corporate Gold Award for our donations to Community Chest. The range for donation for Corporate Gold Award is \$100,000-\$299,999.



Ms Cindy Sim, Deputy Director (Finance), received the award on MPA's behalf.

LABOUR-MANAGEMENT RELATIONS

[102-41, 407-1]

MPA continues to foster a strong and collaborative labour-management relationship with our strategic partners, the Amalgamated Union of Statutory Board Employee (AUSBE), and the MPA branch of AUSBE. Through a series of detailed discussions with AUSBE, MPA kickstarted the review of the Collective Agreement in 2017 to ensure that the appointment terms and benefits offered to our people continue to be relevant, thereby enabling us to build a dedicated workforce.

To encourage employees to sign up for union membership, MPA offers a 50% subsidy of all union membership fees. Every quarter, the AUSBE representatives are also invited to share with new hires on how the union can offer assistance in the course of their career with MPA. As at December 2017, 58% of MPA's workforce are AUSBE members.



All Smiles at Union-Management Lunch

GLOSSARY

TERM & ABBREVIATION

DEFINITION

Amalgamated Union of Statutory Board Employees (AUSBE)

The AUSBE looks after the interest of employees across 12 statutory boards, including MPA.

Classification Society

An organisation that publishes its own classification rules in the design, construction and survey of ships.

Global Compact Network Singapore (GCNS)

The local chapter of the United Nations Global Compact (UNGC) promoting the Corporate Social Responsibility (CSR) movement.

Global Internship Award

The MPA Global Internship Award (GIA) is a fully sponsored internship programme that gives students an opportunity to intern with international maritime companies in Singapore and around the world.

Global Reporting Initiative (GRI)

The GRI is a non-profit organisation that promotes the use of sustainability reporting in organisation to achieve sustainable development and operations.

Greenhouse Gas (GHG)

Greenhouse gases are gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.

Gross Tonnage (GT)

This is a non-linear measure of a ship's overall internal volume.

Information Sharing Centre (ISC)

The ISC is the executive unit of ReCAAP based in Singapore.

Integrated Reporting <IR>

A concise corporate report outlining how a company organised itself to create economic value over time.

International Integrated Reporting Council (IIRC)

A coalition of government, business and accounting professionals to develop a globally-accepted Integrated Reporting framework.

International Maritime Centre (IMC)

A global maritime hub that provides comprehensive and high quality maritime services and support.

International Maritime Organization (IMO)

A specialised United Nations agency that sets the global regulatory standard for the safety, security and environmental performance of international shipping.

Jurong Port (JP)

A Singapore port operator owned by Jurong Town Corporation.

Littoral States

Coastal states with land territory adjacent to a particular maritime area.

Marinet

Marinet is an Internet-based e-commerce system owned by the Maritime and Port Authority of Singapore for the maritime community.

Maritime Cluster Fund (MCF)

A fund created by MPA to facilitate the growth of Singapore's maritime industry in the key areas of business development, manpower development and productivity improvement.

Maritime Outreach Network (MaritimeONE)

A manpower initiative by Maritime stakeholders to raise awareness on the industry and the scholarship and career opportunities available to students.

Maritime Singapore Green Initiative (MSGI)

A voluntary initiative started by MPA in 2011 to promote clean and sustainable shipping in Singapore.

TERM & ABBREVIATION**DEFINITION****MARPOL Convention**

The International Convention for the Prevention of Pollution from Ships is the main IMO legal instrument to prevent pollution of the marine environment from accidents or operational incidents.

Mass Flow Meter (MFM)

A device that measures the flow rate through a tube by mass per unit time.

Natural Gas (LNG)

A natural gas that has been converted to liquid form for ease of storage or transport.

Next Generation Port (NGP)

A new energy efficient and sustainable port that will be developed in Tuas by 2030.

Non-Governmental Organisation (NGO)

An organisation that does not belong to the government and does not operate like a conventional for-profit business.

Port of Singapore

The collective facilities and terminals that conduct maritime trade and handle shipping in Singapore.

Port State Control (PSC)

The inspection of foreign ships by a national port to verify that the competency of the personnel, and the condition of the ship and its equipment comply with international conventions, and that the vessel is manned and operated in compliance with applicable international maritime law.

Pro-Enterprise Ranking (PER)

An annual survey commissioned by the Pro-Enterprise Panel (PEP) to assess the pro-enterprise performance of government regulatory agencies in Singapore.

Regional Co-Operation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP)

A regional government-to-government agreement that came into effect in 2006 with the purpose of promoting and enhancing cooperation against piracy and armed robbery against ships in Asia.

Safety@Sea Singapore

Safety@Sea Singapore is an industry-wide effort to increase awareness of safe practices and inculcate a safety-first culture at sea.

Shipbroking

Shipbroking is a financial service which forms part of the global shipping industry.

Singapore Maritime Institute (SMI)

A joint effort by Maritime Port Authority, the Agency for Science, Technology and Research (A*STAR) and the Economic Development Board (EDB) in partnership with local Institutes of Higher Learning (IHLs) to develop strategies/programmes related to the academic, policy and R&D aspects of the maritime industry.

Singapore Registry of Ships (SRS)

The Singapore ship registry ranked among the top five largest registries in the world.

Singapore Shipping Association (SSA)

A Singapore maritime association that strives to enhance the competitiveness of Singapore as an international maritime centre.

Stevedore

A person employed at a dock to load and unload ships.

Throughput

The amount of material or items passing through a system of process.

Twenty-foot Equivalent Unit (TEU)

A standard unit for describing a ship's cargo carrying capacity or a shipping terminal's cargo handling capacity.

Vessel Traffic Management System (VTMS)

VTMS integrates all the assets relevant to a safe and secure management of Maritime Operations ranging from marine environment protection, traffic management to law enforcement and security at sea.

OUR APPROACH TO INTEGRATED REPORTING

In this fourth edition of MPA's Integrated Report <IR>, we have stayed the course on our IR journey. Our IR journey has enabled MPA to better understand, and refine our value creation process, thus generating greater value creation.

Being the final edition in a four-part series of Sustainability/Integrated Reports, conceptualised with the inaugural edition in 2014, this report illustrates the significant progress that MPA has made in our sustainability journey. Many initiatives, developed through the years, have brought tangible benefits towards the sustained relevance and competitiveness of the maritime industry. In keeping with this spirit of sustainability, MPA continues to launch new initiatives to drive the next phase of growth for the industry amidst continuing disruption and change.

The report has successfully completed the Materiality Disclosure Service. The content elements of the IR framework are articulated in the table below:

CONTENT ELEMENTS	WHERE IN MPA'S REPORT
A. Organisational Overview and External Environment	Chairman's Message Chief Executive's Message About MPA 2017 Performance Summary
B. Governance	Chapter 7 Culture of Excellence – Corporate Governance
C. Business Model	MPA's Approach to Sustainability Mapping Key Material Issues
D. Risks and Opportunities	Mapping Key Material Issues Chapter 7 Culture of Excellence – Corporate Governance
E. Strategy and Resource Allocation	Chief Executive's Message MPA's Approach to Sustainability Mapping Key Material Issues
F. Performance	2017 Performance Summary FY2017 Financial Report (published separately)
G. Outlook	Chairman's Message Chief Executive's Message
H. Basis of Preparation and Presentation	About this Report Mapping Key Material Issues Statutory Board Financial Reporting Standards (FY2017 Financial Statements)

Thank you for your continued support on our sustainability journey. We look forward to receiving feedback on any areas that would be better able to serve your needs.

GRI STANDARDS CONTENT INDEX



FOUNDATION

GRI 101: Foundation 2016

MPA has applied the GRI's Reporting Principles for defining report content and quality in preparing its sustainability report in accordance with the GRI Standards: Comprehensive option.

GENERAL DISCLOSURES

Disclosure	Reference(s) or Reasons for Omission
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GRI 102: General Disclosures 2016

Organisational Profile

102-1	Name of the organisation	About MPA (Pg 12)
102-2	Activities, brands, products, and services	About MPA (Pg 12)
102-3	Location of headquarters	About MPA (Pg 12)
102-4	Location of operations	About MPA (Pg 12)
102-5	Ownership and legal form	About MPA (Pg 12)
102-6	Markets served	About MPA (Pg 12)
102-7	Scale of the organisation	About MPA (Pg 12) Choice Employer > Our People (Pg 89) MPA's Financial Report 2017
102-8	Information on employee and other workers	Choice Employer > Our People (Pg 89)
102-9	Supply chain	Strong Partnerships > Supplier Management (Pg 82)
102-10	Significant changes to the organisation and its supply chain	There were no significant organisational changes during the reporting period.
102-11	Precautionary principle and approach	Mapping Key Material Issues (Pg 16) Culture of Excellence > Corporate Governance (Pg 72-73)
102-12	External initiatives	Safe, Efficient & Sustainable Global Hub Port (Pg 20-31) Safeguard Strategic Maritime Interests & An Influential Voice (Pg 38-43)
102-13	Membership of associations	Safe, Efficient & Sustainable Global Hub Port (Pg 20-31) Safeguard Strategic Maritime Interests & An Influential Voice (Pg 38-43)

Strategy

102-14	Statement from senior decision-maker	Chairman's Message (Pg 2-3) Chief Executive's Message (Pg 4-5)
102-15	Key impacts, risks, and opportunities	Chairman's Message (Pg 2-3) Chief Executive's Message (Pg 4-5) Mapping Key Material Issues (Pg 16-17) Safe, Efficient & Sustainable Global Hub Port (Pg 20-31) Vibrant IMC Eco-system (Pg 32-37)

GENERAL DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
Ethics and Integrity		
102-16	Values, principles, standards, and norms of behavior	Culture of Excellence > FIRST Values (Pg 68-69)
102-17	Mechanisms for advice and concerns about ethics	Culture of Excellence > FIRST Values (Pg 69)
Governance		
102-18	Governance structure	Board of Directors/Board Committees (Pg 6-7) Senior Management (Pg 8-9) MPA's Organisation Structure (Pg 10-11) Culture of Excellence > Corporate Governance (Pg 71)
102-19	Delegating authority	Culture of Excellence > Corporate Governance (Pg 71)
102-20	Executive-level responsibility for economic, environmental, and social topics	Senior Management (Pg 8-9) MPA's Organisation Structure (Pg 10-11) Culture of Excellence > Corporate Governance (Pg 71)
102-21	Consulting stakeholders on economic, environmental, and social topics	Strong Partnerships > Stakeholder Engagement Activities (Pg 84-87)
102-22	Composition of the highest governance body and its committees	Board of Directors/Board Committees (Pg 6-7) Culture of Excellence > Corporate Governance (Pg 71)
102-23	Chair of the highest governance body	Board of Directors/Board Committees (Pg 6-7) The Chairman of the MPA Board, the highest governance body, is a non-executive officer for MPA.
102-24	Nominating and selecting the highest governance body	Culture of Excellence > Corporate Governance (Pg 71)
102-25	Conflicts of interest	Culture of Excellence > FIRST Values (Pg 69)
102-26	Role of highest governance body in setting purpose, values, and strategy	Culture of Excellence > Corporate Governance (Pg 71)
102-27	Collective knowledge of highest governance body	Sustainability issues have been discussed at the Board level during the reporting period, raising awareness towards economic, environmental and social issues.
102-28	Evaluating the highest governance body's performance	Information unavailable – MPA does not currently measure this.
102-29	Identifying and managing economic, environmental, and social impacts	Mapping Key Material Issues (Pg 16-17) Culture of Excellence > Corporate Governance (Pg 71)
102-30	Effectiveness of risk management processes	Culture of Excellence > Corporate Governance (Pg 71)
102-31	Review of economic, environmental, and social topics	Mapping Key Material Issues (Pg 16-17) Culture of Excellence > Corporate Governance (Pg 71)
102-32	Highest governance body's role in sustainability reporting	Mapping Key Material Issues (Pg 16-17) Culture of Excellence > Corporate Governance (Pg 71)
102-33	Communicating critical concerns	Culture of Excellence > Corporate Governance (Pg 71)
102-34	Nature and total number of critical concerns	Culture of Excellence > Zero Tolerance for Corruption (Pg 69)
102-35	Remuneration policies	Culture of Excellence > Corporate Governance (Pg 72)
102-36	Process for determining remuneration	Culture of Excellence > Corporate Governance (Pg 72)

GENERAL DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
Governance		
102-37	Stakeholders' involvement in remuneration	Culture of Excellence > Corporate Governance (Pg 72)
102-38	Annual total compensation ratio	Culture of Excellence > Corporate Governance (Pg 72)
102-39	Percentage increase in annual total compensation ratio	Culture of Excellence > Corporate Governance (Pg 72)
Stakeholder Engagement		
102-40	List of stakeholder groups	Strong Partnerships > Stakeholder Engagement Activities (Pg 84-87)
102-41	Collective bargaining agreements	Choice Employer > Labour-Management Relations (Pg 99)
102-42	Identifying and selecting stakeholders	<p>Stakeholders are entities or individuals that can reasonably be expected to be significantly affected by MPA's activities, or whose actions can reasonably be expected to affect the ability of MPA to successfully implement its strategies and achieve its objectives. In determining key stakeholders, MPA considers their interest in sustainability, potential influence, as well as the extent to which MPA can impact them.</p> <p>Strong Partnerships > Stakeholder Engagement Activities (Pg 84-87)</p>
102-43	Approach to stakeholder engagement	Strong Partnerships > Stakeholder Engagement Activities (Pg 84-87)
102-44	Key topics and concerns raised	Strong Partnerships > Stakeholder Engagement Activities (Pg 84-87)
Reporting Practice		
102-45	Entities included in the consolidated financial statements	<p>All entities included in MPA's consolidated financial statements are covered by this report.</p> <p>MPA's Financial Report 2017 > Notes to the Financial Statements (Investments in subsidiary and associated companies)</p>
102-46	Defining report content and topic boundaries	Mapping Key Material Issues (Pg 16-17)
102-47	List of material topics	Mapping Key Material Issues (Pg 16-17)
102-48	Restatements of information	There have been no restatements from MPA's previous reports.
102-49	Changes in reporting	There have been no changes to the material issues and topic boundaries from MPA's previous report.
102-50	Reporting period	About this Report > Inside Front Cover
102-51	Date of most recent report (if any)	About this Report > Inside Front Cover
102-52	Reporting cycle	About this Report > Inside Front Cover
102-53	Contact point for questions regarding the report	About this Report > Inside Front Cover
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Comprehensive option
102-55	GRI content index	GRI Standards Content Index (Pg 103 – 117)
102-56	External assurance	About this Report > Inside Front Cover

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
Economic Performance		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 201: Economic Performance 2016		
201-1	Direct economic value generated and distributed	MPA's Financial Report 2017
201-2	Financial implications and other risks and opportunities due to climate change	Information unavailable – MPA has not formally assessed the financial implications of climate change to the organisation.
201-3	Defined benefit plan obligations and other retirement plans	Not applicable – benefit plan financial obligations are not relevant in the local context.
201-4	Financial assistance received from government	This disclosure has been omitted as it is not applicable.
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 202: Market Presence 2016		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Not applicable – the Ministry of Manpower (MOM) does not prescribe minimum wages for all workers in Singapore, whether local or foreign.
202-2	Proportion of senior management hired from the local community	All of our Senior Management are hired locally from Singapore. Senior Management (Pg 8-9)
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 203: Indirect Economic Impact 2016		
203-1	Infrastructure investments and services supported	2017 Performance Summary (Pg 13) Safe, Efficient & Sustainable Global Hub Port (Pg 20-31) Vibrant IMC Eco-system (Pg 32-37) Maritime Knowledge & Innovation Hub (Pg 44-49) Strong Partnerships > Strategic Partnerships with Maritime Institutes and Centres of Excellence (Pg 82-83)
203-2	Significant indirect economic impacts	2017 Performance Summary (Pg 13) Safe, Efficient & Sustainable Global Hub Port (Pg 20-31) Vibrant IMC Eco-system (Pg 32-37) Maritime Knowledge & Innovation Hub (Pg 44-49) Quality Maritime Workforce (Pg 50-53)
Procurement Practices		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 204: Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	Information unavailable – MPA does not currently measure this.
Anti-Corruption		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 205: Anti-Corruption 2016		
205-1	Operations assessed for risks related to corruption	Culture of Excellence > FIRST Values (Pg 69)
205-2	Communication and training about anti-corruption policies and procedures	Culture of Excellence > FIRST Values (Pg 69)
205-3	Confirmed incidents of corruption and actions taken	Culture of Excellence > FIRST Values (Pg 69)
Anti-Competitive Behaviour		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 103: Management Approach 2016		
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 206: Anti-Competitive Behaviour 2016		
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Not applicable – MPA is a Statutory Board.

Materials

GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 301: Materials 2016		
301-1	Materials used by weight or volume	The key materials used in MPA are office materials such as copier papers, toners and other stationery. Culture of Excellence > Environmental Sustainability (Pg 65)
301-2	Recycled input materials used	Information unavailable – MPA does not currently measure this.
301-3	Reclaimed products and their packaging materials	Not applicable – MPA does not sell products.

Energy

GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 302: Energy 2016		
302-1	Energy consumption within the organisation	2017 Performance Summary (Pg 15) Culture of Excellence > Environmental Sustainability (Pg 64-65)
302-2	Energy consumption outside of the organisation	Information unavailable – while MPA does not currently measure this, MPA has reported on its responsibilities and initiatives in managing the industry's energy consumption impacts. Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 29-31)
302-3	Energy intensity	Culture of Excellence > Environmental Sustainability (Pg 64)

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 302: Energy 2016		
302-4	Reduction of energy consumption	Culture of Excellence > Environmental Sustainability (Pg 64-65) Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 29-31)
302-5	Reductions in energy requirements of products and services	Not applicable – MPA does not sell products.
Water		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 303: Water 2016		
303-1	Water withdrawal by source	2017 Performance Summary (Pg 15) Culture of Excellence > Environmental Sustainability (Pg 65)
303-2	Water sources significantly affected by withdrawal of water	Not applicable within MPA's organisational boundary – there are no significant withdrawals of water. MPA's water use is only for its office and is sourced from the Public Utilities Board.
303-3	Water recycled and reused	Not applicable within MPA's organisational boundary – MPA does not recycle or reuse wastewater generated by its office.
Biodiversity		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
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	Not applicable within MPA's organisational boundary – while MPA's office is not in a protected area or area of high biodiversity value outside a protected area, MPA has reported on its responsibilities and initiatives in managing the industry's biodiversity impacts. Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 31)
304-2	Significant impacts of activities, products, and services on biodiversity	
304-3	Habitats protected or restored	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Not applicable within MPA's organisational boundary – MPA's operations do not affect any IUCN Red List species or national conservation list species.
Emissions		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 103: Management Approach 2016		
103-2	The management approach and its components	Mapping Key Material Issues > MPA’s Approach to Sustainability (Pg 16) MPA’s Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA’s Business Model – Future-Ready Framework (Pg 18-19)
GRI 305: Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Not applicable within MPA’s organisational boundary – MPA’s main source of GHG emissions mainly relates to electricity consumed in its office. In addition, MPA has reported on its responsibilities and initiatives in managing the industry’s GHG emissions impacts. Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 29-31)
305-2	Energy indirect (Scope 2) GHG emissions	2017 Performance Summary (Pg 15) Culture of Excellence > Environmental Sustainability (Pg 64)
305-3	Other indirect (Scope 3) GHG emissions	Information unavailable – MPA has not been able to accurately measure Scope 3 emissions.
305-4	GHG emissions intensity	Culture of Excellence > Environmental Sustainability (Pg 64)
305-5	Reduction of GHG emissions	Culture of Excellence > Environmental Sustainability (Pg 64-65)
305-6	Emissions of ozone-depleting substances (ODS)	Not applicable within MPA’s organisational boundary – while MPA is not a significant emitter of ODS, NOX, SOX or other significant air emissions, MPA has reported on its responsibilities and initiatives in managing the industry’s air emissions impacts. Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 29-31)
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	
Effluents and Waste		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA’s Approach to Sustainability (Pg 16) MPA’s Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA’s Business Model – Future-Ready Framework (Pg 18-19)
GRI 306: Effluents and Waste 2016		
306-1	Water discharge by quality and destination	Not applicable within MPA’s organisational boundary – MPA does not discharge water (excluding office sewage).
306-2	Waste by type and disposal method	Culture of Excellence > Environmental Sustainability (Pg 65)
306-3	Significant spills	Not applicable within MPA’s organisational boundary – while MPA’s operations do not have spills, MPA has reported on its responsibilities and initiatives in managing the industry’s impacts. Safe, Efficient & Sustainable Global Hub Port > Sustainability (Pg 28-29)
306-4	Transport of hazardous waste	Not applicable within MPA’s organisational boundary – MPA does not generate hazardous waste.

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 306: Effluents and Waste 2016		
306-5	Water bodies affected by water discharges and/or runoff	Not applicable within MPA's organisational boundary – MPA does not discharge water (excluding office sewage).
Environmental Compliance		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 307: Environmental Compliance 2016		
307-1	Non-compliance with environmental laws and regulations	MPA has not received any significant fines or non-monetary sanctions for non-compliance during the reporting period.
Supplier Environmental Assessment		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 308: Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	Strong Partnerships > Supplier Management (Pg 82)
308-2	Negative environmental impacts in the supply chain and actions taken	Strong Partnerships > Supplier Management (Pg 82)
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 401: Employment Practices 2016		
401-1	New employee hires and employee turnover	2017 Performance Summary (Pg 14) Choice Employer > Our People (Pg 89)
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Not applicable – MPA provides the same benefits to part-time workers and full-time workers.

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 401: Employment Practices 2016		

401-3	Parental leave	<p>All employees are entitled to parental leave.</p> <p><u>Female employees</u> 15 female employees went on maternity leave, of which all returned to work during the year.</p> <p><u>Male employees</u> 18 male employees went on paternity leave, of which all returned to work during the year.</p>
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Labour Management Relations

GRI 103: Management Approach 2016		
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103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	<p>Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16)</p> <p>MPA's Business Model – Future-Ready Framework (Pg 18-19)</p>
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

GRI 402: Labour Management Relations 2016

402-1	Minimum notice periods regarding operational changes	When operational changes occur, MPA gives employees as much notice as possible
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Occupational Health and Safety

GRI 103: Management Approach 2016		
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103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	<p>Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16)</p> <p>MPA's Business Model – Future-Ready Framework (Pg 18-19)</p>
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

GRI 403: Occupational Health and Safety 2016

403-1	Workers representation in formal joint management-worker health and safety committees	All of MPA's employees are represented by MPA's Workplace Safety and Health programmes.
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	2017 Performance Summary (Pg 14)
403-3	Workers with high incidence or high risk of diseases related to their occupation	MPA's workers are not involved in occupational activities who with a high incidence or high risk of specific diseases.
403-4	Health and safety topics covered in formal agreements with trade unions	To better ensure the workplace safety and health of its employees, MPA re-constituted the Workplace Safety and Health Committee in 2014. The Committee is chaired by MPA's Director, Human Resource and comprises representatives from HR, the Operations Cluster, Facilities Management, and the Union. The committee meets regularly to review and update the safety plans for MPA.

Training and Education

GRI 103: Management Approach 2016		
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103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
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TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 103: Management Approach 2016		
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	2017 Performance Summary (Pg 14)
404-2	Programmes for upgrading employee skills and transition assistance programmes	In addition to programmes for upgrading the skills of MPA's employees, MPA has also reported on its responsibilities and initiatives relating to the training and development of the industry's workforce. Quality Maritime Workforce (Pg 50-53) Strong Partnerships > Strategic Partnerships with Maritime Institutes and Centres of Excellence (Pg 82-83) Choice Employer > Right People (Pg 90-92)
404-3	Percentage of employees receiving regular performance and career development reviews	Choice Employer > Right People (Pg 90-92)
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Board of Directors/Board Committees (Pg 6-7) Senior Management (Pg 8-9) Choice Employer > Our People (Pg 89)
405-2	Ratio of basic salary and remuneration of women to men	Information unavailable - MPA provides fair remuneration to employees that is not differentiated by gender.
Non-discrimination		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 406: Non-discrimination 2016		
406-1	Incidents of discrimination and corrective actions taken	MPA has not identified any substantiated incidents of discrimination during the reporting period.

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
Freedom of Association and Collective Bargaining		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 407: Freedom of Association and Collective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Strong Partnerships > Supplier Management (Pg 82) Choice Employer > Labour-Management Relations (Pg 99)
Child Labour		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 408: Child Labour 2016		
408-1	Operations and suppliers at significant risk for incidents of child labour	Not applicable – MPA has not identified any of its operations or suppliers considered to have significant risk for incidents of child labour or young workers exposed to hazardous work. Strong Partnerships > Supplier Management (Pg 82)
Forced or Compulsory Labour		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 409: Forced or Compulsory Labour 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	Not applicable – MPA has not identified any of its operations or suppliers considered to have significant risk for incidents of forced or compulsory labour.
Security Practices		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)

TOPIC-SPECIFIC DISCLOSURES

Disclosure	Reference(s) or Reasons for Omission
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GRI 103: Management Approach 2016

103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
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GRI 410: Security Practices 2016

410-1	Security personnel trained in human rights policies or procedures	Information unavailable
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Rights of Indigenous People

GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
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103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
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103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
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GRI 411: Rights of Indigenous People 2016

411-1	Incidents of violations involving rights of indigenous peoples	Not applicable – MPA's operations are only in Singapore.
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Human Rights Assessment

GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
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103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
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103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
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GRI 412: Human Rights Assessment 2016

412-1	Operations that have been subject to human rights reviews or impact assessments	Information unavailable
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412-2	Employee training on human rights policies or procedures	Information unavailable
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412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Information unavailable
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Local Communities

GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
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103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
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103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
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TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 413: Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programmes	All of MPA's operations include implemented local community engagement and development programmes.
413-2	Operations with significant actual and potential negative impacts on local communities	All of MPA's operations seek to have a significant impact on Singapore. MPA's mission is to develop and promote Singapore as a premier global hub port and an international maritime centre, and to advance and safeguard Singapore's strategic maritime interests.
Supplier Social Assessment		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 414: Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	Strong Partnerships > Supplier Management (Pg 82)
414-2	Negative social impacts in the supply chain and actions taken	Strong Partnerships > Supplier Management (Pg 82)
Public Policy		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)
GRI 415: Public Policy 2016		
415-1	Political contributions	Not applicable – MPA does not make any political contributions.
Customer Health and Safety		
GRI 103: Management Approach 2016		
103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

TOPIC-SPECIFIC DISCLOSURES

Disclosure		Reference(s) or Reasons for Omission
GRI 416: Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	Not applicable within MPA's organisational boundary – while MPA does not sell products, MPA has reported on its responsibilities and initiatives in managing the industry's health and safety impacts. Safe, Efficient & Sustainable Global Hub Port > Safety (Pg 26-29)
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	

Marketing and Labelling

GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

GRI 417: Marketing and Labelling 2016

417-1	Requirements for product and service information and labelling	Not applicable within MPA's organisational boundary – while MPA does not sell products, MPA has reported on its responsibilities and initiatives in enhancing the public's awareness, understanding and perception of Maritime Singapore. Strong Maritime Singapore Identity > Brand (Pg 55-57)
417-2	Incidents of non-compliance concerning product and service information and labelling	

Customer Privacy

GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)

GRI 418: Customer Privacy 2016

418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	MPA has not identified any substantiated complaints concerning breaches of customer privacy and losses of customer data during the reporting period.
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Socioeconomic Compliance


GRI 103: Management Approach 2016

103-1	Explanation of the material topic and its boundary	Mapping Key Material Issues > Overview of 6 Key Material Issues (Pg 16-17)
103-2	The management approach and its components	Mapping Key Material Issues > MPA's Approach to Sustainability (Pg 16) MPA's Business Model – Future-Ready Framework (Pg 18-19)
103-3	Evaluation of the management approach	MPA's Business Model – Future-Ready Framework (Pg 18-19)




GRI 419: Socioeconomic Compliance 2016


419-1	Non-compliance with laws and regulations in the social and economic area	MPA has not received any significant fines or non-monetary sanctions for non-compliance during the reporting period.
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UN SDGs INDEX

MPA alignment with the United Nations Sustainable Development Goals		Target Description		Future Ready Framework (FRF)
	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.4	By 2030, substantially increase the number of workers who have relevant skills as required by labour markets, in order for them to have decent jobs and become business owners.	Quality Maritime Workforce Strong Maritime Singapore Identity
		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.	Quality Maritime Workforce
	Ensure access to affordable, reliable, sustainable and modern energy for all	7.3	By 2030, double the national rate of improvement in energy use efficiency. Reduce the rate of power utilisation by 10% compared to the baseline scenario.	Safe, Efficient and Sustainable Global Hub Port
	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.	Quality Maritime Workforce
		8.5	By 2030, achieve full and productive employment and decent work for all men and women, including for young people and persons with disabilities, and ensure equal pay for work of equal value.	Quality Maritime Workforce Choice Employer
		8.6	By 2020, substantially reduce the proportion of youth not in employment, education or training.	Quality Maritime Workforce
		8.8	Protect labour rights and promote safe and secure working environments for all workers, particularly female migrant workers and workers in the informal sector.	Choice Employer

MPA alignment with the United Nations Sustainable Development Goals		Target Description		Future Ready Framework (FRF)
	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	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.	Culture of Excellence
		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, will all countries taking action in accordance with their respective capabilities.	Safe, Efficient and Sustainable Global Hub Port
		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 one million people and public and private research and development spending.	Safe, Efficient and Sustainable Global Hub Port Vibrant IMC Eco-System Maritime Knowledge and Innovation Hub
	Make cities and human settlements inclusive, safe, resilient and sustainable	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.	Safe, Efficient and Sustainable Global Hub Port
		11.4	Strengthen efforts to protect and safeguard the world's cultural and natural heritage.	Safe, Efficient and Sustainable Global Hub Port
		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.	Safe, Efficient and Sustainable Global Hub Port

MPA alignment with the United Nations Sustainable Development Goals		Target Description		Future Ready Framework (FRF)
	Ensure sustainable consumption and production patterns	12.5	By 2030, substantially reduce waste generation and increase the economic value of waste resources through prevention, reduction, recycling, reuse and recovery of energies from waste treatment.	Safe, Efficient and Sustainable Global Hub Port
		12.6	Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.	Safe, Efficient and Sustainable Global Hub Port
		12.7	Promote public procurement practices that are sustainable, in accordance with national policies and priorities.	Strong Partnerships
		12.8	By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.	Strong Maritime Singapore Identity
	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	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.	Safe, Efficient and Sustainable Global Hub Port
		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.	Safe, Efficient and Sustainable Global Hub Port
		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.	Safe, Efficient and Sustainable Global Hub Port
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	16.5	Substantially reduce corruption and bribery in all their forms.	Culture of Excellence
		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.	Safe, Efficient and Sustainable Global Hub Port

MPA alignment with the United Nations Sustainable Development Goals		Target Description		Future Ready Framework (FRF)
	Strengthen the means of implementation and revitalise the global partnership for sustainable development	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.	Safeguard Strategic Maritime Interests and An Influential Voice
		17.17	Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.	Safe, Efficient and Sustainable Global Hub Port Safeguard Strategic Maritime Interests and An Influential Voice Maritime Knowledge and Innovation Hub Strong Maritime Singapore Identity Strong Partnerships

OUR CONTRIBUTORS



BROUGHT TO YOU BY:

Yvonne Chan
Caitlin Fua
Brenda Kwong
Kate Tan

CONTRIBUTORS:

Aw Eng Soon
Bhavani Somu
Claire Chung
Colin Yong
Gladys Tan
Ken Lim
Nathanael Lee

Ong Ah Kiong
Serene Liu
Shayna Chng
Tan Ju Lin
Winnie Lim
Yow Liang Keon



460 Alexandra Road #19-00 PSA Building Singapore 119963

SUSTAINING A FUTURE ➤ READY MARITIME SINGAPORE

SUSTAINABILITY • FINANCIAL REPORT 2017





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This Financial Report covers financial information during the Financial Year 1 January to 31 December 2017.
Both the Annual Report and Financial Report will constitute the Integrated Report <IR>.

STATEMENT BY BOARD OF MEMBERS

For the financial year ended 31 December 2017

In the opinion of the Board of Members,

- (a)

the consolidated financial statements of the Maritime and Port Authority of Singapore and its subsidiary (the "Authority") as set out on pages 7 to 67 are properly drawn up so as to present fairly, in all material respects, the state of affairs of the Authority as at 31 December 2017 and of the results of the business, changes in reserves and cash flows of the Authority for the financial year then ended in accordance with the provisions of the Maritime and Port Authority of Singapore Act (Cap. 170A) 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



Andrew Tan
Chief Executive and Board Member

15 March 2018

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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

Opinion

We have audited the accompanying consolidated financial statements of the Maritime and Port Authority of Singapore and its subsidiary (the "Authority") set out on pages 7 to 67, which comprise the consolidated balance sheet as at 31 December 2017, the consolidated statement of comprehensive income, consolidated statement of changes in reserves and consolidated statement of cash flows of the Authority for the year then ended, and noted to the financial statements including a summary of significant accounting policies.

In our opinion, the consolidated financial statements of the Authority are properly drawn up in accordance with the provisions of the Maritime and Port Authority of Singapore Act, Chapter 170A (the "Act") and Statutory Board Financial Reporting Standards so as to present fairly, in all material respects, the state of affairs of the Authority as at 31 December 2017 and the results, changes in reserves and cash flows of the Authority for the year ended on that date.

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 are independent of the Authority in accordance with the Accounting and Corporate Regulatory Authority ("ACRA") *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. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information Other than the Financial Statements and Auditor's Report Thereon

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

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

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

(CONTINUED)

In connection with our audit of the financial statements, our responsibility is to read the other information identified above when it becomes available 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 on the other information obtained prior to the date of this auditor’s report, 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 these financial statements in accordance with the provisions of the Act and Statutory Board Financial Reporting Standards, 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.

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

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.

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.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Authority to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

INDEPENDENT AUDITOR’S REPORT
TO THE MEMBERS OF THE BOARD OF THE
MARITIME AND PORT AUTHORITY OF SINGAPORE
(CONTINUED)

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 Act; and
- (b) proper accounting and other records have been kept, including records of all assets of the Authority whether purchased, donated or otherwise.

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 Act. This responsibility includes implementing accounting and internal controls as management determines are necessary to enable compliance with the provisions of the Act.

INDEPENDENT AUDITOR’S REPORT
TO THE MEMBERS OF THE BOARD OF THE
MARITIME AND PORT AUTHORITY OF SINGAPORE
(CONTINUED)

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 Act.

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 entity’s internal control. Because of the inherent limitations in any accounting and internal control system, non-compliances may nevertheless occur and not be detected.



Public Accountants and
Chartered Accountants
Singapore

15 March 2018

CONSOLIDATED BALANCE SHEET

As at 31 December 2017

	Note	2017 \$	2016 \$
ASSETS			
Non-current assets			
Property, plant and equipment	4	83,232,617	87,419,239
Capital work-in-progress	4	12,733,224	11,474,259
Financial assets	7	308,519,591	626,342,027
		404,485,432	725,235,525
Current assets			
Trade receivables	8	49,142,432	45,021,166
Deposits, prepayments and other receivables	9	7,748,593	11,590,044
Cash and cash equivalents	10	998,847,658	592,608,223
		1,055,738,683	649,219,433
		1,460,224,115	1,374,454,958
Total assets			
EQUITY			
Capital and reserves			
Establishment account	11	147,375,155	147,375,155
Equity financing account	12	3,978,616	3,978,616
Fair value reserve		13,604,390	13,900,014
Accumulated surplus		1,207,701,058	1,113,967,665
Total capital and reserves		1,372,659,219	1,279,221,450
LIABILITIES			
Non-current liabilities			
Employment benefits	13	422,377	422,377
Deferred capital grant	14	19,114,704	20,461,524
		19,537,081	20,883,901
Current liabilities			
Trade and other payables	15	33,126,361	46,621,860
Advances, deposits and unearned income	16	10,742,120	10,270,867
Provision for contribution to Consolidated Fund	20	24,159,334	17,456,880
		68,027,815	74,349,607
		87,564,896	95,233,508
Total liabilities		1,460,224,115	1,374,454,958
Total equity and liabilities			
Funds managed/held on behalf of others	25	38,830,926	50,805,532
Funds' net assets managed/held on behalf of others	25	(38,830,926)	(50,805,532)

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the financial year ended 31 December 2017

	Note	2017 \$	2016 \$
Operating revenue			
Port dues and marine services		282,073,837	280,910,522
Shipping services		6,328,455	6,859,492
Rental income		3,999,210	4,133,664
Training		898,471	871,265
Miscellaneous revenue		1,239,037	777,775
		294,539,010	293,552,718
Operating expenditure			
Staff cost	17	87,661,307	80,604,987
Depreciation of property, plant and equipment	4	17,623,597	22,482,488
Hire of marine craft and sea garbage services		11,576,012	9,469,567
Fuel, repairs and maintenance ¹		14,322,868	12,240,970
Other operating expenses ¹	18	74,625,546	72,118,672
		205,809,330	196,916,684
Operating surplus		88,729,680	96,636,034
Net other operating surplus	19	51,997,227	4,640,914
Surplus from operations		140,726,907	101,276,948
Amortisation of deferred capital grant	14	1,346,820	1,353,580
Surplus before contribution to Consolidated Fund		142,073,727	102,630,528
Contribution to Consolidated Fund	20	(24,159,334)	(17,456,880)
Surplus for the year		117,914,393	85,173,648
Other comprehensive (loss)/income			
<i>Items that may be reclassified subsequently to income or expenditure:</i>			
Net change in fair value of available-for-sale debt and equity securities placed by fund managers		(23,105,780)	(7,339,638)
Transfer to income or expenditure on sale of available-for-sale debt and equity securities placed by fund managers		22,050,867	7,564,348
Impairment loss on available-for-sale debt and equity securities placed by fund managers transferred to income or expenditure	7a	759,289	1,893,756
Other comprehensive (loss)/income for the year		(295,624)	2,118,466
Total comprehensive income for the year		117,618,769	87,292,114

¹ Reclassifications have been made to the prior year's financials statements to enhance the comparability with current year's financial statement.

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

CONSOLIDATED STATEMENT OF CHANGES IN RESERVES

For the financial year ended 31 December 2017

	Establishment account \$	Equity financing account \$	Fair value reserve \$	Accumulated surplus \$	Total \$
2017					
Beginning of financial year	147,375,155	3,978,616	13,900,014	1,113,967,665	1,279,221,450
<u>Total comprehensive income for the year</u>					
Surplus for the year	-	-	-	117,914,393	117,914,393
Other comprehensive loss for the year	-	-	(295,624)	-	(295,624)
Total	-	-	(295,624)	117,914,393	117,618,769
Dividends paid, representing total transaction with owners, recognised directly in equity	-	-	-	(24,181,000)	(24,181,000)
End of financial year	147,375,155	3,978,616	13,604,390	1,207,701,058	1,372,659,219
2016					
Beginning of financial year	147,375,155	3,978,616	11,781,548	1,245,903,017	1,409,038,336
<u>Total comprehensive income for the year</u>					
Surplus for the year	-	-	-	85,173,648	85,173,648
Other comprehensive income for the year	-	-	2,118,466	-	2,118,466
Total	-	-	2,118,466	85,173,648	87,292,114
<u>Total transaction with owners, recognised directly in equity</u>					
Dividends paid	-	-	-	(17,109,000)	(17,109,000)
Return of surplus funds to Government	-	-	-	(200,000,000)	(200,000,000)
Total	-	-	-	(217,109,000)	(217,109,000)
End of financial year	147,375,155	3,978,616	13,900,014	1,113,967,665	1,279,221,450

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

CONSOLIDATED STATEMENT OF CASH FLOWS

For the financial year ended 31 December 2017

	Note	2017 \$	2016 \$
Cash flows from operating activities			
Surplus before contribution to Consolidated Fund		142,073,727	102,630,528
Adjustments for:			
- Depreciation of property, plant and equipment	4	17,623,597	22,482,488
- Provision for employee benefits	13	11,505	8,649
- Amortisation of deferred capital grant	14	(1,346,820)	(1,353,580)
- Provision of impairment loss on trade receivables	8	334,962	14,382
- Net investment gain from funds with fund managers	19	(51,266,029)	(2,989,731)
- Interest income on bank deposits	19	(1,352,201)	(2,071,217)
- Net loss/(gain) on disposal of property, plant and equipment	19	693,942	(14,459)
- Write off of capital work-in-progress	4	-	1,040,353
		106,772,683	119,747,413
Changes in working capital:			
- Trade receivables		(4,456,228)	823,592
- Deposits, prepayments and other receivables		1,954,211	(4,701,799)
- Trade and other payables		(4,415,521)	(5,805,749)
- Advances, deposits and unearned income		471,253	(4,075,938)
Cash generated from operations		100,326,398	105,987,519
Payment of employee benefits	13	(11,505)	(8,649)
Contribution paid to Consolidated Fund	20	(17,456,880)	(18,009,304)
Net cash from operating activities		82,858,013	87,969,566
Cash flows from investing activities			
Withdrawal of industry funds with Accountant-General's Department		34,169,737	35,401,978
Proceeds from sale of property, plant and equipment		18,829	44,789
Purchases of property, plant and equipment and capital work-in-progress		(15,408,711)	(9,575,001)
Sale of unquoted equity securities, managed internally (Deposit)/proceeds from withdrawal of funds with fund managers		-	38,000
Interest received		1,873,069	1,535,423
Net cash from investing activities		5,652,924	77,199,221
Cash flows from financing activities			
Dividends paid		(24,181,000)	(17,109,000)
Return of surplus funds to Government		-	(200,000,000)
Net cash used in financing activities		(24,181,000)	(217,109,000)
Net increase/(decrease) in cash and cash equivalents		64,329,937	(51,940,213)
Cash and cash equivalents at beginning of financial year		48,443,552	100,383,765
Cash and cash equivalents at end of financial year	10	112,773,489	48,443,552

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

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

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 (Cap. 170A) 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, PSA Building, 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 6.

2. Significant accounting policies

2.1 Basis of preparation

These financial statements have been prepared in accordance with the provisions of the Maritime and Port Authority of Singapore Act (Cap. 170A) 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 2017

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

Interpretations and amendments to published Standards effective in 2017

On 1 January 2017, the Authority adopted the new or amended SB-FRS and Interpretations of SB-FRS (“INT 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 and INT SB-FRS.

The adoption of these new or amended SB-FRS and INT 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.

Interpretations and amendments to published Standards effective in future period

At the date of authorisation of these financial statements, the following SB-FRSs that are relevant to the Authority were issued but not effective:

- SB-FRS 109 Financial Instruments ¹
- SB-FRS 115 Revenue from Contracts with Customers ¹
- SB-FRS 116 Leases ²

¹ Applies to annual periods beginning on or after 1 January 2018, with early application permitted.

² Applies to annual periods beginning on or after 1 January 2019, with early application permitted if SB-FRS 115 is adopted.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

The Authority anticipates that the adoption of the above SB-FRSs in future periods will not have a material impact on the financial statements of the Authority in the period of their initial adoption except for the following:

SB-FRS 109 Financial Instruments

SB-FRS 109 was issued in December 2014 to replace SB-FRS 39 *Financial Instruments: Recognition and Measurement* and introduced new requirements for (i) the classification and measurement of financial assets and financial liabilities (ii) general hedge accounting (iii) impairment requirements for financial assets.

Key requirements of SB-FRS 109:

- All recognised financial assets that are within the scope of SB-FRS 39 are now required to be subsequently measured at amortised cost or fair value through profit or loss (FVTPL). Specifically, debt investments that are held within a business model whose objective is to collect the contractual cash flows, and that have contractual cash flows that are solely payments of principal and interest on the principal outstanding are generally measured at amortised cost at the end of subsequent accounting periods. Debt instruments that are held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets, and that have contractual terms that give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, are measured at fair value through other comprehensive income (FVTOCI). All other debt investments and equity investments are measured at FVTPL at the end of subsequent accounting periods. In addition, under SB-FRS 109, entities may make an irrevocable election, at initial recognition, to measure an equity investment (that is not held for trading) at FVTOCI, with only dividend income generally recognised in income or expenditure.
- With some exceptions, financial liabilities are generally subsequently measured at amortised cost. With regard to the measurement of financial liabilities designated as at FVTPL, SB-FRS 109 requires that the amount of change in fair value of such financial liability that is attributable to changes in the credit risk be presented in other comprehensive income, unless the recognition of the effects of changes in the liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch to profit or loss. Changes in fair value attributable to the financial liability's credit risk are not subsequently reclassified to income or expenditure.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

SB-FRS 109 Financial Instruments (continued)

- In relation to the impairment of financial assets, SB-FRS 109 requires an expected credit loss model, as opposed to an incurred credit loss model under SB-FRS 39. The expected credit loss model requires an entity to account for expected credit losses and changes in those expected credit losses at each reporting date to reflect changes in credit risk since initial recognition. In other words, it is no longer necessary for a credit event to have occurred before credit losses are recognised.
- The new general hedge accounting requirements retain the three types of hedge accounting mechanisms currently available in SB-FRS 39. Under SB-FRS 109, greater flexibility has been introduced to the types of transactions eligible for hedge accounting, specifically broadening the types of instruments that qualify for hedging instruments and the types of risk components of non-financial items that are eligible for hedge accounting. In addition, the effectiveness test has been overhauled and replaced with the principle of an 'economic relationship'. Retrospective assessment of hedge effectiveness is also no longer required. Enhanced disclosure requirements about an entity's risk management activities have also been introduced.

Based on an analysis of the Authority's financial assets and financial liabilities as at 31 December 2017 on the basis of the facts and circumstances that exist at that date, the Members of the Authority have preliminary assessed the impact of SB-FRS 109 to the Authority's financial statements as follows:

1) Classification and Measurement

- Available-for-sale financial assets carried at fair value as disclosed in Note 7: these are not held within a business model whose objective is to collect contractual cash flows, nor are they held within a business model whose objective is achieved both by collecting contractual cash flows and selling financial assets. Accordingly, the available-for-sale financial assets will be measured at FVTPL under SB-FRS 109.
- All other financial assets and financial liability will continue to be measured on the same basis as is currently adopted under SB-FRS 39.

2) Impairment

- The Authority is currently assessing of the possible impact of implementing SB-FRS 109. It is currently impracticable to disclose any further information on the known or reasonably estimable impact to the Authority's financial statements in the period of initial application as the management has yet to complete its detailed assessment.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

3) Hedge accounting

- The Authority does not anticipate that the application of the SB-FRS 109 hedge accounting requirements will have a material impact on the Authority's financial statements.

SB-FRS 115 Revenue from Contracts with Customers

In November 2014, SB-FRS 115 was issued which establishes a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers. SB-FRS 115 will supersede the current revenue recognition guidance including SB-FRS 18 *Revenue*, SB-FRS 11 *Construction Contracts* and the related Interpretations when it becomes effective.

The core principle of SB-FRS 115 is that an entity should recognise revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Specifically, the Standard introduces a 5-step approach to revenue recognition:

- Step 1: Identify the contract(s) with a customer.
- Step 2: Identify the performance obligations in the contract.
- Step 3: Determine the transaction price.
- Step 4: Allocate the transaction price to the performance obligations in the contract.
- Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation.

Under SB-FRS 115, an entity recognises revenue when (or as) a performance obligation is satisfied, i.e. when "control" of the goods or services underlying the particular performance obligation is transferred to the customer. Far more prescriptive guidance has been added in SB-FRS 115 to deal with specific scenarios. Furthermore, extensive disclosures are required by SB-FRS 115.

The Authority has performed a preliminary assessment of the possible impact of implementing SB-FRS 115. Apart from providing more extensive disclosures on the Authority's revenue transactions, the Authority do not anticipate that the application of SB-FRS 115 will have a significant impact on the financial position and/or financial performance of the Authority.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

SB-FRS 116 - Leases

SB-FRS 116 was issued in June 2016 and will supersede SB-FRS 17 *Leases* and its associated interpretative guidance.

The Standard provides a comprehensive model for the identification of lease arrangements and their treatment in the financial statements of both lessees and lessors. The identification of leases, distinguishing between leases and service contracts, are determined on the basis of whether there is an identified asset controlled by the customer.

Significant changes to lessee accounting are introduced, with the distinction between operating and finance leases removed and assets and liabilities recognised in respect of all leases (subject to limited exceptions for short-term leases and leases of low value assets). The Standard maintains substantially the lessor accounting approach under the predecessor SB-FRS 17.

The Authority anticipates that the initial application of the new SB-FRS 116 may result in changes to the accounting policies relating to leases.

As at 31 December 2017, the Authority has non-cancellable operating lease commitment of \$16,459,074. SB-FRS 17 does not require the recognition of any right-of-use asset or liability for future payments of these leases; instead, certain information is disclosed as operating lease commitments. A preliminary assessment is that these arrangements will meet the definition of a lease under SB-FRS 116 and the Authority will recognise a right-of-use asset and a corresponding liability in respect of these leases unless they qualify as low value or short term leases upon application. It is currently impracticable to provide a reasonable estimate of the financial effect until the Authority complete its detailed assessment.

The Authority does not plan to early adopt the new SB-FRS 116.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.2 Revenue recognition

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

Port dues and marine services are recognised as and when services are performed.
- (b) Training revenue

Training revenue are recognised 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 performed.
- (d) Interest income

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

Dividend income is recognised when the right to receive payment is established.
- (f) 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 2017

2. Significant accounting policies (continued)

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 MPA. It is deconsolidated from the date on that control ceases.
- (b) Associated companies

Associated companies are entities 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 companies are accounted for in the consolidated financial statements using the equity method of accounting less impairment losses, if any.

To the extent MPA's associated companies are limited by guarantee and it does not share in their profits or losses, MPA records its contributions to associated companies as grants in the consolidated statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

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 2017

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 remaining lease periods ranging from 4 to 59 years
Building structures	5 to 39 years
Wharves, hard-standing and roads	10 to 39 years
Renovations	5 years
Plant, machinery and equipment	3 to 15 years
Vehicles	10 years
Computers	3 to 5 years
Furniture and fittings	10 years
Floating crafts	5 to 10 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 “Net other operating surplus”.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

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
Investments in subsidiary and associated companies

Property, plant and equipment 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 2017

2. Significant accounting policies (continued)

2.8 Financial assets

(a) Classification

The Authority classifies its financial assets in the following categories: loans and receivables and available-for-sale. 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.

(i) Loans and receivables

Loans and receivables are non-derivative financial assets 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. Loans and receivables are presented as "trade receivables" (Note 8), "other receivables" (Note 9) and "cash and cash equivalents" (Note 10) on the balance sheet.

(ii) Available-for-sale financial assets

Financial assets, available-for-sale are non-derivatives that are either designated in this category or not classified in any of the other categories. 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, intended to be held on a continuing basis, are classified as available-for-sale 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 2017

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

(c) *Initial measurement*

Financial assets are initially recognised at fair value plus transaction costs.

(d) *Subsequent measurement*

Available-for-sale financial assets are subsequently carried at fair value. Loans and receivables are subsequently carried at amortised cost using the effective interest method.

Interest and dividend income on available-for-sale financial assets are recognised separately in income. Changes in the fair values of available-for-sale debt securities (i.e. monetary items) denominated in foreign currencies are analysed into currency translation differences on the amortised cost of the securities and other changes; the currency translation differences are recognised in income or expenditure and the other changes are recognised in other comprehensive income and accumulated in the fair value reserve. Changes in fair values of available-for-sale equity securities (i.e. non-monetary items) are recognised in other comprehensive income and accumulated in the fair value reserve, together with the related currency translation differences.

(e) *Impairment*

The Authority assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired and recognises an allowance for impairment when such evidence exists.

(i) *Loans and receivables*

Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy and default or significant delay in payments are objective evidence that these financial assets are impaired.

The carrying amount of these assets is reduced through the use of an impairment allowance account which is calculated as the difference between the carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. When the asset becomes uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are recognised against the same line item in income or expenditure.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.8 Financial assets (continued)

(e) *Impairment (continued)*

(i) *Loans and receivables (continued)*

The impairment allowance is reduced through income or expenditure in a subsequent period when the amount of impairment loss decreases and the related decrease can be objectively measured. The carrying amount of the asset previously impaired is increased to the extent that the new carrying amount does not exceed the amortised cost had no impairment been recognised in prior periods.

(ii) *Available-for-sale financial assets*

In addition to the objective evidence of impairment described in Note 2.8(e)(i), a significant or prolonged decline in the fair value of an equity security below its cost is considered as objective evidence that the available-for-sale financial asset is impaired.

If any evidence of impairment exists, the cumulative loss that was recognised in other comprehensive income is reclassified to income or expenditure. The cumulative loss is measured as the difference between the acquisition cost (net of any principal repayments and amortisation) and the current fair value, less any impairment loss previously recognised as an expense. The impairment losses recognised as an expense on equity securities are not reversed through income or expenditure.

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.

2.10 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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

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 2017

2. Significant accounting policies (continued)

2.13 Leases

(a) When the Authority is the lessee

Lessee – Operating leases

Leases where substantially all risks and rewards incidental to ownership are retained by the lessors are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessors) are recognised in income or expenditure on a straight-line basis over the period of the lease.

Contingent rents are recognised as an expense in income or expenditure when incurred.

(b) When the Authority is the lessor

Lessor – Operating leases

Leases of leasehold land where the Authority retains substantially all risks and rewards incidental to ownership are classified as operating leases. Rental income from operating leases (net of any incentives given to the lessees) is recognised in income or expenditure on a straight-line basis over the lease term.

Initial direct costs incurred by the Authority in negotiating and arranging operating leases are added to the carrying amount of the leased assets and recognised as an expense in income or expenditure over the lease term on the same basis as the lease income.

Contingent rents are recognised as income in income or expenditure when earned.

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 has been reliably estimated.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

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.

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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

2. Significant accounting policies (continued)

2.16 Currency translation (continued)

(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 the fair value reserve.

2.17 Cash and cash equivalents

For the purpose of presentation in the consolidated 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 consolidated 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, Aids to Navigation Fund, and agency funds held in trust for Ministry of Transport are presented as a line item at the bottom of the consolidated 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 25 to the financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

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

(a) 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.

3.2 Critical judgements in applying the entity’s accounting policies

(a) Measurement of impairment losses for financial assets, available-for-sale

The Authority follows the guidance of SB-FRS 39 in determining when a financial asset is considered impaired. This determination requires significant judgement exercised by management. Refer to Note 7 for details on how the Authority determines the impairment of each class of available-for-sale financial assets.

(b) 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 companies limited by guarantee and MPA does not share in their profits or losses, MPA has recorded the contributions of \$8,658,257 (2016: \$8,530,960) made to the associated companies as grant expenditure in the consolidated statement of comprehensive income.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

4. Property, plant and equipment

	Leasehold land	Building structures	Wharves, hard-standing and roads	Plant, machinery and equipment	Vehicles	Computers	Furniture and fittings	Floating crafts	Capital work-in-progress	Total
2017	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Cost										
Beginning of financial year	7,641,956	60,234,908	99,360,632	15,945,407	669,276	73,345,341	2,847,584	9,871,825	11,474,259	295,406,113
Additions	-	25,931	-	965,352	-	2,433,103	472,752	-	10,518,803	15,408,711
Transfers	-	25,257	-	221,319	-	8,330,428	151,692	-	(9,259,838)	-
Disposals/write-off	-	-	-	(1,565,453)	-	(527,632)	(4,864)	-	-	(5,135,179)
End of financial year	7,641,956	60,286,096	99,360,632	15,566,625	669,276	83,581,240	3,467,164	9,871,825	12,733,224	305,679,645
Accumulated depreciation										
Beginning of financial year	3,258,329	36,367,081	67,718,542	11,362,815	79,552	59,019,959	1,250,398	6,399,050	-	196,512,615
Depreciation charge	241,296	1,715,389	5,037,272	1,268,827	66,927	7,254,718	340,193	501,310	-	17,623,597
Disposals/write-off	-	-	-	(1,305,914)	-	(479,363)	(4,864)	-	-	(4,422,408)
End of financial year	3,499,625	38,082,470	72,755,814	11,325,728	146,479	65,795,314	1,585,727	6,900,360	-	209,713,804
Net book value	4,142,331	22,203,626	26,604,818	4,240,897	522,797	17,785,926	1,881,437	2,971,465	12,733,224	95,965,841
End of financial year										
2016										
Cost										
Beginning of financial year	7,641,956	60,231,774	99,131,593	14,575,943	214,280	71,203,819	1,785,074	9,871,825	17,026,555	292,605,743
Additions	-	-	44,735	682,790	288,696	3,467,631	16,111	-	5,075,038	9,575,001
Transfers	-	3,134	184,304	1,542,695	166,300	3,543,698	1,054,849	-	(9,586,981)	-
Disposals/write-off	-	-	-	(856,021)	-	(4,869,807)	(8,450)	-	(1,040,353)	(6,774,631)
End of financial year	7,641,956	60,234,908	99,360,632	15,945,407	669,276	73,345,341	2,847,584	9,871,825	11,474,259	295,406,113
Accumulated depreciation										
Beginning of financial year	3,017,033	34,560,354	59,893,998	10,906,377	12,566	55,597,835	880,272	5,890,980	-	179,734,075
Depreciation charge	241,296	1,806,727	7,824,544	1,312,459	66,986	8,266,442	373,735	508,070	-	22,482,488
Disposals/write-off	-	-	-	(856,021)	-	(4,844,318)	(3,609)	-	-	(5,703,948)
End of financial year	3,258,329	36,367,081	67,718,542	11,362,815	79,552	59,019,959	1,250,398	6,399,050	-	196,512,615
Net book value	4,383,627	23,867,827	31,642,090	4,582,592	589,724	14,325,382	1,597,186	3,472,775	11,474,259	98,893,498
End of financial year										

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

5. Capital work-in-progress

Capital work-in-progress relates to the cost of computer systems and maritime and port projects under development. Additions during the year amounted to \$10,518,803 (2016: \$5,075,038).

6. Investments in subsidiary and associated companies

(a) Subsidiary

	2017	2016
	\$	\$
Cost of investment		
At beginning and end of financial year	2	2

Details of the subsidiary are as follows:

Name of subsidiary	Country of incorporation	Effective equity held by the Authority	
		2017	2016
		%	%
MPA Venture Pte. Ltd.	Singapore	100	100

The principal activity of the subsidiary is 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.

(b) Associated companies

(i) Singapore Maritime Institute

In January 2011, the Authority, together with Agency for Science, Technology and Research (“A*STAR”), incorporated Singapore Maritime Institute (“SMI”), 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 2017, the Authority had contributed a total amount of \$36.8 million (2016: \$29.4 million) of grants to SMI (including unutilised amount of \$0.7 million (2016: \$2.0 million)).

(ii) Singapore Chamber of Maritime Arbitration

Singapore Chamber of Maritime Arbitration (“SCMA”) was reconstituted as a company limited by guarantee in May 2009. The principal activity of SCMA is to provide a framework for maritime arbitration in response to the needs of the maritime community. As at 31 December 2017, the Authority had not made any direct contribution to SCMA.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

7. Financial assets

	Note	2017	2016
		\$	\$
Non-current investments			
Available-for-sale securities:			
- Quoted equity securities managed by fund managers	7(a), 21	117,373,551	197,849,995
- Quoted debt securities managed by fund managers	7(b), 21	191,146,040	428,492,032
		308,519,591	626,342,027

(a) Available-for-sale equity securities managed by fund managers

For available-for-sale equity securities that are listed in an active market, management believes that there is an objective evidence of impairment if there is a significant or prolonged decline in the fair value of the equity security below its acquisition cost. As at the balance sheet date, an equity security is considered to be impaired if its fair value declines in excess of 20% against its acquisition cost or the fair value has been below acquisition cost for more than 6 consecutive months. The Authority holds a diversified portfolio of equity securities that spans many industries in different geographical locations. Under this impairment assessment approach, the Authority recorded an impairment loss of \$759,289 (2016: \$1,893,756) during the current year. The impairment loss is presented under “net other operating surplus” in the current year’s consolidated statement of comprehensive income.

(b) Available-for-sale debt securities managed by fund managers

For available-for-sale debt securities that are listed in an active market, management considers the debt security to be impaired if objective evidence indicates that one or more events (“loss events”) occurring after its initial recognition have a negative impact on the estimated future cash flows of that asset.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

7. Financial assets (continued)

(b) Available-for-sale debt securities managed by fund managers (continued)

Management considers the following as evidence that a financial asset may be impaired:

- (1)

Significant financial difficulty of the issuer of the debt security;
- (2)

Payment defaults of the issuer;
- (3)

Renegotiation of terms of an asset due to financial difficulty of the borrower;
- (4)

Significant restructuring due to the financial difficulty or expected bankruptcy;
- (5)

Disappearance of an active market for an asset due to financial difficulties; or
- (6)

Observable data indicating that there is a measurable decrease in the estimated future cash flows.

The composition of debt securities at 31 December comprises the following:

	2017		2016	
	\$	%	\$	%
Original cost				
Corporate bonds	93,486,411		235,515,468	
Government bonds	101,361,910		175,610,225	
	194,848,321		411,125,693	
Fair value				
Corporate bonds	90,622,219	47	249,188,870	58
Government bonds	100,523,821	53	179,303,162	42
	191,146,040	100	428,492,032	100

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

7. Financial assets (continued)

(b) Available-for-sale debt securities managed by fund managers (continued)

The composition of debt securities by credit rating category at 31 December is as follows:

Credit rating	2017		2016	
	\$	%	\$	%
Fair value				
AAA/Aaa	95,726,760	50	161,919,583	38
AA/Aa	6,862,580	4	55,539,074	13
A/A	51,769,208	27	136,589,529	32
BBB+/Baa1	22,592,298	12	52,804,574	12
BBB/Baa2	10,527,335	6	18,876,454	4
BBB-/Baa3	-	0	-	0
Not rated	3,667,859	1	2,762,818	1
	191,146,040	100	428,492,032	100

In determining whether a loss event has occurred, management, based on the criteria listed above, did not find any debt securities that indicated evidence of impairment.

A significant portion of the invested debt securities representing 81% (2016: 83%) are rated “A” and above by the credit rating agencies; and for the remaining debt securities rated “BBB+” and below, management is of the view that these debt securities remain “investment grade” and are not impaired.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

7. Financial assets (continued)

(b) Available-for-sale debt securities managed by fund managers (continued)

Other considerations

The composition of government bonds by geographical region at 31 December is as follows:

	2017		2016	
	\$	%	\$	%
Fair value				
Asia (mainly Singapore)	84,085,605	84	103,775,163	58
European union (including UK)	-	0	11,213,693	6
Australia	-	0	3,422,681	2
United States of America	15,128,544	15	59,478,457	33
Middle East	1,309,672	1	1,413,168	1
	100,523,821	100	179,303,162	100

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

8. Trade receivables

	2017	2016
	\$	\$
Trade receivables	49,501,730	45,132,273
Less: Allowance for impairment of receivables	(359,298)	(111,107)
Trade receivables – net	49,142,432	45,021,166

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 ageing of trade receivables at the reporting date is as follows:

	2017	2016
	\$	\$
Gross receivables		
Not past due	43,268,461	39,828,373
Past due 0 - 30 days	2,860,837	3,637,776
Past due 31 - 60 days	388,606	220,163
More than 60 days	2,983,826	1,445,961
	49,501,730	45,132,273
Impairment losses		
Not past due	33,526	348
Past due 0 - 30 days	25,901	61
Past due 31 - 60 days	25,950	15
More than 60 days	273,921	110,683
	359,298	111,107

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

8. Trade receivables (continued)

The change in allowance for impairment in respect of trade receivables during the year is as follows:

	2017 \$	2016 \$
Beginning of financial year	111,107	259,129
Allowance made	334,962	79,840
Amount written back	-	(65,458)
Allowance utilised	(86,771)	(162,404)
End of financial year	359,298	111,107

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.

9. Deposits, prepayments and other receivables

	2017 \$	2016 \$
Deposits	278,316	190,278
Prepayments	1,202,863	1,093,159
Other receivables	1,332,396	763,024
Amount due from associate & trust funds (non-trade)	2,596,904	4,783,260
	3,929,300	5,546,284
Interest receivable	2,338,114	4,760,323
	7,748,593	11,590,044

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

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

	2017 \$	2016 \$
Interest receivable (Note 21)	1,180,370	3,081,711
Receivables on sale of financial instruments (Note 21)	86,105	228,995
Forward foreign exchange purchases (net) (Note 21)	816,702	-
Other receivables (mainly dividend receivables and withholding tax receivables) (Note 21)	201,545	340,388
	2,284,722	3,651,094

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

10. Cash and cash equivalents

	2017 \$	2016 \$
Cash at bank and on hand	414,162,961	17,898,929
Placement with Accountant-General's Department	566,644,729	530,614,996
- Statutory Board Approved Funds ("SBAF")	451,935,821	486,105,558
- Centralised Liquidity Management Framework ("CLMF")	114,708,908	44,509,438
Short-term bills and notes	8,016,968	25,347,067
Fixed deposits	10,023,000	18,747,231
	998,847,658	592,608,223

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

	2017 \$	2016 \$
Cash and bank balances (as above)	998,847,658	592,608,223
Less: Cash and cash equivalents managed by fund managers	(434,138,348)	(58,059,113)
Less: Placement with Accountant-General's Department ("SBAF")	(451,935,821)	(486,105,558)
Cash and cash equivalents per consolidated statement of cash flows	112,773,489	48,443,552

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) \$114,708,908 (2016: \$44,509,438) which is centrally managed by the Accountant-General's Department under the Centralised Liquidity Management Framework ("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 \$451,935,821 (2016: \$486,105,558) which is placed under the Statutory Board Approved Funds ("SBAF") and is subject to restrictions.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

10. Cash and cash equivalents (continued)

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

	2017	2016
	\$	\$
Cash at bank and on hand (Note 21)	416,098,380	13,964,815
Short-term bills and notes (Note 21)	8,016,968	25,347,067
Fixed deposits (Note 21)	10,023,000	18,747,231
	434,138,348	58,059,113

The effective interest rates of fixed deposits placed directly by the Authority vary from 1.21% to 1.33% (2016: 1.31% to 1.49%) per annum ("p.a."). Interest rates reprice at intervals of one, two, three or twelve months.

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

	2017	2016
	% p.a.	% p.a.
Short-term bills and notes	1.21 – 1.27	0.49 – 0.85
Fixed deposits	1.15	0.15 – 0.35

11. Establishment account

The establishment 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 establishment 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 "Net Operating Surplus/Deficit" and the "Other Operating Surplus/Deficit" 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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

12. Equity financing account

The Equity financing account 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.

13. Employment benefits

	2017	2016
	\$	\$
Beginning of financial year	422,377	422,377
Provision made	11,505	8,649
Provision utilised	(11,505)	(8,649)
End of financial year	422,377	422,377

The Authority operates an unfunded employment benefit plan for a limited pool of employees under the provisions of the Pensions Act (Cap. 225). Benefits are payable based on the last drawn salary of the employees and the number of years of service with the Authority.

14. Deferred capital grant

	2017	2016
	\$	\$
Beginning of financial year	20,461,524	21,815,104
Amortisation to income	(1,346,820)	(1,353,580)
End of financial year	19,114,704	20,461,524

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

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

15. Trade and other payables

	2017	2016
	\$	\$
Trade payables	1,010,081	5,751,787
Forward foreign exchange purchases (net) (Note 21)	-	9,503,721
Payables on purchase of financial instruments (Note 21)	400,920	-
Accrued capital expenditure	1,388,251	1,900,288
Accrued operating expenses	25,908,322	23,083,397
Other payables	4,418,787	6,382,667
	33,126,361	46,621,860

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 \$12,279,213 (2016: \$11,234,689) and accrued administrative fee payable to the fund managers and custodian bank amounting to \$762,985 (2016: \$740,162).

The following are the expected contractual undiscounted cash outflows of the financial liabilities, including interest payments and excluding the impact of netting agreements:

	2017	2016
	\$	\$
Undiscounted cash flows within 1 year		
Non-derivative financial liabilities		
Trade and other payables	(32,725,441)	(37,118,139)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

16. Advances, deposits and unearned income

	2017	2016
	\$	\$
Advances and deposits	3,918,281	3,026,780
Unearned operating lease income [Note (a)]	5,304,933	6,160,841
Unearned annual port dues and Maritime Welfare Fee [Note (b)]	1,518,906	1,083,246
	10,742,120	10,270,867

(a) Unearned operating lease income mainly relates to sub-lease of a property to a third party for a period of 10 years (2016: 11 years), of which payment was 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 \$3,894,849 (2016: \$3,011,690).

17. Staff cost

	2017	2016
	\$	\$
Wages and salaries	72,111,111	65,334,749
Employer's contribution to Central Provident Fund	9,671,986	9,224,299
Employer's contribution to other defined benefit plans (Note 13)	11,505	8,649
Other benefits	5,866,705	6,037,290
	87,661,307	80,604,987

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

18. Other operating expenses

Included in other operating expenses are the following:

	2017 \$	2016 \$
Project grants	23,486,335	23,323,941
Contribution to Maritime Cluster Fund projects	12,495,681	10,845,791
Contribution to International Organisations	4,420,974	4,023,310
Transport & travel	2,089,345	1,733,335
Rental ¹	2,969,560	2,940,388
Property tax	1,184,236	1,421,809
Telecommunication	2,407,112	2,794,138
Water cost & water sales service fee	1,501,482	1,492,724
Utility charges	859,799	856,248
Events & publicity	5,323,490	6,910,742
Professional & consultancy fees	7,764,055	10,036,180
Other administrative expenses	8,079,374	7,490,248
Other miscellaneous expenses ²	2,044,103	(1,750,182)
	74,625,546	72,118,672

¹ Reclassifications have been made to the prior year's financials statements to enhance the comparability with current year's financial statement. The items were reclassified as follows:

	Previously reported 2016 \$	After reclassification 2016 \$
Fuel, repairs and maintenance	9,616,090	12,240,970
Other operating expenses - Rental	5,565,268	2,940,388

² In 2016, other miscellaneous expenses included a reversal of provision for salvage activity amounting to \$3,508,136 which was provided in 2015.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

19. Net other operating surplus

	2017 \$	2016 \$
Gain/(Loss) from sale of investments in:		
- Debt securities (a)	8,617,548	11,784,036
- Equity securities (a)	33,150,151	(19,534,967)
One-off reversal of net cumulative unrealised fair value reserves (a)	6,272,896	-
Realised (loss)/gain on foreign exchange on disposal of available-for-sale financial assets – net (a)	(5,129,636)	5,188,404
Impairment loss on investments in available-for-sale equity securities (a)	(759,289)	(1,893,756)
Unrealised (loss)/gain on foreign exchange on debt securities and other monetary assets held by fund managers – net (a)	(12,174,592)	3,007,121
Net gain/(loss) on available-for-sale financial assets	29,977,078	(1,449,162)
Interest income:		
- Debt securities (a)	10,118,204	9,923,623
- Fixed deposits placed by fund managers (a)	218,111	194,985
- Fixed deposits and cash at bank	1,334,930	2,277,171
- Trade receivables ¹	17,271	(205,954)
Total interest income for financial assets that are not fair value through income or expenditure	11,688,516	12,189,825
Fair value gain/(loss) on derivatives (a)	9,972,906	(7,792,947)
Investment expenses (a)	(3,915,146)	(3,113,023)
Dividend income for funds with fund managers (a)	4,894,876	5,226,255
Net (loss)/gain on disposal of property, plant and equipment	(693,942)	14,459
Gain/(loss) on foreign exchange on other monetary assets, managed internally – net	44,333	(535,331)
Income from liquidated damages received	87,797	118,551
Others	(59,191)	(17,713)
	51,997,227	4,640,914

The total net investment gain from funds with fund managers amounted to \$51,266,029 (2016: \$2,989,731) (refer to (a) above).

¹ In 2016, interest income from trade receivables included a waiver of interest for late payment amounted to \$225,786 which was accrued in the previous years.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

20. 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 (Cap. 319A). The contribution is based on 17% (2016: 17%) of the surplus for the year.

	2017	2016
	\$	\$
Beginning of financial year	17,456,880	18,009,304
Amount contributed	(17,456,880)	(18,009,304)
Provision for the year	24,159,334	17,456,880
End of financial year	24,159,334	17,456,880

21. Funds with fund managers

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. Derivative financial instruments are not used for trading purposes. The financial derivatives used include financial futures, swaps and forward foreign exchange contracts.

As at the balance sheet date, the funds placed with fund managers comprised the following assets and liabilities:

	2017	2016
	\$	\$
Debt securities (Note 7)	191,146,040	428,492,032
Equity securities (Note 7)	117,373,551	197,849,995
Interest receivables (Note 9)	1,180,370	3,081,711
Receivables on sale of financial instruments (Note 9)	86,105	228,995
Other receivables (mainly dividend receivables and withholding tax receivables) (Note 9)	201,545	340,388
Fixed deposits (Note 10)	10,023,000	18,747,231
Cash balances (Note 10)	416,098,380	13,964,815
Short-term bills and notes (Note 10)	8,016,968	25,347,067
Forward foreign exchange purchases (net) (Note 9 and 15)	816,702	(9,503,721)
Payables on purchase of financial instruments (Note 15)	(400,920)	-
Accrued administrative fees (Note 15)	(762,985)	(740,162)
	743,778,756	677,808,351

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

21. Funds with fund managers (continued)

As at balance sheet date, the notional amounts of the financial derivatives held by the fund managers are as follows:

	2017	2016
	\$	\$
Notional amounts		
Futures contracts	15,237,481	19,507,548
Foreign currency swap and forward contracts	166,837,891	600,912,247

The following table details the forward foreign currency swap and forward contracts outstanding as at the end of the reporting period.

	2017	Fair value	2016	Fair value
	Contract value		Contract value	
	\$	\$	\$	\$
Outstanding contract				
Buy Australian dollar				
- Sell Singapore dollar	-	-	2,234,865	(70,163)
Buy British pound				
- Sell Singapore dollar	-	-	3,349,082	19,689
- Sell United States dollars	1,352,825	31,292	2,336,769	(33,725)
Buy Euro				
- Sell Singapore dollar			1,591,396	(8,995)
- Sell United States dollars	503,019	17,603	8,812,820	(140,589)
Buy Japanese yen				
- Sell Singapore dollar	802,997	(10,877)	10,671,591	(772,772)
- Sell United States dollars	4,103,813	(1,192)	6,444,408	(71,016)
Buy Singapore dollars				
- Sell British pound	-	-	11,802,150	(238,903)
- Sell Euro	-	-	17,681,016	(4,691)
- Sell Japanese yen	1,599,720	14,303	27,209,874	960,812
- Sell Thai Baht	-	-	8,717,404	(157,648)
- Sell United States dollars	87,661,508	1,488,262	399,640,739	(11,874,088)
Buy United States dollars				
- Sell British pound	6,337,917	(127,997)	10,876,329	(151,941)
- Sell Euro	4,138,169	(106,970)	27,574,816	1,044,105
- Sell Japanese yen	13,608,595	(106,239)	20,933,222	1,508,233
- Sell Norwegian krone	1,836,582	9,919	2,769,795	117,545
- Sell Singapore dollars	29,406,012	(367,887)	18,588,400	198,199
Others	15,486,734	(23,515)	19,677,571	172,227
	166,837,891	816,702	600,912,247	(9,503,721)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

22. Commitments

(a) Capital commitments

Capital expenditures contracted for at the balance sheet date but not recognised in the financial statements are as follows:

	2017 \$	2016 \$
Property, plant and equipment	<u>15,268,204</u>	9,581,785

(b) Operating lease commitments – Where the Authority is a lessee:

The Authority leases a number of office facilities under non-cancellable operating lease agreements. The leases typically run for an initial period of two years, with an option to renew the lease after that date. Lease payments are usually increased annually to reflect market rentals.

Payment recognised as an expense during the year:

	2017 \$	2016 \$
Minimum lease payments under non-cancellable operating leases	<u>12,807,588</u>	12,805,623

The future minimum lease payables under non-cancellable operating leases contracted for at the balance sheet date but not recognised as liabilities, are as follows:

	2017 \$	2016 \$
Not later than one year	12,538,867	12,719,041
Between one and five years	3,920,207	13,642,670
Later than five years	-	-
	<u>16,459,074</u>	26,361,711

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

22. Commitments (continued)

(c) Operating lease commitments – Where the Authority is a lessor:

The Authority leases out rental space and buildings under non-cancellable operating leases.

During the year, the Authority recognised \$3,158,702 (2016: \$3,276,700) of rental income from non-cancellable operating leases.

The future minimum lease receivables under non-cancellable operating leases contracted for at the balance sheet date but not recognised as receivables, are as follows:

	2017 \$	2016 \$
Not later than one year	1,853,818	1,939,122
Between one and five years	2,408,533	2,749,187
Later than five years	<u>2,590,940</u>	3,127,299
	<u>6,853,291</u>	7,815,608

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. 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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

Funds with fund managers (continued)

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.

(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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(i) Currency risk (continued)

The quoted equity securities managed by fund managers denominated in currencies other than the Authority’s functional currency comprise the following:

	2017	2016
	\$	\$
Australian Dollars	1,283,872	2,009,254
Euro	6,749,565	24,774,158
Hong Kong Dollars	8,482,684	7,865,931
Korean Won	3,543,514	7,364,032
Thai Baht	-	4,337,549
US Dollars	58,031,145	76,258,746
Various other foreign currencies	36,157,804	66,001,418
	<u>114,248,584</u>	<u>188,611,088</u>

The quoted debt securities managed by fund managers denominated in currencies other than the Authority’s functional currency comprise the following:

	2017	2016
	\$	\$
Australian Dollars	-	3,422,681
Euro	-	7,927,003
Sterling Pound	-	3,686,015
US Dollars	108,203,217	290,674,832
Various other foreign currencies	-	2,193,534
	<u>108,203,217</u>	<u>307,904,065</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(i) Currency risk (continued)

Cash and cash equivalents managed by fund managers denominated in currencies other than the Authority’s functional currency comprise the following:

	2017	2016
	\$	\$
Euro	749,867	832,150
US Dollars	19,552,028	36,890,733
Various other foreign currencies	1,969,273	1,068,173
	<u>22,271,168</u>	<u>38,791,056</u>

Available-for-sale equity securities, managed by fund managers

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 and assuming that the equity securities are not impaired, the increase/ (decrease) in the fair value of equity securities in other comprehensive income and presented as fair value reserve in the consolidated statement of changes in reserves would be as follows:

	2017	2016
	\$	\$
+5% scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	<u>5,712,429</u>	<u>9,430,554</u>
-5% scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	<u>(5,712,429)</u>	<u>(9,430,554)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(i) Currency risk (continued)

Other monetary assets – debt securities, cash and cash equivalents

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 monetary assets in income or expenditure would be as follows:

	2017 \$	2016 \$
+5% scenario		
Managed by fund managers		
Debt securities	5,410,161	15,395,203
Cash and cash equivalents	1,113,558	1,939,553
	<u>6,523,719</u>	<u>17,334,756</u>
Cash and cash equivalents, managed internally	197,033	168,203
	<u>6,720,752</u>	<u>17,502,959</u>
-5% scenario		
Managed by fund managers		
Debt securities	(5,410,161)	(15,395,203)
Cash and cash equivalents	(1,113,558)	(1,939,553)
	<u>(6,523,719)</u>	<u>(17,334,756)</u>
Cash and cash equivalents, managed internally	(197,033)	(168,203)
	<u>(6,720,752)</u>	<u>(17,502,959)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. 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.

Available-for-sale 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 debt securities in other comprehensive income and presented as fair value reserve in the consolidated statement of changes in reserves by the following amounts:

	2017 \$	2016 \$
+100 basis point scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	(5,696,678)	(12,062,434)
-100 basis point scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	5,973,401	12,066,290

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(ii) Interest rate risk (continued)

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:

	2017	2016
	\$	\$
+100 basis point scenario		
Income or expenditure	50,507	95,208
-100 basis point scenario		
Income or expenditure	(50,507)	(95,208)

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:

	2017	2016
	\$	\$
+100 basis point scenario		
Income or expenditure	-	2,059,845
-100 basis point scenario		
Income or expenditure	-	(2,260,668)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(ii) Interest rate risk (continued)

The effective interest rates 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:

	2017	2016
	\$	\$
Fixed rate		
Maturing in less than 1 year	14,001,308	109,155,577
Maturing between 1 to 5 years	134,057,199	197,471,806
Maturing in more than 5 years	38,806,538	115,783,277
Floating rate		
Repricing in less than 3 months	4,280,995	6,081,372
	191,146,040	428,492,032

(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 by an external investment consultant on a quarterly basis.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(iv) Price risk

Impaired available-for-sale equity securities, managed by fund managers and managed internally

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 fair values of the equity securities in other comprehensive income and presented as fair value reserve in the consolidated statement of changes in reserves and income or expenditure by the following amounts:

	2017	2016
	\$	\$
+5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	(4,356)	(443,900)
Income or expenditure	254,755	817,392
-5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	-	-
Income or expenditure	(250,399)	(373,492)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(a) Market risk (continued)

(iv) Price risk (continued)

Available-for-sale equity securities, managed by fund managers and managed internally, not impaired

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 fair values of the equity securities in other comprehensive income and presented as fair value reserve in the consolidated statement of changes in reserves and income or expenditure by the following amounts:

	2017	2016
	\$	\$
+5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	5,618,279	9,359,937
-5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	(5,618,279)	(8,621,408)
Income or expenditure	-	(738,529)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(b) Credit risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Authority.

As at the balance sheet date, loans and receivables include the following items:

	2017	2016
	\$	\$
Trade receivable (Note 8)	49,142,432	45,021,166
Deposits (Note 9)	278,316	190,278
Other receivables (Note 9)	1,332,396	763,024
Amount due from associate & trust funds (Note 9)	2,596,904	4,783,260
Interest receivable (Note 9)	2,338,114	4,760,323
Loans and receivables	55,688,162	55,518,051

The Authority has a credit policy in place which establishes credit limits for customers and monitors their balances on an on-going basis.

The Authority establishes an allowance for impairment that represents its estimate of incurred losses in respect of trade and other receivables. The main component of this allowance is a specific loss component that relates to individually significant exposures.

The allowance account in respect of trade and other receivables is used to record impairment losses unless the Authority is satisfied that no recovery of the amount owing is possible. At that point, the financial asset is considered irrecoverable and the amount charged to the allowance amount is written off against the carrying amount of the impaired financial asset.

Cash and fixed deposits are placed with banks and financial institutions which are regulated.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(b) Credit risk (continued)

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.

At 31 December 2017, the following financial assets were exposed to credit risk: investment in debt securities, receivables on sale of financial instruments, forward foreign exchange purchases, cash and cash equivalents, derivative financial assets and other receivables. The total carrying amount of financial assets exposed to credit risk amounted to \$627,168,190 (2016: \$480,698,518).

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. Given these credit ratings, except for the impaired securities as described in Note 7, management does not expect any counterparty to fail to meet its obligations.

At the balance sheet date, the geographical concentration of the investments in available-for-sale debt securities managed by fund managers is disclosed in Note 7(b). Other than the abovementioned, there are no other areas that the Authority is exposed to significant concentration of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset on the consolidated 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 Northern Trust Company, the Authority’s custodian of the portfolio of investments placed by fund managers.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(c) Liquidity risk (continued)

Funds with fund managers (continued)

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 15.

(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, and quoted equity securities managed internally) 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 swaps is based on quotations from independent third party vendors and sources that apply fair value techniques. These instruments are classified as Level 2.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

23. Financial risk management (continued)

(e) Financial instruments by category

The carrying amounts of financial assets measured at fair value (available-for-sale and derivative financial instruments) are disclosed on the face of the balance sheet. The carrying amounts of financial instruments at amortised cost approximate their fair values.

The aggregate carrying amounts of loans and receivables and financial liabilities at amortised cost are as follows:

	2017	2016
	\$	\$
Loans and receivables	1,053,719,118	648,126,274
Financial liabilities at amortised cost	36,643,722	40,144,919

24. 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

	2017	2016
	\$	\$
Provision of dumping and monitoring services to Statutory Boards	37,579,440	41,535,810
Provision of agency and project management services to Ministry	14,941,541	8,898,802

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

24. Related party transactions (continued)

(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.

Key management personnel compensation is as follows:

	2017	2016
	\$	\$
Salary and short-term employee benefits	5,277,229	4,602,213
CPF contributions	263,073	249,681
Directors' fees	185,635	197,255
	5,725,937	5,049,149

25. Funds managed/held on behalf of others - Funds held in trust

Funds held in trust and managed by the Authority comprise the following:

	2017	2016
	\$	\$
Singapore Stranded Seafarers' Fund	338,450	337,363
Agency funds held in trust of Ministry of Transport	28,688,062	40,859,483
Aids to Navigation Fund	9,804,414	9,608,686
	38,830,926	50,805,532

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

25. Funds managed/held on behalf of others - Funds held in trust (continued)

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.

(b) The assets and liabilities of the SSSF as at 31 December are as follows:

	2017	2016
	\$	\$
Accumulated fund	338,450	337,363
Current assets		
Interest receivable	643	646
Cash and cash equivalents	337,807	336,717
	338,450	337,363

(c) The results of the SSSF for the year ended 31 December are as follows:

	2017	2016
	\$	\$
Interest income	1,087	1,089
Surplus for the year	1,087	1,089
Accumulated fund as at 1 January	337,363	336,274
Accumulated fund as at 31 December	338,450	337,363

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

25. Funds managed/held on behalf of others - Funds held in trust (continued)

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:

	2017	2016
	\$	\$
Accumulated fund	28,688,062	40,859,483
Current assets		
Cash at bank	30,571,984	43,656,835
Amount due from various Government bodies	270	576
GST receivable	13,326,125	13,346,827
	43,898,379	57,004,238
Current liabilities		
GST payable	(15,199,208)	(16,144,755)
Amount due to various Government bodies	(11,109)	-
Net assets	28,688,062	40,859,483

- (c) The results of the agency funds held in trust for the year ended 31 December are as follows:

	2017	2016
	\$	\$
Grants received	645,511,702	429,155,390
Interest income	91,362	53,172
	645,603,064	429,208,562
Grants disbursed	(643,276,276)	(380,652,460)
Agency fees paid/payable	(14,498,209)	(8,468,737)
(Deficit)/surplus for the year	(12,171,421)	40,087,365
Accumulated fund as at 1 January	40,859,483	772,118
Accumulated fund as at 31 December	28,688,062	40,859,483

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

25. Funds managed/held on behalf of others - Funds held in trust (continued)

Aids To Navigation Fund (“ANF”)

- (a) The Co-operative Mechanism, launched in 2007, is the key platform for the littoral States, user States, stakeholders, and the industry to exchange information, and share their perspectives on issues related to safety of navigation and environment protection in the Straits of Malacca and Singapore (SOMS). The ANF, one of three components of the Co-operative Mechanism, receives direct financial contributions from the international maritime community to maintain critical marine navigational aids in the SOMS. The 14 ANF Committee members are China, India, Japan, Republic of Korea, Saudi Arabia, United Arab Emirates, the International Foundation for Aids to Navigation (IFAN), International Maritime Organization (IMO), Malacca Straits Council, The Nippon Foundation and Witherby Publishing Group, and the three littoral States.

Singapore took over the Chairmanship of ANF on 1 January 2013 for a period of three years ending 31 December 2016. Chairmanship would be extended to financial year ending 31 December 2017.

On 1 January 2018, the Chairmanship of ANF would be transferred to Malaysia.

- (b) The assets and liabilities of the ANF as at 31 December are as follows:

	2017	2016
	\$	\$
Accumulated fund	9,804,414	9,608,686
Current assets		
Cash at bank	9,678,965	9,744,226
Other receivables	125,499	131,241
	9,804,464	9,875,467
Current liabilities		
Other payables	(50)	(266,781)
Net assets	9,804,414	9,608,686

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2017

25. Funds managed/held on behalf of others - Funds held in trust (continued)

Aids To Navigation Fund ("ANF") (continued)

(c) The results of the ANF for the year ended 31 December are as follows:

	2017	2016
	\$	\$
Contribution received	1,673,023	527,969
Interest income	4,656	5,019
	<u>1,677,679</u>	<u>532,988</u>
Maintenance repair and miscellaneous expenses	(751,505)	(1,191,030)
Surplus/(deficit) for the year	926,174	(658,042)
Accumulated fund as at 1 January	9,608,686	10,032,587
Exchange difference on translation of accumulated funds	(730,446)	234,141
Accumulated fund as at 31 December	<u>9,804,414</u>	<u>9,608,686</u>

26. Authorisation of financial statements

These financial statements were authorised for issue by the Board of Members on 15 March 2018.



460 Alexandra Road #19-00 PSA Building Singapore 119963