

A SUSTAINABILITY /
INTEGRATED REPORT



MPA
SINGAPORE



BUILDING

A FUTURE READY
MARITIME SINGAPORE



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ABOUT THIS REPORT

This report marks MPA's second Sustainability Report. This report is prepared in accordance with option Comprehensive of the Global Reporting Initiative's G4 Guidelines and aligned to the principle-based International Integrated Reporting <IR> Framework issued by the International Integrated Reporting Council (IIRC). [G4-30, G4-32]

This Annual Report, together with the Financial Report that is published separately, covers material information pertaining to all our operations during the financial year from 1 January 2015 to 31 December 2015. Together, the Annual Report and the Financial Report constitute the Integrated Report <IR>. [G4-17, G4-28]

For this Annual Report, MPA's material sustainability issues were identified in accordance to the principles set out in the materiality standards of AA1000, GRI and IIRC. MPA's materiality assessment was facilitated by an independent sustainability expert and was carried out via a well thought-out process led by MPA's senior management. We aim to have our Sustainability Report assured in the middle term. [G4-18, G4-33]

MPA monitors air and water quality and controls emissions as part of its environmental stewardship. Wherever possible, we seek to minimise environmental impact by deploying the best available technologies and management practices to comply with international standards. [G4-14]

This report covers all of MPA's operations, with data measured from 2015 and prior. There were no significant organisational changes during the current reporting period. [G4-13]

We welcome your feedback on this report. For any feedback or enquiries, please contact Ms. Goh Siew Min at goh_siew_min@mpa.gov.sg. [G4-31]



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“...with all the measures in place and industry cohesion, we will continue the Maritime Singapore Legacy”



CHAIRMAN'S FOREWORD

With a slowdown in the global economy caused in part by weak trade demand in Europe and a cooling of the Chinese economy, the maritime industry had a year that was not all that smooth sailing.

The Port of Singapore found itself facing headwinds generated by the global economic volatility, slower trade growth, shifts in shipping alliances, excess shipping capacity and a relentless escalation in container vessel size. Despite this, the Port of Singapore managed to put in a steady performance,

In 2015, the Port of Singapore held on to its position as the world's largest transshipment hub and second largest container port by throughput volume. Singapore is still the world's largest bunkering hub and possesses the fifth largest ship registry in the world. Our maritime cluster is also growing with more than 130 shipping groups currently based here. In addition, the latest study by Oslo-based Menon Business Economics as well as the Xinhua-Baltic Exchange International Shipping Centre Development Index both ranked Singapore ahead of other centres like London and Shanghai as a world-leading international maritime centre.

In truth, Maritime Singapore is closely linked to the Singapore economy. The maritime industry in Singapore generates tremendous value for the national economy. A recent economic study by MPA revealed that among all the business sectors in Singapore, the port and maritime sectors are among the biggest contributors to the Singapore economy in terms of spinoff value going back to the economy.

In 2016, MPA will be celebrating its 20th year of leading the development of Singapore's maritime sector. Looking back over the past two decades, we are proud of the industry's achievements. There is no question, however, that much of the credit for these achievements goes to our industry stakeholders who worked hand in hand with us over the years to carefully shape and build Maritime Singapore.

For MPA, this anniversary serves as a reminder of the need to continue to look towards the future. We recognise that for Singapore to maintain our position as a premier global hub port and an international maritime centre, Maritime Singapore needs to continually lead the rest of the world in terms of efficiency and sustainability. This means anticipating and identifying future challenges – both local and international – and retaining and attracting a quality maritime workforce.

To achieve that, MPA will need to continue to work closely with our industry partners. Only through strong partnerships can we build up our long-term competitiveness. Indeed, as an organisation, we have already stepped up a gear in this direction. First and foremost, we have joined hands with the Ministry of Transport and PSA to form the Hub Port Competitiveness Committee. This committee will work closely with port operators in Singapore to enhance the future competitiveness of the Port of Singapore. There is no doubt that this strategic move will strengthen our position as a hub port in the long term.

Also, to ensure the continued success of the Port of Singapore, MPA is investing in future capabilities to meet the growth of the industry. Our mega Next Generation Port located within the Tuas Maritime Hub is designed to answer Singapore's future maritime needs. The Tuas Maritime Hub extends beyond the smart port to adjoining areas, to make the most of available land both above and underground. In addition, it will feature new cutting-edge technologies such as fully automated controls, remote sensors and unmanned vehicles for future ready port operations.

On top of these initiatives, we are also cultivating a strong pool of maritime talent to future-proof Maritime Singapore. Our focus is on attracting and grooming a future pipeline of talents for the maritime sector so that Maritime Singapore is steered and run by the best.

Despite the present lacklustre outlook for the maritime cluster, we continue to keenly build on the Maritime Singapore success story by crafting future ready measures and striving for greater industry cohesion.

I would like to express my heartfelt gratitude to all our industry stakeholders for working closely with us and contributing to the growth and success of Maritime Singapore over the past 20 years. Together, we can build a future ready Maritime Singapore.

Mr Lucien Wong,
Chairman, MPA

CHIEF EXECUTIVE'S FOREWORD

2015 has been a challenging year for the maritime industry as it faces growing economic headwinds with slower trade growth, excess capacity and depressed freight rates. In spite of this, guided by the MPA Future Ready framework and working alongside our stakeholders, MPA continued to work with the industry to develop Singapore into a global hub port and international maritime centre.

As the industry prepares itself for the ever growing size of container vessels and formation of mega-alliances, MPA continues to invest in future port infrastructure, with Pasir Panjang Terminal Phases 3 and 4 officially launched in 2015 by Prime Minister Lee Hsien Loong. This marked another milestone for us as not only is the terminal equipped with leading-class infrastructure, the expansion will also increase our operational capacity to a total of 50 million TEUs by the latter part of this decade.

In view of growing regional competition, it is important that we maintain our competitive advantage by working closely with our industry partners to enhance efficiency and productivity. We have been supporting PSA in their efforts to improve productivity through the use of automation, as well as Jurong Port in realising their green berths status.

Singapore achieved a record low incident rate last year, but recent incidents such as the "Sea Prince" Batam ferry incident underscores the importance of not taking safety for granted. Hence, the National Maritime Safety at Sea Council was formed to drive national efforts for maritime safety. Events such as Safety@Sea Week and the Maritime Safety Forum were also held to promote safety practices with the local and international maritime community.

As a testament to MPA's efforts in building a vibrant maritime eco-system, Singapore

was recognised as the top international shipping centre by Menon Business Economics and Xinhua-Baltic Exchange. Even so, we continue to proactively engage the industry by organising quarterly dialogues with shipping companies. Enhancements were also made to the Maritime Sector Incentive schemes. In addition, we supported the establishment of the Singapore War Risks Mutual, thereby increasing the types of marine insurance products offered in Singapore.

We continue to be active participants of the International Maritime Organization and various regional and international fora, such as the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP), and the International Hydrographic Organization. As a strong endorsement of our contributions, Singapore was successfully re-elected into the IMO Council for a 12th consecutive term. We continue to affirm good relations with our overseas counterparts through platforms like the Distinguished Visitors Programme and Maritime Visitors Programme.

MPA's push to promote maritime thought leadership continued with the launch of the inaugural Advanced Maritime Leaders Programme, as well as the Port Authorities Roundtable in 2015. Further to these, MPA participated and contributed to several think tank events, such as the World Ocean Council's Sustainable Ocean Summit. To encourage maritime innovation, MPA established strategic partnerships with various agencies, including signing MOUs with A*STAR, IBM, and Research Council of Norway. To further encourage knowledge exchange, we held events including the inaugural Singapore Maritime Technology Conference 2015, and the 2nd Smart Port Hackathon.

We stepped up our efforts to attract and groom a pipeline of maritime talent. Given the current climate, we also need to find ways to retain talent in the sector and emplace new talent. Led by MPA, the Sectoral Tripartite Committee for Transport (Sea) spearheaded several key SkillsFuture initiatives to grow the talent pool. We have also committed \$4 million over the next three years to help local seafarers advance their careers through programmes such as the Cadet Allowance Reimbursement.

To strengthen public awareness of Maritime Singapore, new public outreach programmes were introduced, such as the first SMW Maritime Heritage Exhibition, Maritime Youth Club and the second edition of the Singapore Maritime Trails. MPA also partnered the Singapore Shipping Association and National Geographic Channels to produce a documentary and coffee table book to showcase Maritime Singapore in celebration of Singapore's Golden Jubilee. The 10th Singapore Maritime Week was successfully organised, attracting a record 30 events.

Last year, MPA achieved a significant milestone in our organisational excellence pursuit as we successfully renewed our People Developer certification and garnered two new certifications – the Innovation-Class and Service Class. Committed to operational excellence, we completed the Ops Tech Roadmap which will guide us in leveraging new technologies as a force multiplier to further improve operational readiness and responsiveness.

MPA continued to forge strong partnerships with key stakeholders and industry partners through active engagements. Various platforms were also organised to obtain feedback on service improvements, and share best



MPA will continue to be a champion for Maritime Singapore. We will ensure that we are well-equipped for the challenges ahead. Together, with strategic collaborations with our stakeholders, we will continue to pave the way.

practices in areas such as Enterprise Risk Management and Integrated Reporting. Our efforts contributed to MPA clinching top spot in the Pro-Enterprise Award for the 4th consecutive time. At the heart of all these efforts is the dedication of our officers. We continue to work hard in transforming MPA into a choice employer and developing our people, from the commissioning of the Vessel Traffic Simulator that enhances the training of VTM officers, to the launch of the inaugural MPA FIRST Values Week to inculcate a strong MPA FIRST culture.

Looking ahead, the maritime industry faces a confluence of cyclical and structural changes, which in turn present

the industry with challenges, as well as opportunities. It is therefore crucial that we continue to work closely with our partners to develop our longer-term vision and strategies.

We will continue to invest in future capacity and to build up our future capabilities to stay ahead of the competition. Developmental works have begun for the Next Generation Port 2030 initiative, providing an excellent opportunity to test new concepts and enhance Singapore's competitive advantage as a global hub port. We will further develop a vibrant IMC eco-system, raise Singapore's competitiveness as a destination for

business, and strengthen Singapore's suite of maritime services.

Last but not least, we will work with other countries and organisations to play an active role in key maritime issues, as well as work towards being an influential voice in the international maritime community. MPA will continue to be a champion for Maritime Singapore. We will ensure that we are well-equipped for the challenges ahead. Together, with strategic collaborations with our stakeholders, we will continue to pave the way.

Mr Andrew Tan,
Chief Executive, MPA

BOARD OF DIRECTORS



Mr Lucien Wong (Chairman)
Chairman and Senior Partner,
Allen & Gledhill LLP



Mr Andrew Tan
Chief Executive,
Maritime and Port Authority
of Singapore



Mr Esben Poulsen
President,
Singapore Shipping Association



Mr Wong Weng Sun
President & Chief Executive Officer,
SembCorp Marine Ltd



RADM Lai Chung Han
Chief of Navy,
Republic of Singapore Navy



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



Mr Carl Krogh Arnet
Chief Executive Officer,
BW Offshore Ltd



Mr Luke Goh
Senior Director, PS21 Office, Public
Service Division, Prime Minister's Office/
Institute Director (Institute of Governance
and Policy), Civil Service College



Mrs Quek Bin Hwee
Vice Chairman,
Markets and Industries,
PricewaterhouseCoopers LLP



Mr Vincent Lien
Director,
Wah Hin & Company Pte Ltd



BG (NS) Ishak Ismail
Chief Executive Officer,
Defence Services, CWT Limited



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

BOARD OF COMMITTEES

INVESTMENT COMMITTEE

Chairman
Mr Lucien Wong

Members
Mr Andrew Tan
Mr Vincent Lien
Mr Patrick Phoon (till 31 Jul 15)
Mr Wong Weng Sun
Mrs Quek Bin Hwee (from 27 Aug 15)

Secretary
Director (Corporate Development)/CFO

AUDIT REVIEW COMMITTEE

Chairman
Mr Vincent Lien
Dato' Jude Benny (till 31 Mar 15)

Members

Mr Carl Arnet
Mr Luke Goh
RADM Lai Chung Han
Mrs Quek Bin Hwee

Secretary
Assistant Director (Internal Audit)

WELFARE COMMITTEE FOR SEAMEN

Chairman
Mr Norifumi Yamamoto (till 21 Jul 15)
BG (NS) Ishak Ismail (from 22 Jul 15)

Members
Mr Kam Soon Huat
Mr Esben Poulsen
Mr Teo Choo Wee (from 27 Aug 15)

SSA

Capt Anuraj Singh
Deputy General Manager
Maritime Human Resources
NYK Shipmanagement Pte Ltd

PSA Corporation

Mr Lee Siak Quee
Assistant Vice President
Keppel Terminal

Jurong Port Pte Ltd

Captain Hemant Gupta
Senior Manager
Operations Department

Seaman's Missions

Rev Peter Manimuthu
Port Chaplain
Mission to Seafarers

Rev Schmidt Christian
Port Chaplain
International Lutheran Seamen's Mission

MPA

Director (Shipping)
Director (Corporate Development)/CFO

Secretary
Deputy Director (Shipping2)

REGISTRATION COMMITTEE

Chairman
BG (NS) Ishak Ismail

Members
Mr Luke Goh
Mr Kam Soon Huat
Mr Norifumi Yamamoto (till 21 Jul 15)
Mr Teo Choo Wee (from 27 Aug 15)

Secretary
Director (Shipping)

MINT FUND STEERING COMMITTEE

Chairman
Mr Wong Weng Sun

Members
Mr Andrew Tan
Mr Carl Arnet
RADM Lai Chung Han
Mr Patrick Phoon (till 31 Jul 15)
Mr Esben Poulsen (from 27 Aug 15)

Industry Representative
Prof Lui Pao Chuen
Advisor
National Research Foundation

Secretary
Director (Technology)

SENIOR PERSONNEL BOARD

Chairman
Mr Lucien Wong

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

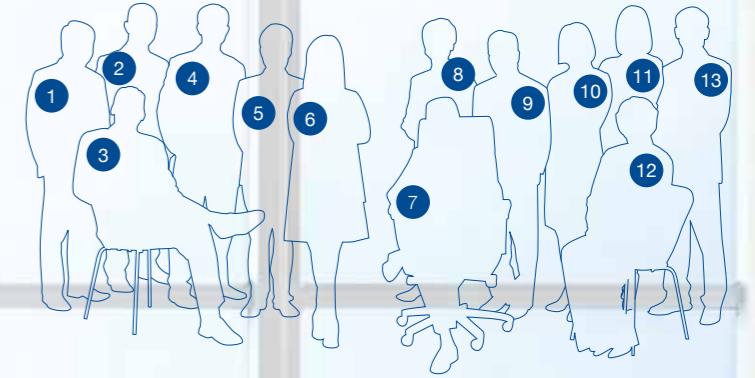
Secretary
Director (Human Resource)

SENIOR MANAGEMENT

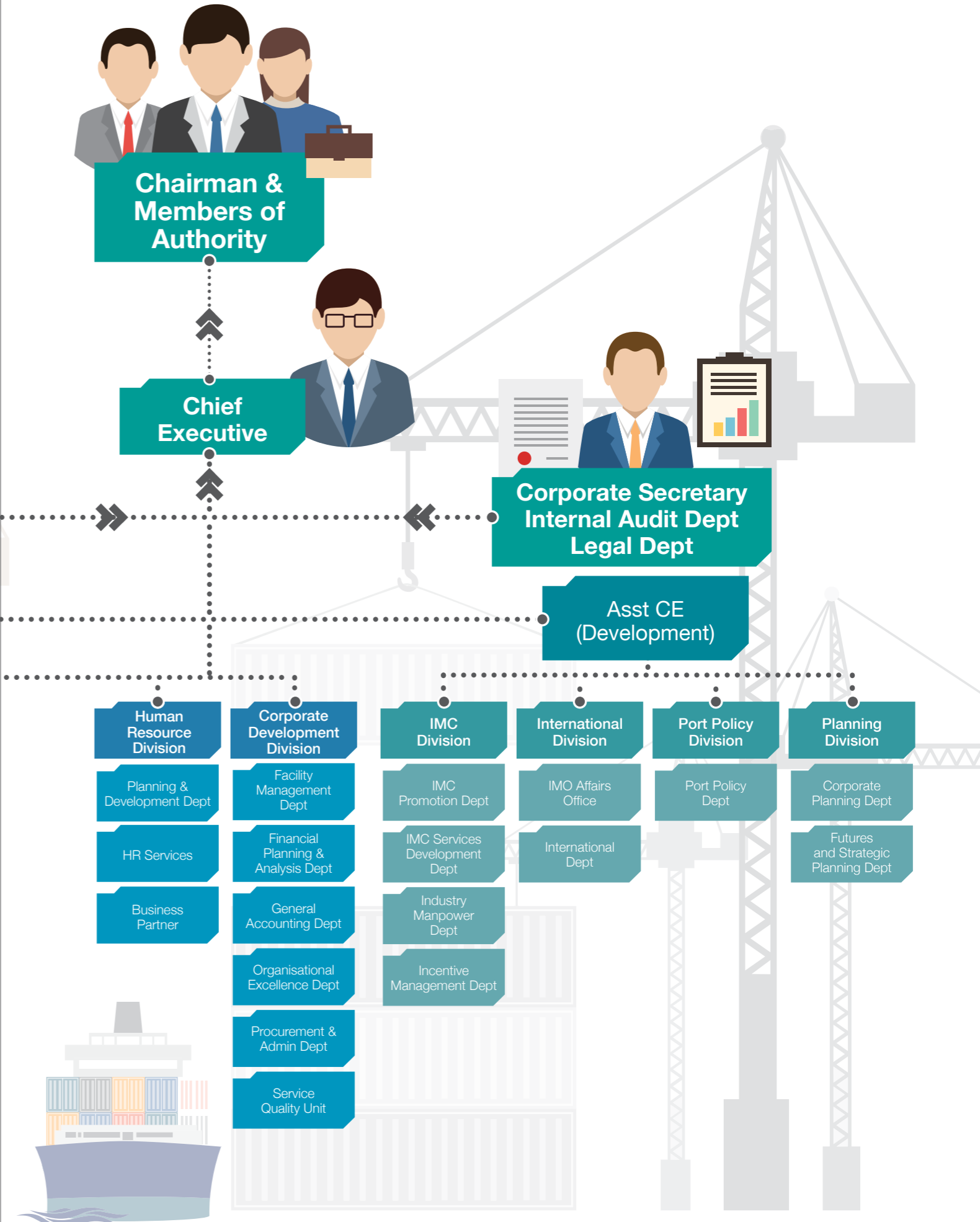
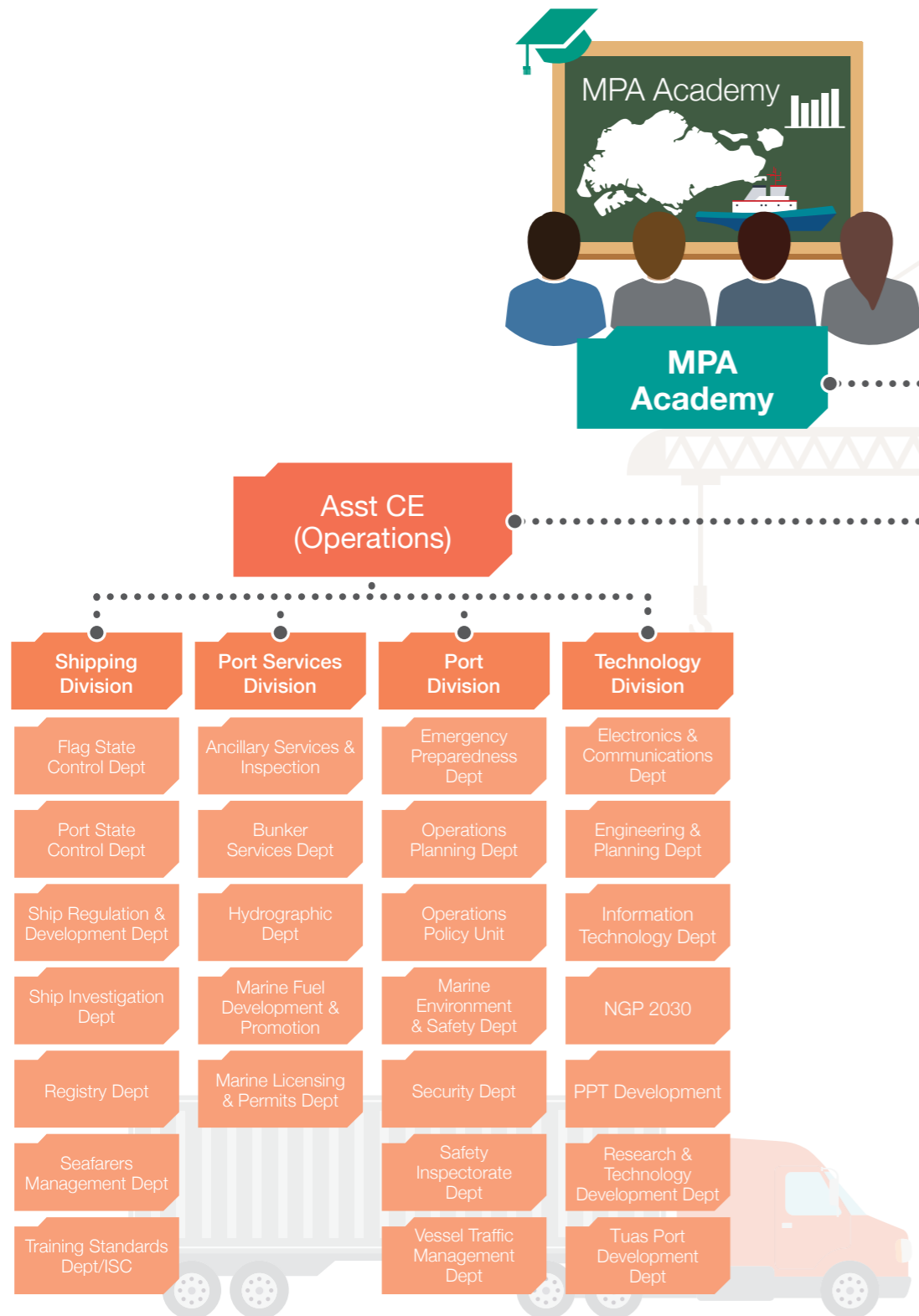
- 1. **Dr Parry Oei**
Director, Port Services Division
- 2. **Mr Tan Suan Jow**
Director, Shipping Division
- 3. **Capt M Segar**
Assistant Chief Executive (Operations)
- 4. **Mr Toh Ah Cheong**
Director, Technology Division
- 5. **Mr Au Kheng Sheng**
Director, Communications & Community Division
- 6. **Ms Yvonne Chan**
Director, Corporate Development Division/
Chief Financial Officer



- 7. **Mr Andrew Tan**
Chief Executive
- 8. **Mrs Ong Seok Bin**
Director, Human Resource Division
- 9. **Capt Khong Shen Ping**
Dean of MPA Academy
- 10. **Ms Angela Png**
Director, International Division
- 11. **Ms Bernice Yeoh**
Director, International Maritime Centre Division
- 12. **Ms Tan Beng Tee**
Assistant Chief Executive (Development)
- 13. **Mr Tan Cheng Peng**
Director, Port Policy Division



MPA'S ORGANISATION STRUCTURE



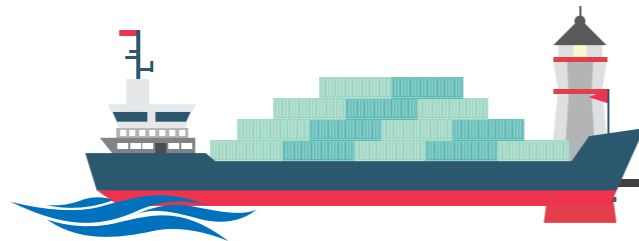
ABOUT MPA

ABOUT THE MARITIME AND PORT AUTHORITY OF SINGAPORE (MPA)

The Maritime and Port Authority of Singapore (MPA) was established on 2 February 1996, with the mission 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 is the driving force behind Singapore's port and maritime development, taking on the roles of Port Authority, Port Regulator, Port Planner, IMC Champion, and National Maritime Representative. MPA partners the industry and other agencies to enhance safety, security and ensures sustainable goals are met. These included the environmental protection in our port waters, facilitate port operations and growth, expand the cluster of maritime ancillary services, and promote maritime R&D and manpower development.

ABOUT THE PORT OF SINGAPORE

The Port of Singapore comprises a number of facilities and terminals that handle a wide range of cargo transported in different forms, including containers as well as conventional and bulk cargo. The MPA is responsible for the overall development and growth of the Port of Singapore, which includes terminal operators, such as PSA Corporation and Jurong Port Pte Ltd.



SINGAPORE RECOGNISED AS A TOP INTERNATIONAL MARITIME CENTRE

MENON Report The leading Maritime Capitals of the World 2015

Source: Menon (2015), The Leading Maritime Capitals of the World

1.		Singapore
2.		London
3.		Oslo
4.		Hong Kong
5.		Shanghai

Xinhua - Baltic International Shipping Centre Development Index Report

Source: 2015 Xinhua-Baltic Exchange ISC Index

1.		Singapore
2.		London
3.		Hong Kong
4.		Rotterdam
5.		Hamburg

EXAMPLES OF RISK [G4-2]

To be viewed as a trusted and reliable port authority, MPA must be able to mitigate enterprise risks and manage unforeseen events. A structured enterprise risk management process allows MPA to do this.

CYBER SECURITY RISKS

As the champion of the Singapore maritime sector, it is vital that we ensure the cyber security resiliency of the maritime critical information infrastructure. Accordingly we have launched many initiatives to enhance our resiliency in this area. Among other things, we have revised our cyber security policy for critical information infrastructures and established and disseminated the Maritime Cyber Security Standards and Maritime Cyber Security Incident Management Framework for the Maritime Cyber Security Network (MCSN). We are currently developing a MCSN portal to provide one-stop information sharing, tracking of security advisories/alerts and reporting of cyber incidents within the MCSN.



MARINE COLLISIONS AND SPILLS

To mitigate the impact of operational risks such as collisions and marine spills in Singapore waters - events that would cause reputational harm to MPA - we launched the annual Safety@Sea campaign in order to instil a strong safety culture among our stakeholders. Since its launch in 2015 the campaign message has reached more than 2,000 masters of vessels and 500 shipping companies. Through this campaign, we hope to promote vigilance at sea, raise safety standards and, most importantly, get everyone in the community to do his part.



SHORTAGE OF LOCAL MARITIME TALENT

A shortage of local maritime talent would adversely affect the capability of the Singapore maritime industry to function efficiently. To address this issue, MPA leads the Sectoral Tripartite Committee for Transport (Sea) to find ways to tackle current manpower gaps in the Singapore maritime industry. The committee has recommended several new initiatives to strengthen manpower development efforts for both seafaring and shore-based sectors. Our manpower initiatives are aligned with the SkillsFuture scheme and can be broadly classified under three key thrusts:

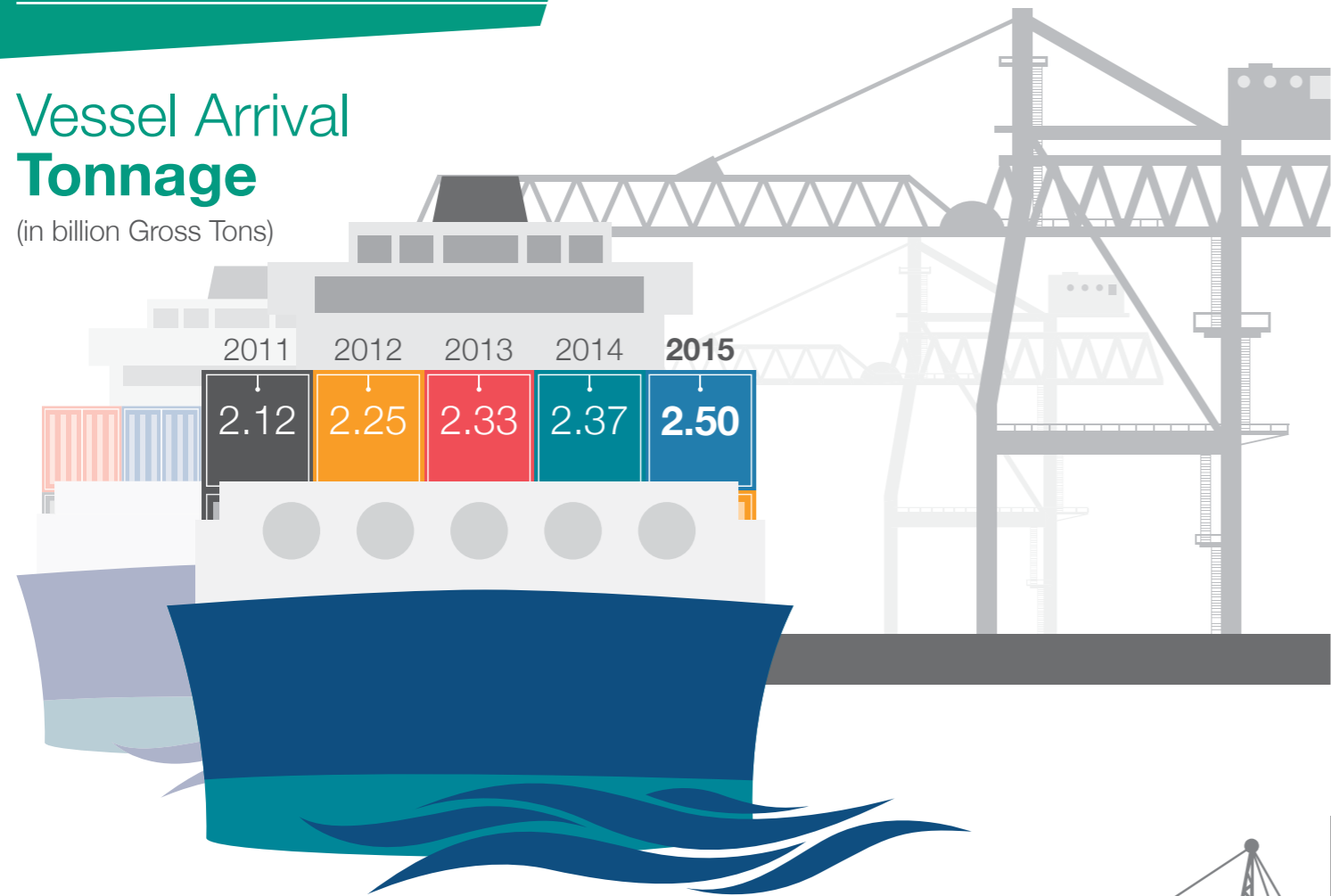
- To profile and promote maritime careers to make them more attractive;
- To grow a pool of maritime talent by creating multiple pathways and multiple entry points;
- To encourage the deepening and mastery of skills by developing career progression pathways.



SINGAPORE 2015 MARITIME PERFORMANCE

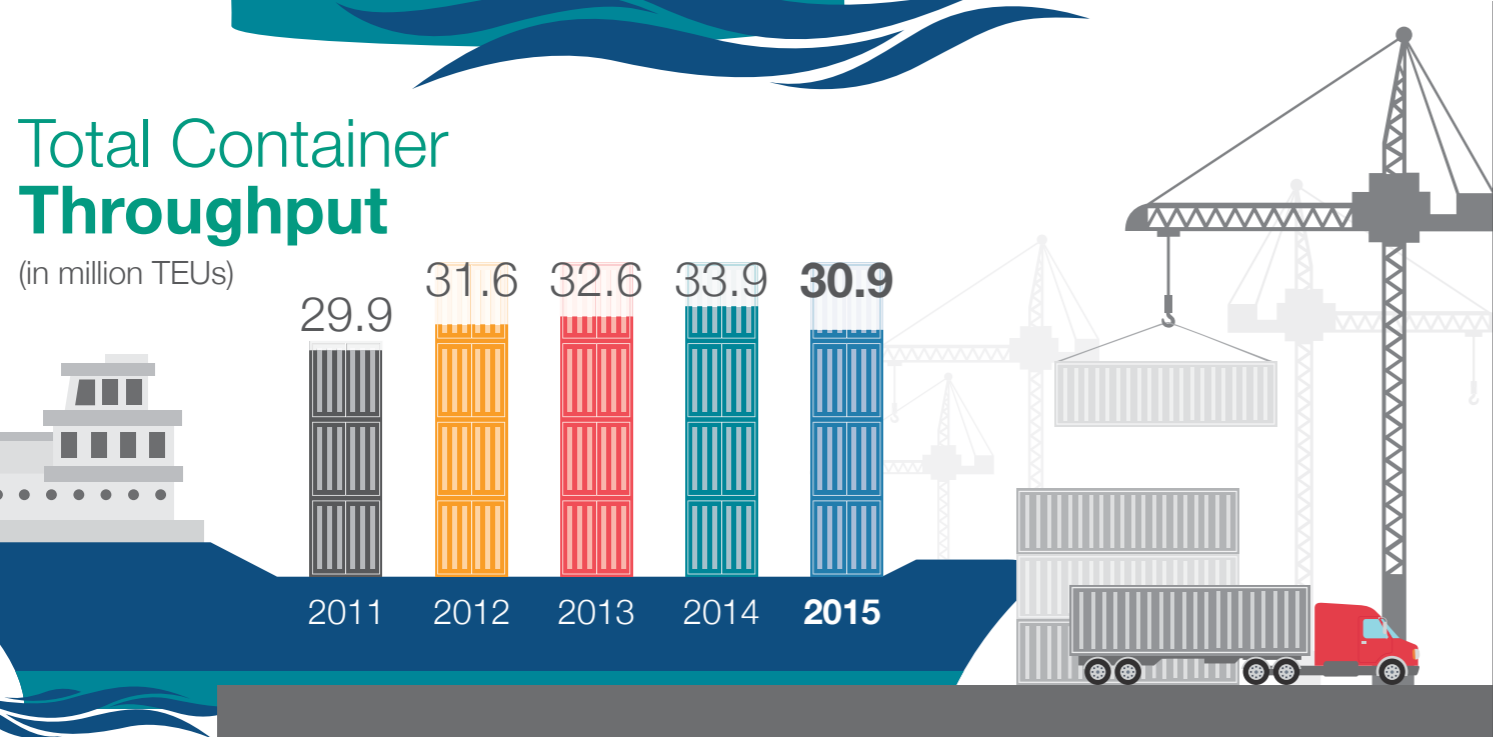
Vessel Arrival Tonnage

(in billion Gross Tons)



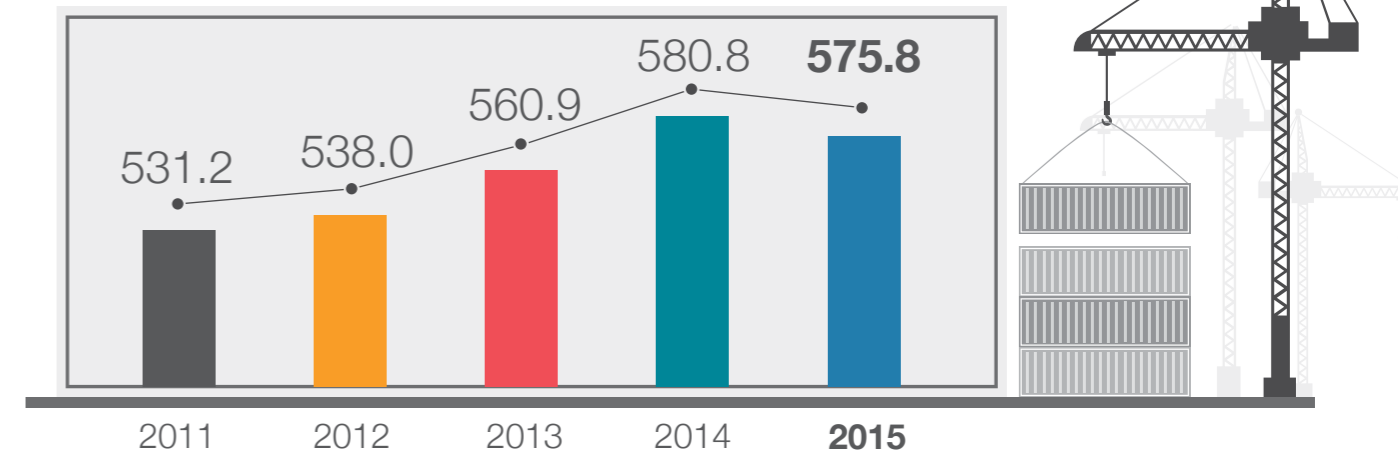
Total Container Throughput

(in million TEUs)



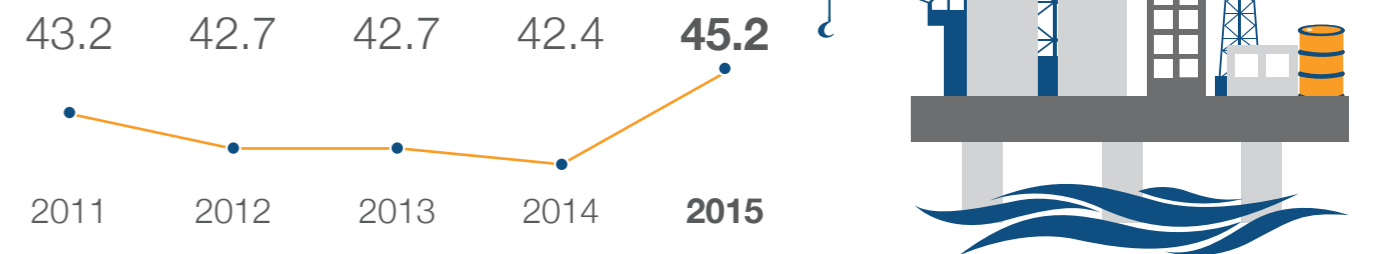
Total Cargo Tonnage

(in million Tonnes)



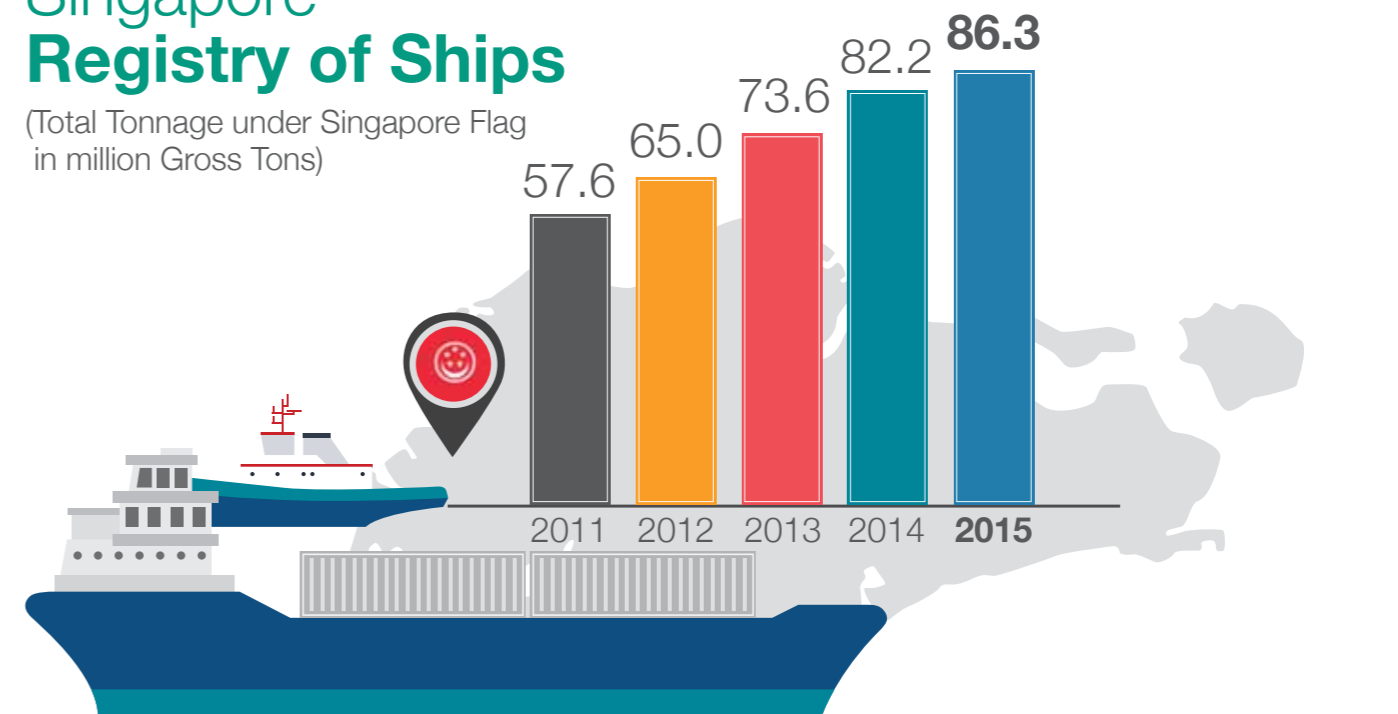
Bunker Sales Volume

(in million Tonnes)



Singapore Registry of Ships

(Total Tonnage under Singapore Flag
in million Gross Tons)



MAPPING KEY MATERIAL ISSUES

BUSINESS MODEL – FUTURE READY FRAMEWORK

MPA applied the AA1000 AccountAbility Principles Standard to identify and prioritise sustainability issues that are material to the organisation. We also applied the principles of the Global Reporting Initiative (GRI) G4 Guidelines and the International

Integrated Reporting <IR> Framework of the International Integrated Reporting Council to determine our key material issues. [G4-18]

In January 2016, the senior management, including the Chief Executive, re-assessed MPA's materiality issues based on AA1000's materiality principles in [G4-48] a session facilitated by an independent

sustainability expert. From the session, the senior management concluded that MPA's materiality issues remain unchanged from those identified earlier. Subsequently, all of these material issues and their respective key performance indicators (KPIs) were mapped to a Future Ready Framework that was developed following an initial materiality assessment conducted in 2015.

A

MATERIAL ISSUES [G4-19, G4-20, G4-21]

- 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

INPUTS

- 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

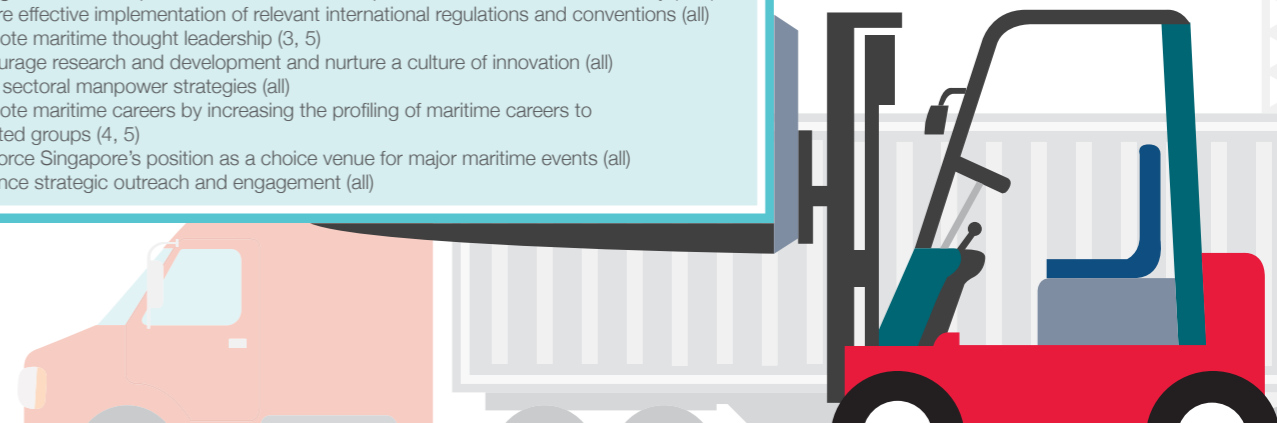
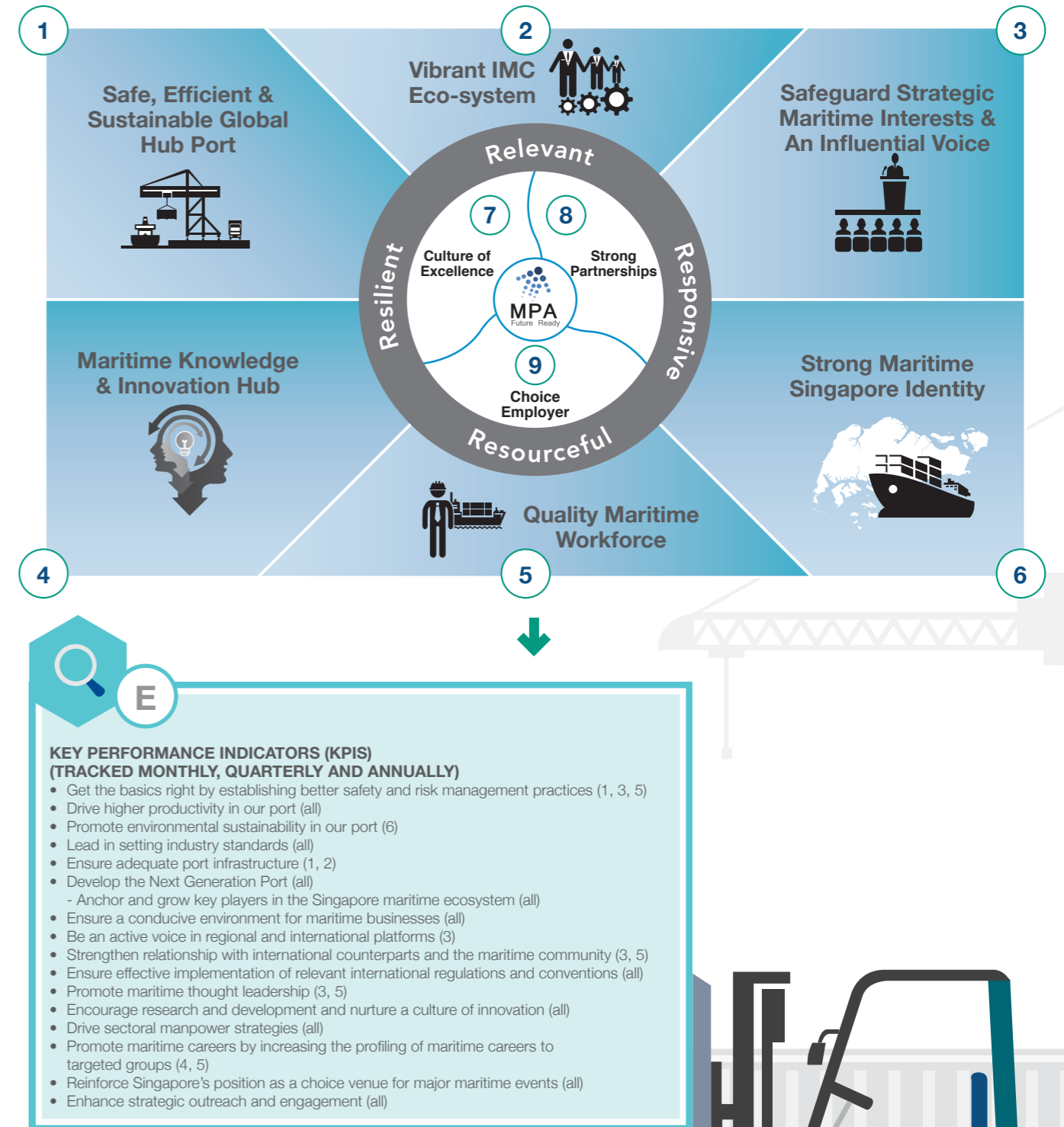
INITIATIVES

- Administration of harbor pilot examination and licensing
- Process for dangerous goods declaration
- Process for vessel pre-arrival notification of security and approval of application for vessel going to restricted/prohibited areas
- Vessel traffic information service
- Administration of the Singapore Registry of Ships
- Administration of MPA's Seafarers Management Department
- 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 for Singapore ships
- Training of port inspectors
- Provision and supervision of maritime, port and simulator-based training services
- Assessment, certification, endorsement and re-validation activities for seafarers
- Provision of facilities management services 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 and sustainable global hub port
- A vibrant IMC ecosystem
- Safeguard strategic maritime interests and an influential voice
- Maritime knowledge and innovation hub
- Quality maritime workforce
- Strong maritime Singapore identity
- Culture of excellence
- Strong partnerships
- Choice employer



SAFE, EFFICIENT & SUSTAINABLE GLOBAL HUB PORT

It is vital for us to stay competitive. We have to adapt constantly and evolve with the changing needs of our customers, business partners, NGOs, maritime regulatory framework, and the environment, to remain a key global hub port.

CHAPTER 1



STAYING AHEAD OF COMPETITION

Across the globe, hub ports are transforming themselves and investing in new infrastructure and technologies to enhance their efficiency and effectiveness. To stay ahead of the competition and ensure sustainability, MPA must keep pace with the growing demand and complexity of port operations through the leverage of technology and use of smart solutions.

QUALITY BUNKERING SERVICES

MPA recognises the importance of enhancing the quality of bunkering services provided by service providers in the Singapore Port. This is especially important as Singapore is the world's top bunkering port, with bunker sales of 45.16 million tons in 2015.

In its role as port regulator, MPA regulates bunker suppliers, craft operators and surveyors. This enables MPA to set quality standards for the delivery of bunkering services.

MPA has implemented accreditation schemes for bunker suppliers. These schemes serve to recognise good practices and deter malpractice in the bunker supply industry.

As part of ongoing efforts to promote bunkering in Singapore, MPA regularly engages the bunker buyers, with the aim of (i) identifying the bunker procurement decision makers for the buyers; (ii) sharing MPA's current and upcoming plans; and (iii) gathering feedback from them on their bunkering experience in Singapore and inputs on how MPA could improve the quality of bunkering services provided by service providers.



To further entrench Singapore's reputation as an efficient and premier bunkering port, MPA announced the mandatory use of the mass flow metering (MFM) system for custody transfer of marine fuel oil from 1 January 2017. Eligible bunker tankers were provided with an incentive grant of \$80,000 to subsidise the cost of installing the system. As at 31 December 2015, 60

bunker tankers have been installed with the MFM system and have been tested and approved for MFM delivery in the Port of Singapore.

In addition, MPA will start licensing bunker surveying companies from 1 January 2017 as part of its efforts to raise the standards of bunker surveying services provided in Singapore.

LNG BUNKERING

With the IMO tightening sulphur emission regulations, MPA is looking at liquefied natural gas (LNG) as an alternative marine fuel.

In 2015, MPA began studying the development of technical standards and operational requirements for LNG bunkering. Subsequently, in May 2015, MPA established a technical committee for LNG bunkering to oversee the development of a national standard for LNG bunkering.

In tandem with these efforts, MPA signed an MOU with the Port of Rotterdam in April 2015 for collaboration on research and development in the areas of service efficiency, optimisation and new developments in the maritime and port sectors, including LNG bunkering.

Currently the ports of Antwerp, Zeebrugge, Rotterdam and Singapore are working to align operational

procedures for LNG bunkering at all four ports. In September 2015, a focus group discussion was held at Rotterdam on this matter. MPA is also collaborating with the Society for Gas as a Marine Fuel (SGMF) to realise the goal of introducing a global LNG bunkering standard.

To further promote clean shipping and strengthen the competitiveness of Singapore's bunkering industry, MPA is working with the maritime industry to introduce LNG bunkering services in the coming years. In early 2017, MPA plans to launch a LNG bunkering pilot programme to test the operational protocols for LNG bunkering operations in Singapore. Towards this end, MPA, together with the Energy Market Authority and the Singapore LNG Corporation, formed a taskforce to address operational and regulatory issues for the implementation of the LNG Bunkering pilot programme. And on 28 July 2015, MPA launched its



first Request for Proposal for interested parties to apply for LNG bunker supplier licences. MPA plans to issue the first LNG bunker supplier licence by early 2016. On 30 September 2015, MPA announced the funding guidelines for the pilot programme, which will allow interested companies to apply for funding of up to \$2 million for each LNG fuelled vessel MPA will fund up to six vessels for the pilot.

OPENING OF PASIR PANJANG TERMINAL PHASE 3 & 4 BY PM LEE HSIEN LOONG



Prime Minister Lee Hsien Loong with Mr Fock Siew Wah, Group Chairman of PSA International, during the opening of Pasir Panjang Terminal 3 and 4

On 23 June 2015, Prime Minister Lee Hsien Loong officially opened the Phase 3 and 4 expansion of the Pasir Panjang Terminal. This expansion feature leading-class infrastructure and the latest port innovations such as zero-emission and fully-automated electric yard crane system. These technologies will help to increase port productivity and when the expansion is fully operational

by the end of 2017, Singapore would be able to handle a total of 50 million TEUs of containers annually.

Costing \$3.5 billion, this project will provide 6,000 metres of quay length and up to 19 metres draft, catering to the next generation of mega container ships.

¹The Society for Gas as a Marine Fuel is a new non-governmental organisation established to promote safety and industry best practices in the use of gas as a marine fuel.

KEEPING SINGAPORE WATERS SAFE

In an age of multiple risks and uncertainty, maintaining the safety and security of our waters and assets is of utmost importance. Besides, as a future ready organisation, MPA must always be prepared for the unexpected. MPA works closely with industry partners and other agencies to enhance safety and security.

KEEPING SEA ROUTES OPEN AND SAFE



As a shipping nation and a major hub port, Singapore must keep shipping routes along the Straits of Malacca and Singapore, as well as between the ports in the straits, safe and secure for ships transporting cargoes and passengers.

The Port of Singapore and the Singapore Strait have always been kept safe. In 2015, the number of marine incidents per 1,000 vessel movements remained low at 0.001 and 0.006 per 1,000 vessel

movements in port waters and the Singapore Strait respectively.

Piracy and sea robbery are a threat to the safety and security of key sea routes used for international shipping. Singapore is highly vigilant against the threat of all piracy and sea robbery. To counter this threat, MPA has been strengthening inter-agency coordination and cooperation so as to better combat piracy and sea robbery in Singapore

waters and in the region. MPA has also stepped up its engagement with key stakeholders, including its counterparts in Indonesia and Malaysia, and is exploring ways to expand counter-piracy/sea robbery cooperation and to fortify the confidence of the wider maritime community.

In addition, MPA provides regular updates on piracy and sea robbery trends to the maritime industry as well as disseminates all bulletins on preventive measures and other advisories related to piracy and sea robbery issued by IMO and the Regional Cooperation Agreement on Combating Piracy and Armed Robbery Against Ships' Asia's Information Sharing Centre.

Singapore also contributes actively to anti-piracy efforts on a global scale. Singapore assumed command of the Combined Task Force (CTF) 151 thrice in 2010, 2011 and 2013. Additionally, each year between 2009 and 2014, Singapore has dispatched a unit from the Singapore Armed Forces to CTF 151 to contain piracy activity in the Gulf of Aden. In 2011, Singapore chaired the 9th Plenary Session of the Contact Group on Piracy off the Coast of Somalia.

PROMOTING SAFETY@SEA SINGAPORE

SAFETY@SEA CAMPAIGN

MPA first launched the Safety@Sea Singapore Campaign in July 2014 to raise awareness of the importance of maritime safety. This was followed by the launch of the inaugural Safety@Sea week, a week-long event centring on information sharing on maritime safety matters.

In 2015, Safety@Sea Week 2015 was held from 17 to 21 August and focused on building on relationships and engaging new sectors of the maritime industry.

The anchor event of Safety@Sea Week 2015 was the Maritime Safety Forum, which provides a platform for industry practitioners to exchange views and hear industry experts speak on safety related topics. The full-day forum featured lectures on topics such as best practices in the areas of navigation and shipboard safety, maritime search and rescue, incident investigation and legal and insurance matters.

Safety@Sea Week 2015 also featured safety workshops for regional ferry operators, MPA's Vessel Traffic Management officers and cruise terminal operator Singapore Cruise Centre Pte

Ltd (SCCPL). In addition, the shipping community and industry partners were brought on a tour of MPA's Port Operations Control Centre at PSA Vista (POCC Vista) to gain an insight of the Vessel Traffic Information System.

As part of Safety@Sea Week 2015, MPA also ran a regional Mass Rescue Operations (MRO) workshop in partnership with the International Maritime Rescue Federation. The MRO workshop was attended by over 50 participants from international organisations such as the IMO, Royal Netherlands Lifeboat Institute and Japan Association of Marine Safety, together with government agencies from China, Indonesia, Malaysia, Mongolia and the Philippines and delegates from the international maritime industry. The goal of the exercise was to raise awareness of the logistics and the fundamentals involved in mounting a large scale mass rescue at sea.

The highlight of the final day of Safety@Sea Week 2015 was the Ferry Rescue Exercise (FEREX) led by MPA. This inter-agency exercise was supported by government agencies and industry experts from the private sector and

involved the participation of over 350 personnel, 15 marine craft and 100 role players. The exercise consisted of a tabletop exercise and a full troop deployment exercise at sea.

Two new posters and a decal were produced in 2015 to support the Safety@Sea Singapore Campaign. These posters promote safety awareness among passengers of regional ferries and launches. These will be incorporated into MPA's safety information kit, which contains safety posters, decals, a pamphlet on safe passage through the Straits of Malacca and Singapore and a small craft guidebook. To date, over 2,500 of these kits have been distributed to about 500 companies. The information kits are mainly distributed by port inspectors and pilots and at maritime safety events.



NATIONAL MARITIME SAFETY AT SEA COUNCIL

The National Maritime Safety at Sea Council (NMSSC) was officially launched on 17 August 2015 during Safety@Sea Week 2015. The 15-member NMSSC



is chaired by Professor Richard Lim, the current chairman of ST Logistics and an adjunct professor at Nanyang Technological University's School of Mechanical and Aerospace Engineering. The other members comprises 15 professionals from a wide spectrum of the maritime industry including the legal, insurance, academia, offshore and marine engineering, ship management and pleasure boating sectors. The council will spearhead the drive for

maritime safety on a national level and ensure the sustainability of safety efforts. The NMSSC mainly serves as an advisory body to MPA on safety matters. It will also lead and endorse projects and initiatives undertaken by four MPA-industry safety working groups². In the long term, the council plans to initiate international collaboration with other centres of excellence with the goal of enhancing Singapore's reputation for maritime safety.

² MPA-SSA Safety of Navigation Working Group for ocean-going vessels; MPA-PSAM Safety of Navigation Working Group for Harbour Pilots; MPA-ARFO Safety Working Group for Regional Ferries; and MPA-Pleasure Craft Safety Working Group for pleasure crafts.

CONTINGENCY PLANNING AND EMERGENCY RESPONSE



To be a trusted and reliable maritime administration capable of protecting ships and lives in Singapore waters, MPA must possess the capability to handle emergencies at sea around the clock. To realise this, MPA established an emergency response system together with other government agencies and organisations. The system allows for prompt response to emergency situations, while minimising casualties and economic and environmental damage.

Every year, MPA conducts exercises depicting different emergency scenarios to test the full extent of the readiness of the personnel and the efficiency of particular emergency response procedure. These exercises may range from simple tabletop drills to inter-agency operations involving government, commercial service providers and the public.

In 2015, four exercises were conducted to assess the readiness and speed of response of governmental agencies and the maritime industry.

Chemical Spill Exercise (Chemspill)

Chemspill 2015 was conducted in October 2015 to test the activation procedures and Chemical Contingency Plan (Marine) for the handling of chemical spill incidents in Singapore waters. The tabletop exercise involved multiple agencies working together to devise mitigation strategies to tackle a chemical spill involving benzene on board a container ship.

Border Health Exercise

A border health exercise was conducted in February 2015 to test the Border

Health Sea Checkpoint Screening Operation plan. The ground deployment exercise involved the setting up of temperature scanners and temperature screening workstations at a border and the management of febrile passengers for transfer to a designated hospital for further medical assessment as well as the implementation of infection control measures and decontamination of infected workplaces. The exercise was attended by participants from various government agencies and observers from marinas, sea sports centres, cruise and ferry operators and fishery ports.

Ferry Rescue Exercise

A ferry rescue exercise was conducted in August 2015 to drill MPA's Emergency Operations Centre



and supporting agencies on the processes and procedures of the Ferry Mishap Contingency Plan. More than 350 personnel from 10 agencies and companies took part in this full deployment exercise that involved the deployment of resources at sea for rescue operations, manning of the emergency operations centre, and landing of casualties and rescued persons at Tanah Merah Ferry Terminal.

Exercise JOSE 2015

A multi-agency joint oil spill exercise was conducted in April 2015 in conjunction with the International Chemical and Oil Pollution Conference and Exhibition (ICOPCE) to test and demonstrate Singapore's response readiness to combat oil spills at sea. The full deployment exercise was planned together with representatives from the International Tanker Owners Pollution Federation and Shell Eastern Petroleum Limited. It included full deployment at a seaward location and a tabletop exercise. Delegates attending the ICOPCE were invited to observe the exercise at sea. Observers witnessed the deployment of an aerial dispersant spraying aircraft and an unmanned aerial vehicle for aerial surveillance.

Enhancing navigation safety and strengthening cooperation for emergency response in the region

In late 2015, three marine incidents occurred in the Indonesian waters off Batam. Two of these involved passenger ferries plying between Singapore and Indonesia, while the third incident involved a collision between a chemical tanker and a freighter.

The "Sea Prince" ferry incident saw passengers being evacuated via life rafts before they were transferred to nearby vessels. Immediately following the incident, MPA conducted an investigation into the incident and reminded all ferry operators in Singapore of the importance of navigational safety and emergency preparedness. MPA also worked with the relevant agencies to conduct an After Action Review to determine gaps in its emergency



response procedures. While the review was underway, MPA took immediate steps to plug gaps with interim measures, including the issuing of safety reminders to ferry operators.

MPA's quick response in handling the incidents and in rallying the support of the maritime industry underlined its commitment to maritime safety and security.

PERFORMANCE OF THE SINGAPORE FLAG



Over the years, the Singapore flag has grown to become a quality flag of choice for many international shipowners and operators. The Singapore Registry of Ships (SRS) now ranks among the world's top five largest ship registries and boosts one of the youngest fleets in the world.

To remain a quality flag, it is vital that we uphold the high safety and security standards of Singapore-flagged vessels, and maintain a low detention record with key Port State Control (PSC) regimes

such as Tokyo MOU and Paris MOU. Both MOUs consist of major maritime administrations that seek to eradicate substandard ships by conducting routine checks on vessels calling at their port and detaining substandard ships until their deficiencies are fully rectified.

To ensure Singapore-flagged ships are of a high standard, SRS actively monitors and audits Singapore-flagged ships. It also works closely with maritime companies to better understand their operational needs and challenges. This close industrial engagement has been mutually beneficial as it enables MPA to develop policies that are in tandem with industry developments and also keeps the maritime community in the loop when it comes to new regulatory developments.

The industry partnership has helped SRS to grow a quality fleet. In 2015,

SRS reached 86.3 million gross tonnage, a 5% increase from 2014. Despite the growth, the total number of Singapore ships detained worldwide increased only marginally from 46 in 2014 to 49 detentions in 2015. Overall, SRS detention rates were kept low at 1.02% and 1.79% respectively against the average of 3.70% for the Tokyo MOU regime and 3.28% for the Paris MOU regime.

SRS maintained its 4th ranking under the Tokyo MOU White list and 11th on 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 is a list of high quality flags with a consistently low detention record.

SRS RANKING IN WHITE LIST

	2011	2012	2013	2014	2015
Tokyo MOU	6 th	5 th	4 th	4 th	4 th
Paris MOU	8 th	16 th	17 th	11 th	11 th



THE MARITIME SINGAPORE GREEN INITIATIVE [G4-EN19]

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

Maritime companies were also invited to take the Maritime Singapore

Green Pledge to demonstrate their commitment to promoting clean and sustainable shipping in Singapore.

Since its launch, MSGI has received strong support from the maritime community. As of 2015, 100 companies including shipping lines, salvage companies and offshore service providers signed the Green Pledge; 267 Singapore-flagged ships qualified for the GSP; more than 3,000 vessel calls enjoyed port dues concessions under the GPP; and 17 companies and 61 Singapore-flagged ships benefited from the GTP, leading to an estimated

reduction of more than 177,000 tonnes of carbon dioxide annually from the improved ships.



FOURTH SRS FORUM

In 2015, the Singapore Registry of Ships Forum was organised with the theme of the "Quality Shipping". The event focused on the importance of safe, responsible and sustainable maritime operations.

For the event, MPA invited distinguished figures among its stakeholders – such as Maersk, Singapore Environment Council and Singtel - to share their expertise and insights on implementing best practices in shipping that embrace environmental and social responsibility while supporting business growth. The audience comprised some 250 senior maritime professionals and partners from institutes of higher learning,

The forum saw the formal recognition of an additional 53 green ships from 41 companies that have qualified for the GSP. The event also saw 10 more companies signing the Green Pledge, bringing the total number of Green Pledge signees to 100 companies.



The signing of a Memorandum of Understanding (MOU) between MPA and Du Pont Company (Singapore) to collaborate on services and solutions for the maritime industry.

REAPING THE BENEFITS [G4-EN7]

EMISSIONS

International shipping remains the backbone of international trade and globalisation. Recent findings from the Third International Maritime Organisation (IMO) Greenhouse Gas Study 2014 estimated that international shipping emitted 796 million tonnes of carbon dioxide in 2012, against 885 million tonnes in 2007. This amounts to 2.2% of global carbon dioxide emission in 2012 as compared to 2.8% in 2007.

With international shipping continuing to grow in tandem with world trade, the maritime industry must play its part in reducing air emissions and improving energy efficiency.

The IMO is a key player in promoting safe, efficient and sustainable shipping. In particular, the IMO's Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL) plays a central role in reducing air emission by ships. Annex VI saw the global sulphur cap on bunker fuel reduced to 3.5% from 4.5% from January 2012. Depending on the outcome of the IMO's Fuel Oil Availability Study, the global sulphur cap on bunker fuel could be further reduced to 0.5% by either 2020 or 2025.

As a responsible member of the international community, Singapore actively contributes to ongoing discussions



at the IMO pertaining to environmental sustainability. In addition, Singapore is a member of the steering committee overseeing the Fuel Oil Availability Study.

REDUCING GHG EMISSIONS AND ENERGY USAGE



MPA has been working closely with shipping lines to further reduce carbon dioxide emission through its Green Ship Programme (GSP). The GSP encourages owners of Singapore ships to adopt energy efficient ship designs that exceed IMO's Energy Efficiency Design Index requirements for particular ship types and sizes. Qualifying ships can enjoy up to 75% discounts on the Initial Registration Fees and 50% discounts on Annual Tonnage Tax.

MPA has also commissioned two separate studies to map out the air emission profiles of its port areas and terminals, as well as to benchmark the energy efficiency of its terminal operations against that of renowned green ports around the world. Both studies are on schedule for completion by mid-2016 and will provide good baselines for MPA to formulate future policies to reduce air emissions by the maritime sector and improve the energy efficiency of its terminals.

LOCAL AIR QUALITY

MPA is encouraging ships to reduce sulphur oxide (SO_x) emission through the GSP and GPP programmes. To qualify for the GSP, owners and operators of Singapore ships must submit documentation showing the installation of an approved SO_x scrubber and the resultant emission reduction results achieved.

Ships calling on Singapore that burn clean fuels (less than 1% of sulphur content) while at port or use type-approved abatement/scrubber technology are eligible to participate in the GPP.

Under the GPP, ships are entitled to port dues discounts of between 15% and 25%. The goal of this initiative is to encourage more ships to reduce SO_x emission.



MAINTAINING BIODIVERSITY AND RECYCLING EXCAVATED MATERIALS

[G4-EN11, G4-EN12, G4-EN13]

In 2015, MPA completed the relocation of 2,300 hard coral colonies from Sultan Shoal (located south west of Singapore), to three southern sites at St. John's Island and Sisters' Islands. The relocation programme was initiated to protect the corals from the impact of the development of Tuas Terminal. The coral conservation programme saw MPA working with volunteers from various environmental interest groups to relocate corals and set up coral

nurseries and is part of MPA's efforts to ensure sustainable development of the new Tuas Terminal. The coral conservation programme is a good example of our commitment to develop our future mega-port at Tuas without compromising on environmental sustainability. To increase public awareness of the coral conservation efforts, a 'Conserving our Corals' T-shirt design competition was launched on 29 May 2015.



Mrs Josephine Teo (right), Senior Minister of State in the Prime Minister's Office, Ministry of Foreign Affairs and Ministry of Transport with a volunteer of the 'Conserving our Corals' initiative.

INTER-AGENCY COLLABORATION TO RECYCLE EXCAVATED MATERIALS

Reclamation work for the development of Tuas Terminal would require significant amount of fill material. Instead of relying wholly on sand for the reclamation, Land Transport Authority (LTA) and MPA developed an innovative solution that would reduce the amount of sand required as well as the cost of the reclamation work.

The solution involved using excavated material generated during excavation work for LTA's many underground construction projects. Each year LTA generates large volumes of excavated material

that is usually dumped as waste. Upon investigation, however, LTA and MPA determined that this material is suitable for the reclamation of the new port.

Based on the original method of reclamation, Tuas Terminal Phase 1 reclamation site would have required 40 million m³ of excavated and dredged materials. However, an increase in LTA's projects meant that it needed to dump more excavated material, which would have meant the need to acquire additional disposal capacity. To accommodate LTA's surfeit of

excavated materials, MPA devised an optimised reclamation design for Tuas Terminal Phase 1 with a final filling level of +4.5mCD for the excavated material. This increased the disposal capacity by about 13 million m³, which is made possible by the use of specially designed material re-handling barges that are equipped with conveyors.

The revised design also allowed for the use of sand from an earlier constructed sand bund and existing sand from an earlier reclamation project. The void created by the re-handled sand is about 5 million m³, which can be used for the disposal of the excavated and dredged materials.

The plan meant an increase in overall dumping capacity of 18 million m³. This yielded a total cost saving of about \$550 million, with savings in sand cost amounting to about \$360 million and a savings of about \$190 million in doing away with the need to store, re-handle and dispose of the excavated materials involved.



VIBRANT IMC ECOSYSTEM

Singapore is home to more than 130 of the world's top shipping groups. A rich diversity of maritime products and services can be found in Singapore, and she is the ideal Asian gateway for global leaders in maritime services such as shipping finance, shipbroking, maritime law and arbitration, and marine insurance. MPA aims to continually broaden both the breadth and eco-system in Singapore.

CHAPTER 2



DEVELOPING AN EXTENSIVE ECOSYSTEM



Former Minister for Transport, Mr Lui Tuck Yew, 5th from right, with industry leaders at the Singapore International Maritime Awards 2015

The Singapore maritime industry is a significant contributor to the economy. It provides 170,000 jobs and accounts for about 7% of the nation's gross domestic product. Today Maritime Singapore boasts a comprehensive maritime ecosystem that is home to more than 5,000 maritime establishments including the providers of port, shipping and maritime services such as broking, insurance, finance, legal and arbitration firms.

To continue to strengthen the nation's position as an international maritime centre, MPA has directed its efforts

towards attracting a core group of shipowners, ship operators and maritime service providers to set up operation in Singapore.

Currently more than 130 international shipping groups contribute to the Singapore economy; collectively, they commit annual business spending of close to \$4 billion under the Maritime Sector Incentive-Approved International Shipping Enterprise scheme.

To further entrench maritime players' commitment to Singapore, MPA regularly recognises individuals and

companies for their outstanding contributions to Singapore's advancement as a premier global hub port and an international maritime centre. In 2015, MPA paid tribute to outstanding individuals and companies at the Singapore International Maritime Awards 2015. Held in conjunction with the 10th Singapore Maritime Week, the event saw a gathering of 630 luminaries and leaders from the maritime industry. The event drew a bumper crop of over 150 nominations, reflecting the richness, diversity and quality of the Singapore maritime industry.

EXPANDING OUR MARITIME SERVICES

A vibrant maritime services sector is key to sustaining the dynamic growth of Maritime Singapore. At this present juncture, Maritime Singapore houses more than 30 local and foreign law firms with maritime practice, over 20 major banks with shipping portfolios, more than 20 leading international shipbroking firms and 10 shipping groups managing assets of over US\$4 billion under the Maritime Sector Incentive-Approved International Shipping Enterprise scheme.

In September 2015, as part of its efforts to develop Singapore as a leading maritime legal and arbitration centre, MPA partnered The National University of Singapore (NUS) Faculty of Law to officially launch

the Centre for Maritime Law. In addition, MPA has supported a total of \$5 million towards the establishing of an endowed chair position in the NUS Faculty of Law.

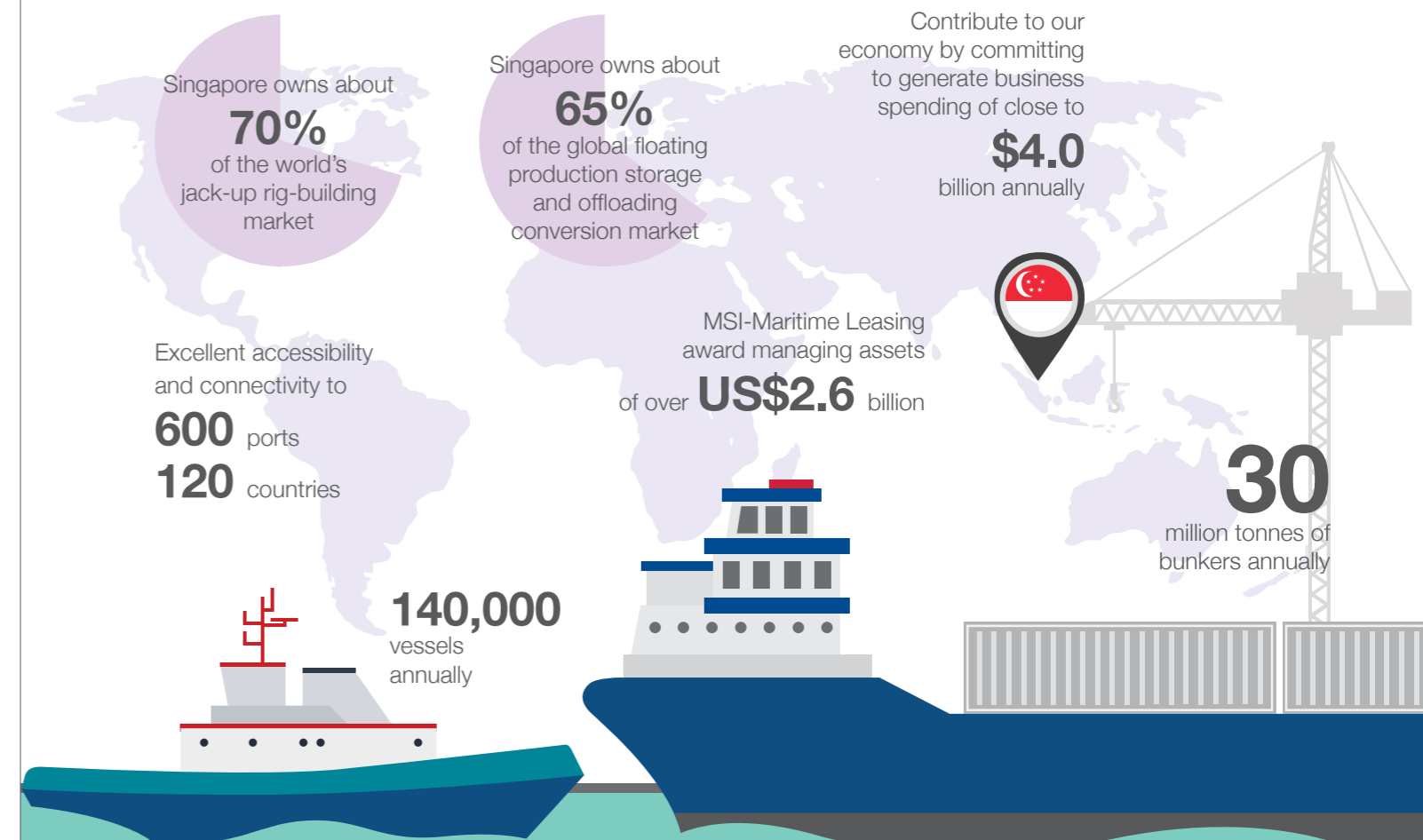
In 2015 MPA also carried out an evaluation of the maritime arbitration scene in Singapore. Based on the findings from the evaluation, MPA will proceed to implement recommendations made in the report together with our stakeholders to bolster the maritime arbitration cluster.

In addition, the marine insurance sector in Singapore has grown in size over the years with an increasing number of shipping companies and maritime service providers setting up offices in Singapore.

There are now 18 Lloyd's Asia Service Companies based in Singapore that write marine and offshore energy business (up from 16 in 2014), as well as 7 Protection and Indemnity clubs that belong to the International Group of P&I Clubs.

In 2015, to further develop Singapore's capital markets for the shipping and offshore sectors, MPA also led a taskforce comprising government and industry stakeholders to study the state of Singapore's capital markets. MPA has since produced a report outlining its recommendations for bolstering the markets.

Developing Singapore as a leading International Maritime Centre



SAFEGUARD STRATEGIC MARITIME INTERESTS AND AN INFLUENTIAL VOICE

Since 1993, Singapore has been a member of the IMO Council, contributing towards the IMO's goal of safe, secured and efficient shipping and also taking on various leadership positions within IMO.

CHAPTER 3



ENGAGING INTERNATIONAL AND REGIONAL MARITIME STAKEHOLDERS [G4-EN19]

As a port state, flag state and coastal state along a key shipping lane, safety of navigation ranks high among Singapore's strategic interests. Indeed, MPA believes that safety of navigation is a key pillar underpinning the shipping industry and champions safe and open shipping on clean oceans.

In particular, MPA works unflaggingly to enhance its cooperation with key stakeholders to keep regional waters safe and secure.

MPA's efforts in this sphere include participation in the Regional Cooperation

Agreement on Combating Piracy and Armed Robbery Against Ships in Asia (ReCAAP). This is the first intergovernmental initiative to promote cooperation among government agencies against piracy and sea robbery in Asia. Singapore is a Contracting Party of ReCAAP.

Singapore is also the host country of the ReCAAP Information Sharing Centre (ISC) from the time of the formation of the centre in 2006. As a member of the ReCAAP ISC Governing Council, Singapore actively contributes to ReCAAP ISC's strategy development.

Ahead of ReCAAP's 10th anniversary in 2016, Singapore is currently engaged in discussions to map out ReCAAP's future directions and the way forward for the ISC to become a Centre of Excellence.

Additionally, Singapore is an active contributor to The Cooperative Mechanism on Safety of Navigation and Environmental Protection in the Straits of Malacca and Singapore. The Cooperative Mechanism was launched in 2007 by the three littoral States of the Straits - Indonesia, Malaysia and Singapore - under the IMO's Protection of Vital Shipping Lanes initiative.

THE COOPERATIVE MECHANISM ON SAFETY OF NAVIGATION AND ENVIRONMENTAL PROTECTION IN THE STRAITS OF MALACCA AND SINGAPORE



Mrs Josephine Teo, Senior Minister of State in the Prime Minister's Office, Ministry of Foreign Affairs and Ministry of Transport, and Mr Andrew Tan (1st from left) CE, MPA, at the 8th Co-operation Forum.

The Cooperative Mechanism is the key platform for the three littoral States, user States, the industry and other stakeholders to engage in dialogue and share their perspectives on issues relating to navigational safety in, and environmental protection of, the Straits. It consists of three interconnected and complementary components, namely, the Cooperation Forum, Project Coordination Committee and Aids to Navigation Fund (ANF).

As the current Chair of the ANF Committee, Singapore hosted the 14th and 15th ANF Committee meetings in 2015. The Committee has played an important role in ensuring that financial contributions received from the international maritime community are channeled to the upkeep of aids to navigation critical in facilitating the safe navigation of ships in the Straits.

DEVELOPING AN INFLUENTIAL VOICE ON THE GLOBAL STAGE

MPA is also involved in the Arctic Circle Singapore Forum and the National University of Singapore's Centre for International Law and K.G. Jebsen Centre for the Law of the Sea Conference on the Governance of Arctic Shipping. At both events, MPA shared Singapore's measures for marine oil spill pollution prevention in the context of cooperative frameworks such as The Cooperative Mechanism.

Singapore was successfully reelected to the IMO Council for the 12th consecutive time, with the highest number of votes in Category "C".

Singapore has served on the IMO Council for 12 consecutive two-year terms as a member state, during which it has made several important contributions. Through the years, Singapore has held key leadership positions such as Chairman of the IMO Council and Vice-chair of the Maritime

Safety Committee and the Marine Environment Protection Committee. In November 2015, Singapore assumed the office of Vice-Chair on Committee 1 at the 29th Session of the IMO Regular Assembly.

MPA has also been providing technical assistance to developing member states in Africa, Asia Pacific, the Caribbean and the Middle East through the IMO-Singapore Third Country Training Programme. Over the past 17 years, MPA has trained more than 1,700 participants from 84 IMO member states through this programme. In 2015, a total of five workshops were organised covering training for auditors, the formulation of a regional spill contingency plan for ASEAN, biofouling guidelines, Ballast Water Management Convention and the Electronic Chart Display Information System.



Minister for Transport, Mr Khaw Boon Wan, far right, with CE MPA, Mr Andrew Tan (2nd from right) and delegates at the Singapore IMO Reception 2015, held in London.

Maritime Singapore continued to play a key role on the global stage as a major port and flag state. Singapore participated actively in international fora to safeguard our maritime interests and to uphold our global reputation.

As an Observer at the Arctic Council, Singapore has also been participating in the working groups and taskforces of the Arctic Council to better understand ongoing developments in the Arctic and the implications of these developments for Singapore as a maritime nation.

ARCTIC CIRCLE SINGAPORE FORUM

The Singapore Maritime Institute and the Arctic Circle held the Arctic Circle Singapore Forum on 12 November 2015. Supported by the Singapore government, the Arctic Circle Singapore Forum is the second of a series of forums on the Arctic Circle convened outside of Iceland. It is the first event on the Arctic Circle ever held in Asia. The forum was attended by over 150 delegates, including academics, scientists, government representatives and maritime and financial business leaders.

Discussions at the three plenary sessions of the Arctic Circle Singapore Forum centred on the governance of Arctic shipping, infrastructure development in the Arctic, and the role of oceanic science and research. Distinguished speakers at the forum included Arctic ambassadors, senior government officials as well as representatives from the maritime industry, investment funds and scientific institutes, from both Arctic and non-Arctic states. Captain Muhammad Segar, MPA's



Assistant Chief Executive (Operations), was a panelist at the plenary session on Governance of the Northern Sea Route.

ENGAGING WITH MARITIME THOUGHT LEADERS



Permanent Secretary of Ministry of Transport, Mr Pang Kin Keong, delivering his remarks

MPA regularly invites key opinion makers in the international maritime community to visit Singapore under the Distinguished Visitors Programme, the Maritime Visitors Programme and other platforms. These platforms are central to MPA's engagement efforts with the international maritime community.

In April 2015, during Singapore Maritime Week, all six IMO Secretary-General candidates visited Singapore on the invitation of MPA. MPA also hosted



A group photograph of the participants at the Opening Ceremony for the Inaugural Advanced Maritime Leaders Programme

Mr. Koji Sekimizu, the then-IMO Secretary-General in Singapore in the same month. During their visits, these distinguished figures gained a better understanding of the maritime industry in Singapore and met industry leaders and office holders from the Ministry of Transport.

MPA recognises the importance of addressing climate change and is

committed to supporting the global regulator of international shipping, the IMO, in its efforts in this sphere. In 2015, MPA lent its support to the IMO's efforts to promote the deployment and promulgation of environmentally-friendly ship technologies by co-organising with the IMO the inaugural **Future Ready Shipping 2015** conference.

DISTINGUISHED VISITORS PROGRAMME AND MARITIME VISITORS PROGRAMME

In 2015, three prominent maritime figures visited Singapore under the Distinguished Visitors Programme and the Maritime Visitors Programme. Mr. Binyah Kesselly, Commissioner and Chief Executive Officer of the Liberia Maritime Authority, and Mr. Jorge Barakat, Minister of Maritime Affairs and Administrator of the Panama Maritime Authority, were invited under the Distinguished Visitors Programme, while Mr. Andrew Winbow, the then-IMO Assistant Secretary-General and Director of the Maritime Safety Division, was invited under the Maritime Visitors Programme. All three guests were briefed on MPA's roles and functions and toured MPA's Port Operations Control Centre and Integrated Simulation Centre. Mr. Kesselly and Mr.



Barakat also met with office holders from the Ministry of Transport. On his visit, Mr. Kesselly delivered a lecture on Liberia's experience in managing the Ebola outbreak. During Mr. Winbow's

visit, he delivered a keynote speech at the Maritime Technology Conference and was a panellist at the ReCAAP ISC Piracy and Sea Robbery Conference.

As part of its efforts to strengthen relations with the international maritime community, Singapore regularly supports other countries in their efforts to develop their maritime capability. This support is generally provided through MPA's training arm, the MPA Academy.

In 2014, the MPA Academy was repositioned as a full-fledged academy with dedicated premises and a focus on global maritime leadership training. The academy's new training facility was officially launched in October 2015 by Mr. Pang Kin Keong, Permanent Secretary for the Ministry of Transport.

MPA leverages on the MPA Academy to build up strategic expertise in maritime education and training. Accordingly, the mission of the academy is to develop into a global learning centre for MPA and other maritime and port administrations,

as well as support the training needs of the IMO as a Council Member.

To fulfil this mission, the MPA Academy is forging new strategic partnerships with international centres of excellence.

In April 2015, the academy signed a Memorandum of Understanding with the World Maritime University, a postgraduate university supported by the IMO, with a focus on global maritime leadership development. The academy followed this up by signing an extension to the Memorandum of Understanding for cooperation on human resources development of government officers in the maritime field with the Directorate General of Sea Transportation (DGST), Ministry of Transportation, Republic of Indonesia in December 2015.

In June 2015, MPA Academy also collaborated with the Centre for Liveable

Cities and the International Transport Forum to host a public lecture by Mr. Olaf Merk, who is the Administrator of Ports and Shipping at International Transport Forum. The event saw a gathering of maritime experts and a sharing of insights on the evolving relationship between ports and cities and the impact on public policy.

MPA Academy partnered the IALA World Wide Academy to organise the IALA Risk Management Seminar in October. The seminar focused on risk management in ports and waterways including identifying major safety hazards, estimating risk levels, evaluating potential mitigation measures and implementing measures to reduce risks. 28 participants from Asia, Europe, Middle East, Latin America and Africa attended the seminar.

FUTURE READY SHIPPING 2015

MPA partnered the IMO to organise **Future Ready Shipping 2015: An IMO-Singapore International Conference on Maritime Technology Transfer and Capacity Building**. Held in Singapore in September 2015, the conference served to advance dialogue on what decision-makers need to do to remove barriers to energy-efficient technologies. It also encouraged an exchange on best practices for green shipping. Mr. Koji Sekimizu, then-IMO Secretary General, was the keynote speaker at the conference. The conference drew some 200 delegates, representing maritime and port authorities, government and international institutions, academia and industry from 31 countries.

MPA is also the IMO's Strategic Partner in the GloMEEP project (formally known

as "Transforming the Global Maritime Transport Industry towards a Low Carbon Future through Improved Energy Efficiency"). Launched in 2015 by the Global Environment Facility, the IMO

and the United Nations Development Programme, the project supports developing countries in pursuing relevant legal, policy and institutional reforms needed to meet IMO's energy efficiency requirements.



MPA ACADEMY'S FLAGSHIP PROGRAMMES



(a) Advanced Maritime Leaders Programme

In April 2015, the MPA Academy introduced a new flagship training programme for senior maritime officials called The Advanced Maritime Leaders Programme. Conducted by MPA Academy in partnership with the Singapore Management University, Human Capital Leadership Institute and training and consultancy agency Strategic Moves, it is designed for senior maritime officials heading maritime or port administration in their country (for example, chief executives, director-general and commissioners) and their deputies. Held from 16 to 20 April 2015, the inaugural run was well received by the 13 senior maritime officials from Africa, Asia, Europe, Oceania, the Caribbean and the Middle East who underwent the programme.



(b) Maritime Public Leaders' Programme

The Maritime Public Leaders' Programme is a non-examinable executive programme jointly organised by MPA and Nanyang Technological University, and supported by the Ministry of Foreign Affairs as part of the Singapore Cooperation Programme. The programme is for senior officials in maritime administrations who hold the rank of director or equivalent. To date, more than 90 senior officials from over 50 countries have attended the programme. The fifth edition of the programme was held from 19 to 24 October 2015 and was attended by 18 senior maritime officials from Africa, Asia, Oceania, the Caribbean and the Middle East.

(c) Port Management Programme

The Port Management Programme is a flagship programme conducted by MPA Academy for port masters, harbour masters and middle management personnel from maritime and port administrations.

Following the success of the inaugural run in 2014, the second run was held from 17 to 21 August 2015. It was attended by 17 senior maritime officials from Africa, Asia, the Caribbean, Latin America, Oceania and the Middle East.



THE INTERNATIONAL ASSOCIATION OF PORTS AND HARBORS (IAPH)

MPA participates in the IAPH World Ports Conference every year. This annual conference promotes the interest of ports worldwide by strengthening relationship between members, by allowing for collaboration and information sharing to resolve common issues, by advancing sustainable practices and by helping

ports continually improve how they serve the maritime industry. Being a member of IAPH allows MPA to network with key players in the global port industry at IAPH conferences and participate actively in technical committees to address and analyse issues faced by the world port community.

APEC PORT SERVICES NETWORK (APSN)

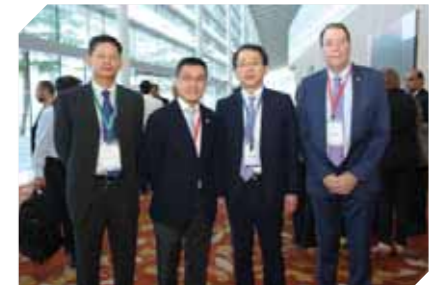
APEC Port Services Network is a non-profit organisation established on 18 May 2008 to facilitate cooperation and communication among the port and port-related industries in the Asia Pacific region. Each year, MPA attends the organisation's annual council meeting to contribute to this pivotal regional platform. The 8th APSN Council Meeting and Workshop was held in the Philippines from 10 to 13 November 2015. At the meeting, Singapore was reelected to a second term as the APSN Second Vice President.

ENGAGING THE REGIONAL & INTERNATIONAL MARITIME STAKEHOLDERS

ENGAGEMENT WITH PORT AUTHORITIES

Shipping is a global business that accounts for more than 90% of world trade. For this reason, it takes global effort to tackle issues and challenges in the maritime industry. To better work with the global maritime community to address maritime issues and challenges, MPA actively seeks out engagement opportunities with port authorities around the world.

This active engagement with other port authorities allows MPA to keep abreast of international port services development, so that it is better able to safeguard Singapore's interests as well as be better prepared for the evolving challenges and to meet the future needs of the maritime industry.



Representatives from MPA, Ministry of Oceans and Fisheries - Republic of Korea and Port Authority of New South Wales.

PORT AUTHORITIES ROUNDTABLE

The inaugural Port Authorities Roundtable was launched by MPA on 20 April 2015 in conjunction with Singapore Maritime Week 2015. The closed-door event brought together port authorities from major ports around the world to network, share insights on pertinent issues and best practices and explore areas of collaboration.

The theme for the roundtable discussion was "Future Ready Ports – Challenges and Opportunities Ahead", which sparked a lively and spontaneous discussion among the delegates on port developments, efforts to improve port safety, efficiency and sustainability, and the adoption of future ready technology and infrastructure. The roundtable discussion yielded a wealth of ideas and information for participants, including emerging industry trends, best practices and innovative ideas that have been implemented at other major ports.

To make the event even more fruitful for the participating port authorities, notable maritime industry leaders in Singapore were also invited to join the participants at the networking sessions.



The event also saw the signing of a Memorandum of Understanding between MPA and the Port of Rotterdam Authority on cooperation in information exchange and research and development. The two authorities will exchange information on standards, procedures and the regulatory frameworks for bunkering and other marine services. This includes the use of information technology to facilitate services to vessels. In addition, the two parties will jointly undertake R&D in the areas of LNG bunkering, green shipping and port optimisation. The

MOU was signed by Mr. Andrew Tan, Chief Executive of MPA, and Mr. Allard Castelein, President and CEO, Port of Rotterdam Authority.

The event served to demonstrate MPA's thought leadership on maritime issues and underlined its commitment to strengthening relationships with the international maritime community. The inaugural Port Authorities Roundtable has received positive and encouraging feedback from delegates, who said they hope to see the event return for another run.

MARITIME KNOWLEDGE & INNOVATION HUB

One of MPA's key material issues is to grow a vibrant maritime technology cluster in Singapore, and establish a centre of Excellence for Maritime R&D and Technology.

CHAPTER 4



EXCELLENCE IN R&D

PROMOTING MARITIME R&D AND TECHNOLOGY



MPA recognises the importance of a vibrant maritime research and development (R&D) and technology cluster. Besides creating a competitive edge for the Port of Singapore, the presence of strong maritime R&D capability together with a vibrant maritime technology cluster spurs new areas of growth and innovation linkages that will sustain Singapore as an International Maritime Centre (IMC). Being a centre for R&D also allows Singapore's maritime industry

players to harness new technologies to enhance their maritime operations and environment sustainability.

MPA seeks to achieve this mission by encouraging partnerships in R&D. One of the ways MPA champions partnerships and grows strong R&D linkages between the industry and tertiary and research institutions is by hosting key maritime events. Events such as the annual Singapore Maritime Technology Conference, the

biennial International Maritime and Port Technology and Development Conference (which MPA jointly organises with Norway), Sustainable Marine Transportation Conference, the annual Singapore Maritime Institute Forum and other technology-related events held in Singapore help promote and profile maritime technologies and thought leadership, and spur R&D collaboration among the industry and local research communities.

FUNDING SUPPORT FOR MARITIME R&D AND SUSTAINABLE SHIPPING

MPA also fosters the growth of R&D within the maritime industry by offering funding support for R&D projects. MPA first established the Maritime Innovation and Technology (MINT) Fund in 2003 to co-fund R&D projects and test-bed activities initiated by the industry, institutes of higher learning and research institutions. MPA recently topped up the fund, bringing total allocation in the fund to \$200 million.

One of the key R&D areas that the MINT Fund supports is maritime environment and energy.

The fund has supported a number of R&D projects in this field, including the development of an electrochemical ballast water management system. This system has since been granted Basic Approval by the IMO. The fund also supported another project involving the decoding of the adhesive process of bio-organisms, which led to the development of better anti-fouling coatings for ships and marine structures. Other projects supported include the development of a modelling tool for shipowners to optimise selection of marine scrubbers by a classification society and a zero-emission ferry concept tailored for Singapore.

To promote sustainable shipping, MPA also provides grants under the Green Technology Programme of up to \$3 million per project for maritime companies based in Singapore to adopt or develop green technologies



that reduce air emissions of sulphur oxides, nitrogen oxides, and carbon dioxide. In 2015, MPA committed a total of \$50 million to the programme and extended it by another five years to 2021.

The Green Technology Programme has supported many projects including the electrification of PSA's current rubber tyred gantry cranes at its container terminals. Switching from diesel fuel to electricity successfully

reduced emissions by up to 80%. The programme also supported a local bunker supplier in its adoption of diesel-electric propulsion technology on one of its bunkering harbour craft. This reduced emissions by 20% compared to conventional technology. To date, the programme has benefited 21 maritime companies in the shipping, port and harbour craft sectors, with all the projects yielding an estimated direct reduction of 285,000 tons of carbon dioxide per year.

DEVELOPING R&D CAPABILITIES IN MARITIME ENVIRONMENT AND ENERGY



To develop long-term capabilities in maritime environment and energy, MPA actively seeks out collaboration opportunities with institutes of higher learning.

Since 2010, MPA and Nanyang Technological University have been collaborating in the Maritime Clean Energy Research Programme at the jointly established Maritime Clean Energy Research Centre, which is part

of the Energy Research Institute at NTU (ERI@N). These efforts led to the creation of the \$8 million Maritime Energy Test Bed at the university. Established in November 2015, the test bed is Southeast Asia's first maritime energy test bed facility. Today it serves as a platform for the development of innovative solutions for air emission control and energy efficiency management and for research and development into alternative marine fuels. The project is partly supported

by maritime industry leaders such as ClassNK.

Meanwhile, through the Singapore Maritime Institute, MPA continues to support research community with a \$5 million commitment to the Maritime Energy Systems R&D programme that will run from 2013 to 2016 and a \$4 million commitment to the Maritime Sustainability R&D programme that will run from 2015 to 2018.

EXPANDING MARITIME R&D COLLABORATION NETWORKS

MPA is continually working to add vibrancy to the research and development scene in Singapore by expanding its circle of collaborators and improving the quality and quantity of R&D projects.

This drive saw MPA joining hands with the Research Council of Norway and the Singapore Maritime Institute to issue a joint call for research proposals in 2015. Three joint research projects relating to maritime energy were ultimately approved from the proposals submitted, and these projects are scheduled to

be launched with joint funding by the Research Council of Norway and the Singapore Maritime Institute.

In addition, MPA provides funding incentives to encourage international maritime establishments to set up regional R&D centres and offices in Singapore. In 2013, DNV-GL became the first centre to benefit from MPA's MCF-BD funding when it established its ECO Research Centre in Singapore. The centre focuses on environmentally sustainable and energy efficiency solutions for the maritime industry. The

following year, in February 2014, MPA and DNV-GL signed a Memorandum of Understanding to promote R&D and test-bedding of maritime environment and clean technologies in the areas of liquefied natural gas, green ports and marine environment and resources.

In 2015, MPA signed a Memorandum of Understanding with the Port of Rotterdam on R&D collaboration. Some of the areas the two parties will collaborate on include optimising port efficiency through information exchange, harmonisation of standards and R&D.

In 2015, MPA also signed a Memorandum of Understanding with ClassNK to formalise ClassNK's R&D activities in Singapore and its intent to undertake maritime R&D to enhance ship safety and environmental sustainability. The two parties will join hands to focus on areas such as safety on ships, smart ships, environmentally-friendly ships and marine renewable energy. The signing ceremony also marked the opening of ClassNK's first research centre outside of Japan called the ClassNK Global Research and Innovation Centre. The centre undertakes research with industry, academia and government agencies in Singapore. Some of its current projects include the development of an exhaust gas cleaning system (also known as scrubber), and a pilot-scale demonstration of zero-emission desulphurisation process for maritime applications.



Signing of Memorandum of Understanding between MPA and ClassNK in February 2015

QUALITY MARITIME

WORKFORCE

Manpower development is essential to ensure a steady pipeline of talents to support the maritime industry's growth.

CHAPTER 5



DEVELOPING MARITIME TALENT



The SkillsFuture Sectoral Tripartite Meeting held in January 2016

With manpower critical to Singapore's continued competitiveness and growth as a leading IMC, MPA is continuously developing and implementing initiatives to grow the pool of skilled local maritime manpower, including tapping on the national SkillsFuture scheme.

MPA works actively with industry and key institutes of higher learning to develop quality maritime education and training programmes to better groom a pool of skilled local maritime professionals. It also works with industry associations, the maritime industry and self-help groups to raise

greater awareness of maritime careers among the general public. In addition, MPA encourages maritime sector employers to invest in its human capital by providing skills training.

To achieve its goal of developing local maritime talent, MPA has rolled out a host of outreach programmes and manpower development schemes over the years. The success of these efforts is reflected in the fact that each year more than 1,000 students enrol in maritime-related courses or modules in Singapore.



ATTRACTING LOCALS TO JOIN THE MARITIME SECTOR

As part of its efforts to draw fresh young talent to join the maritime industry, MPA apportioned \$2 million from the Maritime Cluster Fund-Manpower Development scheme to support the MPA Global Internship Award programme for the period 2013 to 2017. The programme offers high achieving local undergraduates from the National University of Singapore, Nanyang Technological University and Singapore Management University a fully sponsored maritime internship involving both local and overseas work stints. In 2015, 30 undergraduates were given the award, bringing the total number of undergraduates who have undergone internship under the scheme to 54 to date.

To further attract bright young talent to take up seafaring careers, MPA joined hands with industry players and Singapore's seafaring unions to offer the Tripartite Maritime Scholarship. The scholarship offers promising students an opportunity to jump-start their seafaring career by undergoing grooming to become a Master or Chief Engineer of oceangoing merchant ships. As they mature in their career, talented officers would have the option to transfer to shore-based positions to fill critical high-level appointments within the maritime industry. In 2015, 20 Tripartite Maritime Scholarships were awarded to students pursuing either a Diploma in Nautical Studies or Diploma in Marine Engineering at the



Singapore Maritime Academy. This is the highest number of scholarships awarded since 2002. In total, more than 150 scholarships have been awarded since the launch of the scheme. Also, in 2015, further enhancements were made to the scheme following MPA's additional funding commitment of \$6.3 million towards the scheme for the next five years.

ENCOURAGING MANPOWER INVESTMENT

MPA has also been actively encouraging maritime companies in Singapore to invest in and develop their own local talent. This will not only help these companies keep their manpower costs competitive and entrench the companies in Singapore, but also support the growth of local maritime talent. These efforts yielded programmes like the MaritimeONE scholarship scheme. To date, more than 200 MaritimeONE scholarships have been awarded, with

funding for the scholarships coming from shipping lines, shipyards and maritime service providers.

In line with the government's pledge to support local maritime companies in the development of their pool of local talents and to help them adopt more sophisticated human resource tools and infrastructure, MPA topped up the Maritime Cluster Fund-Manpower Development scheme by some

\$65 million in 2015. The top-up followed MPA's review of the scheme in 2014. This latest top-up meant that MPA would have committed \$115 million to the scheme since 2007. Since its launch in 2007, more than 20,000 people have benefitted from the scheme. In 2015 alone, more than 4,500 individuals benefitted from signed up for training programmes offered under the scheme.

- 》 a. **Training@Maritime Singapore**, which offers a slate of approved training courses designed to advance the knowledge and expertise of local maritime personnel.
- 》 b. **Talent@Maritime Singapore**, a programme that is intended to spur the career development of local talent through the co-funding of industrial attachment stints, overseas attachment stints and leadership grooming programmes.
- 》 c. **InvestManpower@Maritime Singapore**, which encourages maritime enterprises and industry associations to implement quality human resource programmes and training infrastructure including certification programmes and mid-career conversion courses, so that they are better able to attract, train and develop their talent pool.

RAISING PUBLIC AWARENESS OF MARITIME CAREERS



MPA has also been working with its industry partners and various educational institutions to create greater awareness of maritime career opportunities among students.

With its MaritimeONE (Maritime Outreach Network) partners, MPA has organised many events that reach out to students. These include Maritime Campus, a roving exhibition held on campuses that provides upper secondary and junior college students information on maritime education, MaritimeONE scholarships and maritime careers.

Other events include the Singapore Maritime Dialogue and Singapore Maritime Ambassador Programme, where junior college, polytechnic and Institute of Technical Education students get to interact with political office holders and maritime industry leaders to discuss maritime matters.

In addition, MPA organised a Maritime Experiential Programme for secondary schools students who were on the Sea Asia Youth Tour. This tour was held in conjunction with the biennial Sea Asia event for maritime students

from institutes of higher learning. Students at the Sea Asia Youth tour visited company booths set up by maritime firms and spoke with industry practitioners to find out more about internship and career opportunities with these firms. Meanwhile, the Maritime Experiential Programme saw more than 400 secondary school students visiting various maritime sites. The programme is intended to allow students to gain a broader perspective on maritime work and spark in them an interest in maritime education and career.

SKILLSFUTURE INITIATIVE

Chaired by Deputy Prime Minister Tharman Shanmugaratnam, the SkillsFuture Council was set up in 2014 to establish an integrated system of education, training and career progression based on skill mastery. As the lead agency overseeing the Transport (Sea) sector for the SkillsFuture initiative, MPA chairs the Transport (Sea) Sectoral Tripartite Committee that will develop and implement the Sectoral Manpower Plan for the maritime sector. The Transport (Sea) Sectoral Tripartite Committee is supported by two taskforces - the Tripartite Maritime Manpower Taskforce for Seafaring Sector and the Maritime Manpower Taskforce for Shore-based



Sector which will spearhead manpower development efforts for seafaring and shore-based occupations respectively.

In 25 September 2015, the Transport (Sea) Sectoral Tripartite Committee unveiled an initial set of measures.

The measures are:

- **Developing Visual Narrative – “Multiple Pathways to a Rewarding and Enriching Maritime Career”.**

This will guide the committee in its work to develop multiple pathways to rewarding and enriching maritime careers and packing be a base from which collaterals can be developed.

- **Establishing the Maritime Singapore Connect Office.**

The Maritime Singapore Connect Office will be established to further raise awareness of and interest in the opportunities in the maritime sector among the general public. The office will see close collaborations between maritime employers, schools and the relevant government agencies and industry associations. MPA has set aside \$4 million to support the set up.

- **Launch of the SkillsFuture Earn and Learn Programme for Maritime Sector (Port Operations Officer, Deck Officer and Marine Engineer Officer).**

Targeted at fresh polytechnic graduates, the programme features a year-long structured work-study arrangement that leads to industry-recognised certification. The first intake for the three programmes is expected to be in the first half of 2016.

- **Launch of the SkillsFuture Study Awards for Maritime Sector.**

This scheme was created to support and encourage Singaporeans currently or previously employed in the maritime sector who wish to further develop and deepen their specialist skills. Recipients will receive a \$5,000 monetary award to help defray the cost of attending work-related training.

- **Launch of the SkillsFuture Credit for Maritime Sector.**

This scheme is intended to encourage individuals to take responsibility for their skill development and lifelong learning needs. All Singaporeans aged 25 and above will receive an initial credit of \$500 to cover fees for a wide range of work skills-related courses. Those interested in taking up maritime-related courses can choose from over 120 courses listed in the SkillsFuture Credit course directory.

- **Launch of TF-Sea Measures – Cadet Allowance Reimbursement, Achievement Awards and Up-Skill Allowance.**

These additional measures are meant to encourage more locals to take up a seafaring career and embark on up-skilling. This will help to improve retention of seafaring talent locally. MPA has committed \$4 million over the next three years to implement these measures.

STRONG MARITIME

SINGAPORE IDENTITY

Our work with stakeholders has helped us identify young people as a potential source of maritime talent - providing potential benefits for the community and MPA.

CHAPTER **6**

MARITIME SINGAPORE



FROM
TRADING POST
TO
GLOBAL HUB

COMMUNITY ENGAGEMENT

A STRONG MARITIME SINGAPORE IDENTITY



As an industry champion, MPA strives to build a strong Maritime Singapore identity. A strong Maritime Singapore brand benefits the Singapore maritime industry in many ways. It raises the profile of Maritime Singapore internationally,

enhancing the image of the industry among the Singapore public, increasing interest in maritime careers and last but not least, adding to Singapore's influence on the global stage.

To enhance Maritime Singapore's branding, MPA teams up with its stakeholders to launch various publicity and outreach efforts.

MAKING MARITIME SINGAPORE RELEVANT

MPA dedicates itself to promoting the importance and significance of Singapore's maritime industry to Singaporeans and to the world.

MPA first coined the term 'Maritime Singapore' to develop a sense of national

pride in the local maritime industry among Singaporeans and to cultivate in Singaporeans a sense of connection to the maritime industry. There exists currently many different perceptions of Singapore's maritime industry. To shape public opinion, MPA has launched many

initiatives over the years that project a positive brand image of Maritime Singapore. These brand building efforts are intensified in 2015 and also in 2016.

SPARKING INTEREST IN MARITIME SINGAPORE AMONG YOUTH



A key mission of MPA is to promote a deeper awareness and appreciation of Maritime Singapore.

In 2015, as part of its ongoing efforts in this, MPA launched the Maritime Youth Club programme. The Maritime Youth Club programme allows young people

to join maritime clubs in their schools or enjoy funding for maritime-related projects. This new outreach programme is intended not only to raise awareness of the maritime industry among the younger generation, but also to grow a pipeline of maritime talent and promote the image of Maritime Singapore.



It is another platform in the Singapore education landscape that allows youths to be exposed to and experience the maritime sector in a fun, interactive and engaging manner. The programme is expected to reinforce the importance of Maritime Singapore and inspire the young to consider a career in the maritime industry.

OTHER PUBLIC ENGAGEMENTS



Participants at the Singapore Maritime Trail 2

Aside from the Maritime Heritage Exhibition and Maritime Learning Journeys, in 2015 MPA also sought

to engage members of the public by organising outreach activities such as the Singapore Maritime Trails and the



Amazing Maritime Challenge. Also part of MPA's ongoing efforts to promote Maritime Singapore and careers in the maritime sector, Singapore Maritime Trails are guided tours of iconic landmarks rooted in Singapore's maritime heritage, while the Amazing Maritime Challenge is an annual team challenge featuring a maritime theme.

INSIDE MARITIME SINGAPORE



In 2015, the profile of Maritime Singapore was elevated with the airing of a documentary profiling the Port of Singapore.

The hour-long documentary titled 'Inside Maritime Singapore' was produced by National Geographic Channel in partnership with MPA and the Singapore Shipping Association. The documentary was aired in Singapore, Hong Kong, the rest of Southeast Asia and other parts of the world.

'Inside Maritime Singapore' traces the development of the Port of Singapore from its beginnings as a colonial trading outpost to its transformation into one of the world's busiest ports, largest



container transshipment hub, leading International Maritime Centre and world leader in the offshore and marine engineering sectors. It depicts the port as a global pivot of trade connected to more than 600 ports in over 120 countries.

The documentary allows viewers to witness the dynamic lives of people



in the maritime industry, and how they contribute to the port, offshore and marine engineering and maritime services to ensure that Maritime Singapore runs smoothly and efficiently. A coffee table book featuring photographs by renowned photographer Michael Yamashita was also commissioned as part of the collaboration.

SINGAPORE MARITIME WEEK 2015/ SINGAPORE MARITIME WEEK EXHIBITION



Each year, MPA uses Singapore Maritime Week as a platform to showcase Singapore's vibrant maritime cluster, generate interest in the maritime sector among the general public and engage with the general public and the regional maritime community.

Featuring the theme of People, Ideas and Opportunities, Singapore Maritime Week 2015 (SMW 2015) reached out widely to the general public with a lineup of 30 events that drew almost 32,000 participants, including high-level delegates such as port authorities, CEOs, industry leaders and maritime experts from across the globe.

Officially opened by then Minister for Transport and Second Minister for Defence Mr Lui Tuck Yew, SMW 2015 helped to promote thought leadership and

business opportunities in the maritime sector and offered fruitful networking opportunities within the industry.

Among the highlights of SMW 2015 were the community outreach events, which generated great public interest in the maritime sector and the exciting career opportunities it offers.

The Maritime Heritage Exhibition also created a buzz. Put together by MPA and its partners including the Singapore Maritime Foundation, Singapore Shipping Association and Association of Singapore Marine Industries, this first-ever exhibition on Singapore's maritime heritage told the story of the past, present and future of Maritime Singapore. Walking through the five zones of the exhibition, visitors experienced the transformation of

Maritime Singapore through the years through artefacts, interactive presentations and multimedia displays.

During the week, more than 1,000 students and members of the public went on the SMW Maritime Learning Journeys, which included boat tours to Raffles Lighthouse. Maritime Learning Journeys are field trips organised by MPA to its various facilities and are part of MPA's ongoing efforts to generate public interest in the maritime sector.



CULTURE OF EXCELLENCE

In order to build a future-ready Maritime Singapore, MPA spearheads various committees to stay relevant and competitive.

CHAPTER 7



SUSTAINABILITY

MPA embraces a culture of excellence to stay relevant and competitive in a fast-changing world. To realise this culture of excellence, MPA established several internal cross departmental committees to help steer ahead on several key domain areas such as Operations Excellence/ Technology, Strategic Communications, Value for Money, Employee Engagement, Sustainability, and Service and Innovation. These committees work together to ensure

improvement to processes and services to our diverse stakeholders.

In particular, to elevate commitment to environmental and social issues by Board and Management, the MPA Sustainability Office was formed in 2014 to drive both internal and external sustainability efforts. The committee reports to the steering committee, headed by the Chief Executive, twice a year on progress of initiatives and KPIs.



This section covers internal to foster a culture of good governance, prudent resource management and conscientious environmental and social sustainability (covered in "Our People") beyond financial sustainability.

As MPA is a self-funded statutory board, it is vital that MPA achieves financial sustainability. For MPA, this means ensuring that its revenue stream, derived mainly from its provision of port and marine services, is able to sustain the staff costs and depreciation cost of fixed assets account that make up the bulk of its operating expenses.

FINANCIAL SUSTAINABILITY



MPA's One Stop Document Centre providing a hassle-free experience for all port and marine related services.

REVIEW OF FEES AND CHARGES

As a general rule, fees and charges imposed by MPA are based on the principle of cost recovery. Rates may be set below cost if the policy intent is to subsidise usage. They may also be

set above cost if the policy intent is to deter usage. Each year MPA monitors cost recovery ratios – which are ratios of revenue to cost - to ensure rates set are aligned to policy intent.

UPHOLDING STANDARDS THROUGHOUT SUPPLY CHAIN

MPA strongly advocates fair employment practices, high standards of productivity, a progressive wage model and a safe workplace. We have sought to extend these values to our business partners, consultants, suppliers and contractors by incorporating them as mandatory requirements in our tender



and quotation specification. These include the Ministry of Manpower's Workplace and Safety and Health Act, the Building and Construction Authority's Public Sector Standard Conditions of Contract for Construction Works, and the National Environment Agency's Clean Mark Accreditation Scheme.

VALUE FOR MONEY



The most cost effective proposal is selected if that can meet most, majority of the requirements can be met at the best value of investment. Beyond cost, staff evaluating the tenders also considers other factors such as reputation, track record and service quality of potential suppliers.

GREEN GOODS AND SERVICES



We encourage our appointed food catering companies to use eco-friendly disposable plates and utensils at all our MPA hosted events.

INTEGRATED REPORTING



In 2014, MPA achieved a first in the maritime industry and public sector with its inaugural Sustainability and Integrated Report titled **Towards a Future Ready Maritime Singapore**. This report saw MPA adopting a more holistic approach in reporting its performance in the year to both its internal and external stakeholders, which include its customers, partners, suppliers, vendors and employees.

This move reflects MPA's embrace of a more integrated approach in fulfilling its roles and responsibilities where, besides promoting and regulating the maritime industry and ensuring the smooth operating of the port, MPA will also champion broader engagement with the maritime community to ensure that the maritime industry has a positive impact on society, the economy and the environment.



GOING BEYOND FIGURES IN CORPORATE REPORTS

MPA is an early mover towards Sustainability and Integrated Reporting and hopes to encourage companies in the maritime industry and organisations in the public sector to follow suit. With its holistic and system-wide perspective, Integrated Reporting resonates with MPA's philosophy that the sum of the whole is greater than its individual parts. Gathering the lessons with the release of its 2014 Sustainability and Integrated Report, MPA actively shares its experience with other public agencies and professional accounting bodies.



ENVIRONMENTAL SUSTAINABILITY

Climate change is one of the most significant threats facing the world today. MPA firmly believes that the maritime industry must further improve its energy efficiency and emission control, especially as international shipping will continue to grow in tandem with world trade. As the driving force behind one of the world's busiest ports, it is imperative that MPA leads in sustainability across the maritime industry and drives change internally by reducing the impact of its own operations, and externally by influencing others where it can.

With many of MPA's material environmental impacts outside its direct control, MPA uses regulation, tariffs and incentives to positively influence areas such as the consumption of water and energy of vessels in port.

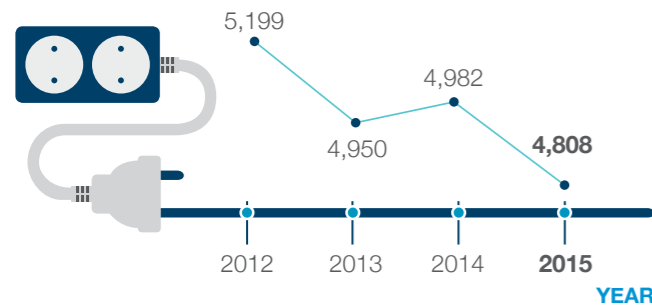
In addition, MPA also seeks to minimise the environmental impact of its own operations wherever possible.

Electrical and water consumption decreased marginally in 2015. Electrical consumption has decreased from 4.982GWh in 2014 to 4.808GWh

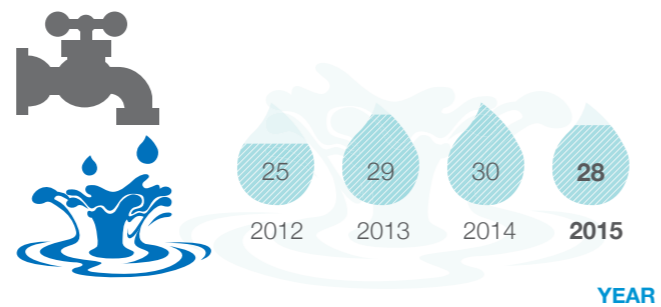
in 2015, translating to 7% decrease in energy intensity of 18.0kWh/\$ to 16.7kWh/\$ respectively. This could also be translated to 2,241.4TCO₂ in 2014 and 2,163.1TCO₂ in 2015. Water consumption has decreased by 6.7% from 20m³ in 2014 to 28m³ in 2015.

Other than the energy from solar panels, all of MPA's energy usage are purchased from the national grid. Electrical and water usage are the only material energy and water consumption in our facilities.

ENERGY ELECTRICAL CONSUMPTION ('000 KWH)



WATER WATER CONSUMPTION ('000 CU M)



TARGETS FOR SUSTAINABILITY KPIS

MPA will take guidance from the Public Sector Taking the Lead in Environmental Sustainability (PSTLES) initiative 2.0 led by Energy Efficiency Programme Office.

Preliminarily, MPA plans to reduce energy and water consumption by 3% and 5% respectively by 2020. A more concrete plan will be looked into after an energy audit.



Save equivalent of 15% of the Ministry's FY2013 electricity consumption



Reduce Water Efficiency Index by 5% from the Ministry's FY2013 baseline



Reduce Waste Disposal Index by X% from the Ministry's FY2015 baseline
(A waste reporting system is to be put in place in FY2015; Targets to be established in FY2016)



Use renewable energy
(A feasibility study is to be carried out to establish the solar adoption potential among agencies; Targets to be established in FY2016)

Sustainability KPis from PSTLES 2.0

(1) On the basis of \$277m of total revenue in 2014.
 (2) On the basis of \$288m of total revenue in 2015.
 (3) Conversion factor taken from MEWR (2014) "Carbon intensity of electricity generation" figure (0.4499kgCO₂/kWh).

THE NEXT CHAPTER OF OUR SUSTAINABILITY

Since the early 1980s, MPA has been using solar energy to light up its four offshore lighthouses and about 160 navigational beacons and buoys, in place of generators and non-electric energy sources like acetylene.

In the years since MPA first embarked on its sustainability journey to reduce its carbon footprint on a large scale, MPA has been exploring the feasibility of tapping into sustainable energy sources such as solar energy.

During the early years, however, using solar energy as an alternative to fossil fuel for large scale usage was not feasible for economic reasons. That changed when the solar leasing model became available in Singapore two years ago.

INCORPORATION OF SOLAR ENERGY SYSTEMS AT MPA SITES

In September 2015, MPA completed installing solar energy systems at four MPA-owned sites. All four systems utilise the solar leasing model.

Brani Depot



West Coast Pier



Energy generated by the solar energy systems at the four sites varies according to the size of the system at the individual sites.

Combined, these sites represent a total installed capacity of 400 kilowatt, equivalent to the power consumption of approximately 100 four-room HDB flats.

The solar energy system has reduced the reliance on the national grid by 3% at Maritime House, 12% at West Coast Pier, 50% at Marina South Pier and 100% at Brani Buoy Depot.

Marina South Pier



Maritime House



In addition, as the operator, MPA is able to contribute excess power generated from the system back to the national power grid, thus becoming a provider of sustainable energy for the country.

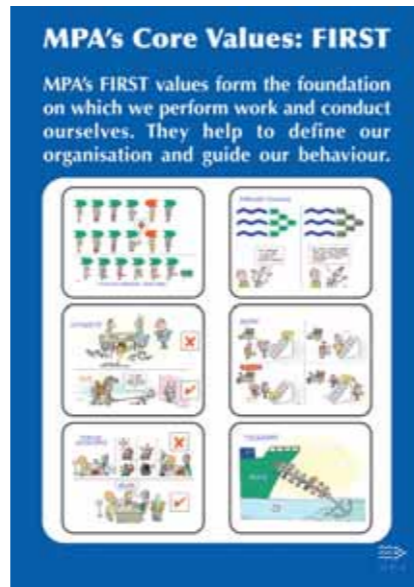
DEVELOPING A CULTURE OF ETHICS AND INTEGRITY

[G4-49, G4-50, G4-56, G4-57, G4-58]

ESTABLISHING A CULTURE OF ETHICS AND INTEGRITY THROUGH EDUCATION AND AWARENESS

To foster a culture of ethics and integrity within the organisation, MPA developed and launched a mandatory course that guides employees' behaviour and action and help align their conduct to the organisation's FIRST values. MPA's FIRST VALUES are: Forward Thinking, Integrity, Respect, Service Excellence and Teamwork. The interactive half-day

programme is held on an annual basis to remind all staff on the importance of FIRST values and to educate them on how these values apply in their daily work. The course is also conducted for all new employees as part of the foundation programme for all new recruits.



ZERO TOLERANCE FOR CORRUPTION

[G4-SO4, G4-SO5]

As a public agency, MPA is held up to a high standard of ethical behaviour and professional conduct. To ensure that it upholds this standard, each year, MPA requires all its employees to acknowledge and submit an MPA Code of Ethics form and declare any potential conflict of interest to its Human Resource Division. In addition, a rigorous Conflict of Interest framework is in place to ensure that all staff,

including board members, abstain from decision making in situations involving potential conflicts of interest.

MPA has also improved its practices in managing and preventing corruption. For instance, as part of MPA's Ethics Policy, guidelines are set for internal disclosure specifically to allow MPA employees to raise concerns of serious wrongdoings without fear of reprisal.

Staff can raise these concerns through a whistle-blowing channel manned by the Internal Audit Department, which reports directly to the Audit Review Committee.

As at 31 December 2015, no critical concerns on ethics and integrity was raised to the Board.

CORPORATE GOVERNANCE

ORGANISATION AND STRUCTURE

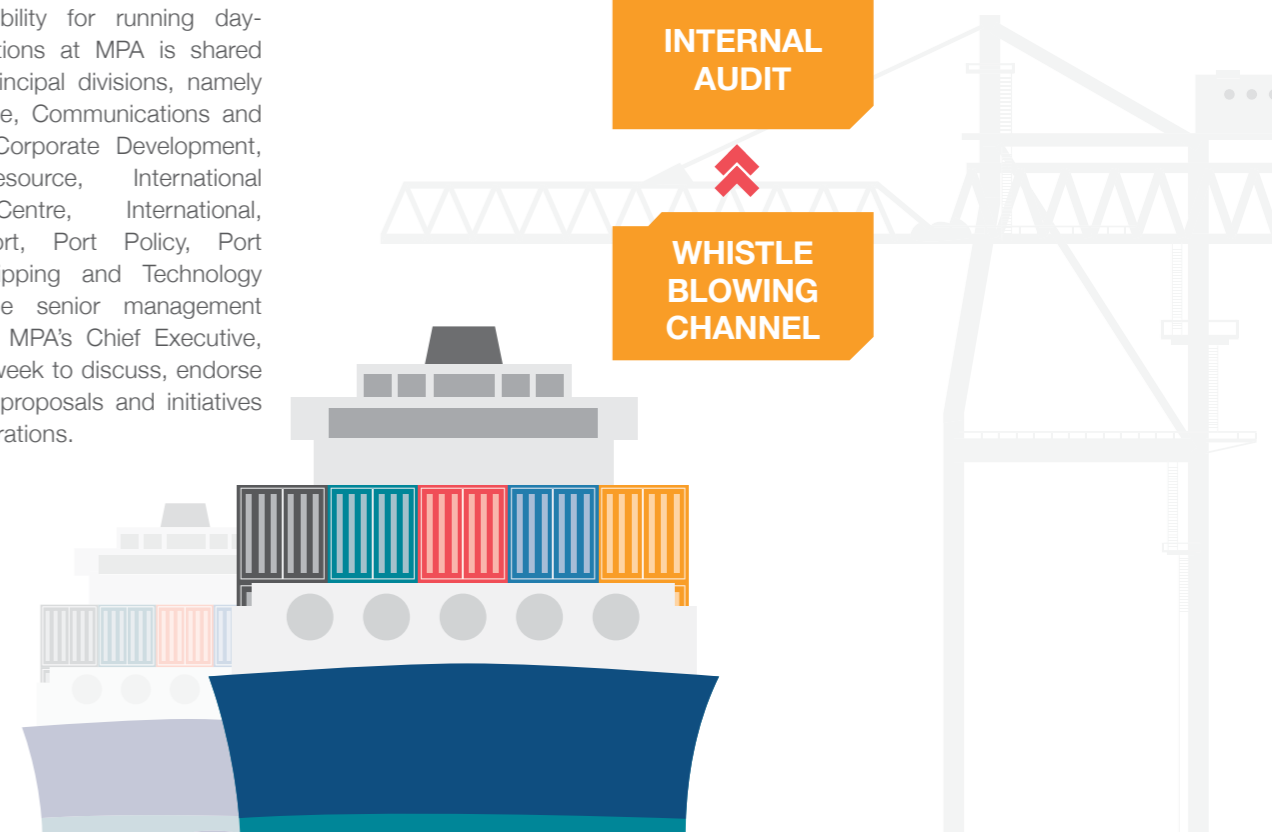
[G4-34, G4-35, G4-36, G4-40, G4-42]

MPA was instituted by parliament under the MPA Act. As an autonomous agency, the broad strategic directions to realise the organisation's mission and fulfil its role are determined by the MPA Board, which is headed by the MPA Chairman. Members of the Board include the MPA's Chief Executive, senior officials from the public sector and industry representatives from across the maritime sector. They are independently appointed by the Minister of Transport for a three-year term. The current MPA Board was appointed on 2 February 2015.

The MPA Board meets every alternate month to deliberate over and approve matters pertaining to key policies as well as operational, governance and sustainability issues, including the key material issues addressed in this report.

The responsibility for running day-to-day operations at MPA is shared among 12 principal divisions, namely the CE's office, Communications and Community, Corporate Development, Human Resource, International Maritime Centre, International, Planning, Port, Port Policy, Port Services, Shipping and Technology Divisions. The senior management team, led by MPA's Chief Executive, meets every week to discuss, endorse and approve proposals and initiatives for MPA's operations.

MPA BOARD AND BOARD COMMITTEES



DISCLOSURE ON COMPENSATION

[G4-51, G4-52]

The remuneration criteria for the MPA Board and senior management are pegged to the Public Service Division's guidelines. The process for determining remuneration is prescribed by the government. We have also disclosed the

composite fees paid to MPA Board on page 56 of our Financial Report 2015.

In 2015, the ratio of total compensation of the MPA Board and executive senior management to that of all employees

was 0.0024. [G4-54] There has been no increase in the annual total compensation of the two groups since 2013. [G4-55]

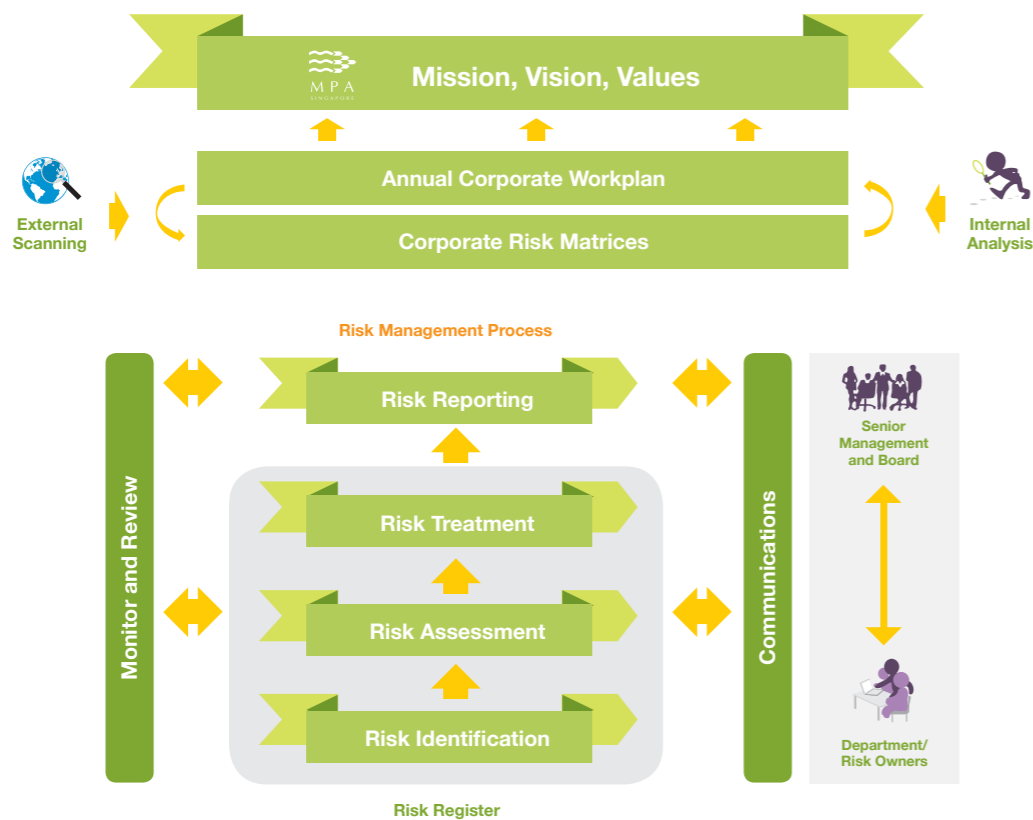
RISK MANAGEMENT PROCESS

[G4-45, G4-46, G4-47]

In 2014, MPA established a risk management framework that incorporates a systematic risk management process. As part of

the risk management process, MPA introduced an ERM work plan cycle that dovetails with its corporate work plan cycle. With this, when working

on their work plans for the year ahead, MPA officers review their risks and ERM work plans concurrently.



MPA's Risk Management Framework

THE RISK MANAGEMENT PROCESS CONSISTS OF THE FOLLOWING STEPS:

Risk Assessment-

The various departments identify risks and assess the impact and likelihood of the risks occurring based upon a set of parameters. While risks are reviewed every half yearly, MPA also set up a live reporting process where divisions can register new risks at any point in time should any surface.

Risk Treatment -

The departments propose mitigation measures to counter these risks. These measures will be evaluated and approved by the ERM Working Committee and Steering Committee, which are also responsible for setting the organisation's risk appetite.

Risk Reporting -

The ERM Working Committee and Steering Committee (comprising MPA's Chief Executive and senior management) will evaluate the risks and class key risks as corporate risks. These risks are then mapped into three categories of corporate risk matrices - Strategic Risks, Operational Risks and Corporate Governance Risks. Examples of key risks can be found on the next page.

Communications -

Communication of risks is carried out using both the bottom-up and top-down approach. Where risks are

identified by risk owners and reported to senior management, these risk owners will, in turn, provide feedback on proposed mitigation measures.

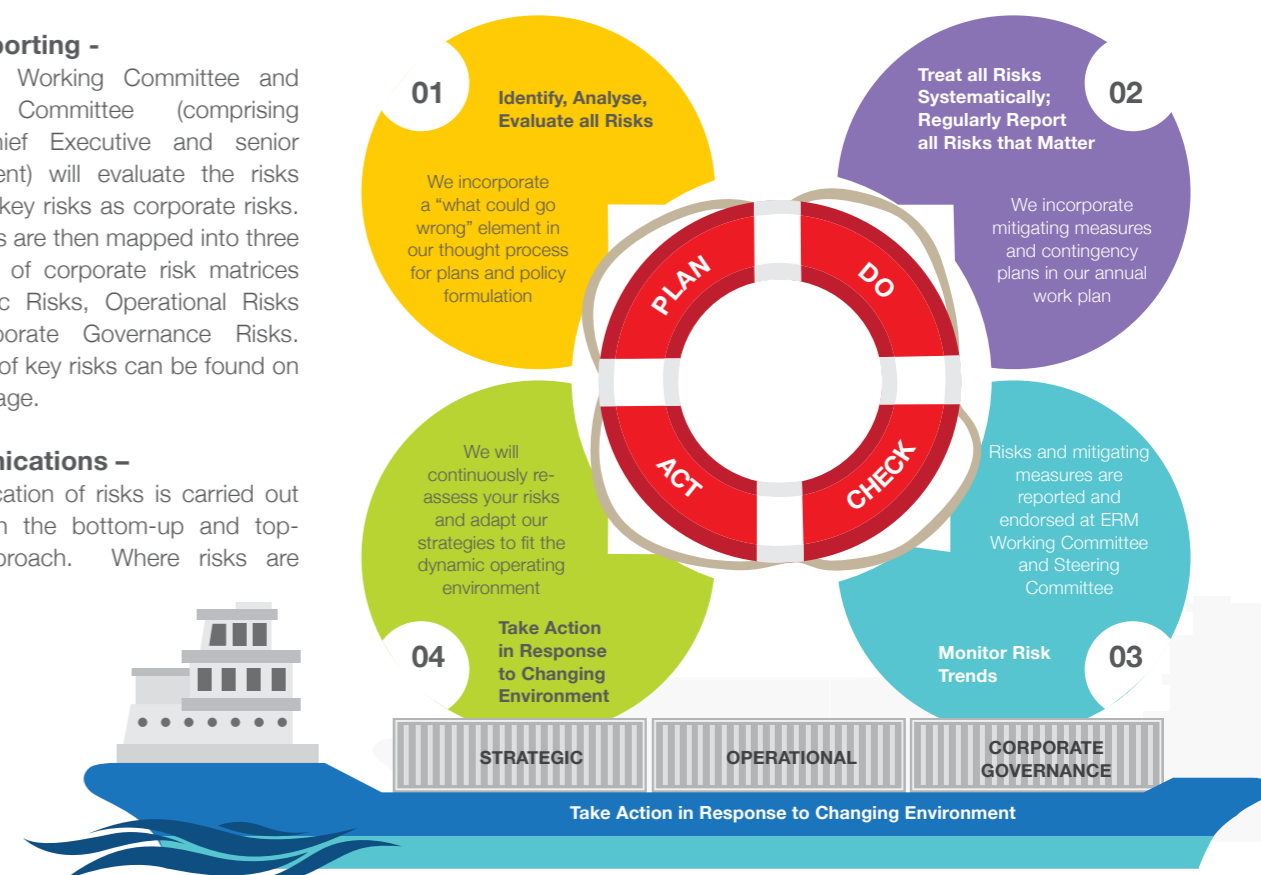
Monitor and Review -

To track the success of the mitigation measures, departments submit half-yearly progress reports on their ERM initiatives. Departments may also file an update in the risk register at any point in time.

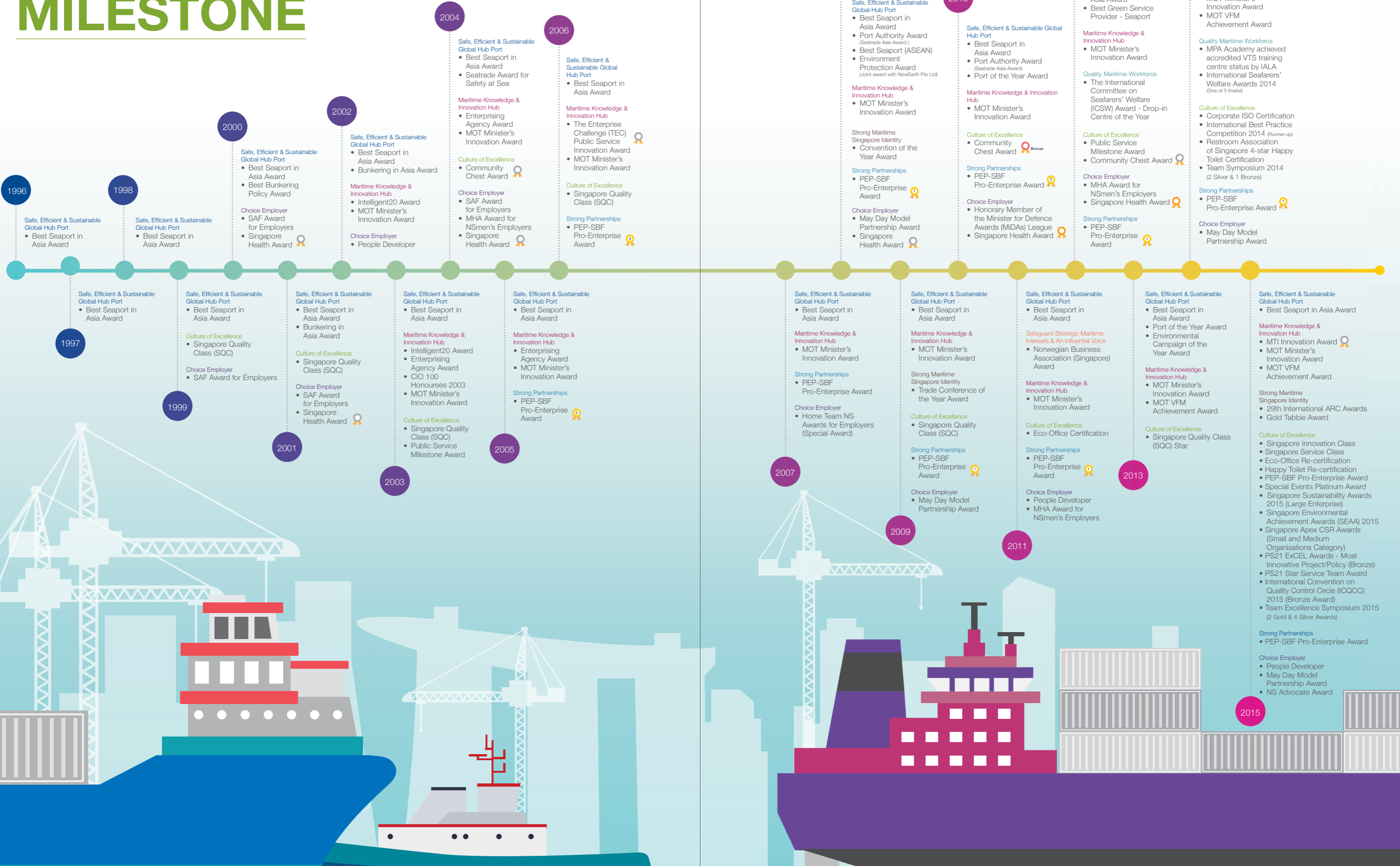
Advancing MPA's Risk Culture -

To promote MPA's risk culture within the organisation, an ERM poster has been distributed to all departments.

The poster is also displayed in meeting rooms and common areas within the MPA premises. The poster illustrates the Plan-Do-Check-Act cycle and how employees can incorporate this model in their work processes, it serves to remind officers to have a risk-aware mindset at work, to ensure that MPA remains Future Ready. Twice yearly, MPA also circulates the MPA Risk Digest, an in-house publication that communicates various risk issues, among its staff to raise risk awareness among them. In addition, MPA is in the process of rolling out customised ERM training programmes to build organisational risk competency.



MPA'S AWARDS MILESTONE



1996

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

1998

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

2000

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Best Bunkering Policy Award

- Choice Employer
- SAF Award for Employers
- Singapore Health Award

2002

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Bunkering in Asia Award

- Maritime Knowledge & Innovation Hub
- Intelligent20 Award
- MOT Minister's Innovation Award

- Choice Employer
- People Developer

2004

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Seatrade Award for Safety at Sea

- Maritime Knowledge & Innovation Hub
- Enterprising Agency Award
- MOT Minister's Innovation Award

- Culture of Excellence
- Community Chest Award

- Choice Employer
- SAF Award for Employers
- MHA Award for NSMen's Employers
- Singapore Health Award

2006

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

- Maritime Knowledge & Innovation Hub
- The Enterprise Challenge (TEC) Public Service Innovation Award
- MOT Minister's Innovation Award

- Culture of Excellence
- Singapore Quality Class (SQC)

- Strong Partnerships
- PEP-SBF Pro-Enterprise Award

1997

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

- Culture of Excellence
- Singapore Quality Class (SQC)

- Choice Employer
- SAF Award for Employers

1999

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Bunkering in Asia Award

- Culture of Excellence
- Singapore Quality Class (SQC)

- Choice Employer
- SAF Award for Employers
- Singapore Health Award

2001

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Bunkering in Asia Award

- Culture of Excellence
- Singapore Quality Class (SQC)

- Choice Employer
- SAF Award for Employers
- Singapore Health Award

2003

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

- Maritime Knowledge & Innovation Hub
- Intelligent20 Award
- Enterprising Agency Award
- CIO 100 Honourees 2003
- MOT Minister's Innovation Award

- Culture of Excellence
- Singapore Quality Class (SQC)
- Public Service Milestone Award

2005

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

- Maritime Knowledge & Innovation Hub
- Enterprising Agency Award
- MOT Minister's Innovation Award

- Strong Partnerships
- PEP-SBF Pro-Enterprise Award

2008

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Port Authority Award (Seatrade Asia Award)
- Best Seaport (ASEAN)
- Environment Protection Award (Joint award with NewEarth Pte Ltd)

- 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
- Choice Employer
- MHA Award for NSMen's Employers
- Singapore Health Award

- Strong Partnerships
- PEP-SBF Pro-Enterprise 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
- MPA Academy achieved accredited VTS training centre status by IALA
- International Seafarers' Welfare Awards 2014 (One of 5 finalists)

- 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)

- Strong Partnerships
- PEP-SBF Pro-Enterprise Award

- Choice Employer
- May Day Model Partnership Award

2007

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award

- Maritime Knowledge & Innovation Hub
- MOT Minister's Innovation Award

- Strong Partnerships
- PEP-SBF Pro-Enterprise Award

- Choice Employer
- Home Team NS Awards for Employers (Special 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
- People Developer
- MHA Award for NSMen's Employers

2013

- Safe, Efficient & Sustainable Global Hub Port
- Best Seaport in Asia Award
- Port of the Year Award
- Environmental Campaign 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 Tabble Award

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

- Strong Partnerships
- PEP-SBF Pro-Enterprise Award

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

AWARDS

RECEIVED IN 2015

MTI Innovative Award

14 Apr 2015

The Mass Flow Meter project won the Silver award under the MTI innovative category award.

May Day Model Partnership Awards

23 May 2015

The award is presented by the NTUC and recognises partnerships that have put in efforts to upgrade the workforce. The joint partners receiving this award include Keppel Smit Towage, MPA, STET Maritime and the Shipbuilding and Marine Engineering Employees Union for their role in developing the Tugmaster Training Programme. Joint recipient of the award for developing the Tugmaster training Programme.

Innovation Class (I-Class) Service Class (S-Class) People Developer (PD)

31 May 2015

MPA has reached another milestone in our business excellence journey by achieving the Innovation Class (I-Class), Service Class (S-Class) and People Developer (PD) certifications.

Best Seaport-Asia Award

24 Jun 2015

The Port of Singapore has won for the 27th time the 'Best Seaport - Asia' award at the 2015 Asia Freight, Logistics and Supply Chain Awards (AFLAS) held in Hong Kong on 24 June 2015. The AFLAS awards, 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.

NS Advocate Award

13 July 2015

The Maritime and Port Authority of Singapore (MPA) has been conferred the NS Advocate Award – a corporate award for recognising employers, educational institutions and community groups that have demonstrated excellent support for NSmen.

National Day Awards

10 Aug 2015

The Singapore National Day Awards recognise individuals who have made significant contributions to public service. This year, a total of 3,888 individuals in 23 award categories received the National Day Honours including Senior Manager, Corporate Systems (IT), Ms Tan Kheng Hun and Senior Assistant Hydrographer Mr Lee Weng Choy from the Maritime and Port Authority of Singapore (MPA).

Gold Tabbie Award

14 Aug 2015

AsiaOne: Six international awards for SPH Magazines' Custom Publishing Unit Issue 26 of Singapore Nautilus clinched a Gold Tabbie award under the Front Cover Illustration category in the annual Content Marketing Awards presented by US-based organisation Content Marketing Institute. In another category, Best Single Issue: Top 25 Issues, Singapore Nautilus Issue 28 garnered sixth placing.

Singapore Apex CSR Awards (Small and Medium Organisations Category)

25 Aug 2015

The inaugural Singapore Apex CSR Awards thus aims to recognise and showcase the highest level of CSR excellence in Singapore, and provide a benchmark for other companies aspiring to better sustainability practices.

Singapore Environmental Achievement Awards (SEAA) 2015

26 Aug 2015

The Singapore Environmental Achievement Award (SEAA) recognises Singapore and South East Asian organisations that have shown commitment to environmental and social responsibilities. The Maritime and Port Authority of Singapore (MPA) clinched top honours at this year's Singapore Environmental Achievement Awards. The green awards were launched in 1997 to inspire local commitment to corporate best practices in the environment. An event organised by the Singapore Environment Council (SEC) on Wednesday, MPA was presented the Outstanding Singapore Environmental Achievement Award. It was also a joint winner in the public sector category, alongside Nanyang Technological University.

29th International ARC Awards - Bronze

28 Aug 2015

MPA won a bronze award in the Annual Report competition - ARC Awards International XXIX, under Govt Agency Integrated Annual / Sustainability Report

Team Symposium 2015

1 Oct 2015

The Team Excellence Symposium 2015, organised by Singapore Productivity Association, was held from 28 Sep to 1 Oct 2015.

We are proud to announce that our teams have won 2 Gold & 4 Silver Awards.

Gold

WIT : Atlass
Project Title: Annual Administrative Fee Scheme
Division: SG, CD & TN

WIT : VIS2000

Project Title: Building a Smarter Port with Connectivity and Mobility
Division: TN, PT & PS

Silver

WIT : Vision
Project Title: Improvements to Private Wharfrage Customer Transactions
Division: CD & TN

WIT : NOVA

Project Title: MPA Corporate ISO Certification
Division: CD

WIT : Terminators

Project Title: Consolidated Maps of Pasir Panjang Terminal
Division: PP

WIT : KIMIA

Project Title: Measuring the effectiveness of oil spill dispersants used at sea during an oil spill incident
Division: PT

International Convention on Quality Control Circle (ICQCC) 2015

4 Oct 2015

The International Convention on Quality Control Circle (ICQCC) 2015 was held in Korea, GyeonAgnam from 6 to 8 Oct 2015. MPA's team VIS2000 won a Bronze Award

Special Events Platinum Award

8 Oct 2015

The ComChest Special Events Awards are presented to organisations and groups of individual for raising substantial funds for Community Chest through fund-raising events. The Special Event Platinum award is the most prestigious award for the category and is awarded to organisations that raised \$300,000 or more for their fund raising event.

MPA has received the Special Events Platinum Award for our efforts in organising the MPA Charity Golf 2014, which raised \$412,488 for Community Chest and MPA's adopted charities.

MTI Innovative Project/Policy Award 2015 (Silver)

14 Oct 2015

MPA, A*STAR (National Metrology Centre) and SPRING worked together on the project for setting the World-First Standard on Mass Flow Metering for Bunkering. This project won the Silver Award for the MTI Innovative Project/Policy Award 2015, which recognises and celebrates individuals and teams in the MTI family of agencies who have demonstrated outstanding innovation and collaboration in their work.

PS21 Star Service Team

15 Oct 2015

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. Subject to judges' discretion, teams that have displayed exceptional effort may also be conferred the PS21 Distinguished Star Service Team Award.

Facilities Management Department won the award for Improvements to Marina South Pier.

PS21 Star Service

15 Oct 2015

The PS21 Star Service Award recognises and rewards public officers who have consistently demonstrated high standards of service excellence. Their dedication, their heart for others, and their commitment to excellent service inspire our vision of success.

Our staff Goh Tong Lin Irene and Puvaneswari Tamil Selvam won the award.

PS21 ExCEL Awards – 'Innovation Champion' (Merit)

15 Oct 2015

This Awards Ceremony celebrates and recognises public officers and agencies for their innovations and excellence in public service delivery. Manin Kaur has achieved the Innovation Champion Merit Award. The Innovation Champion is to recognise officers who injects innovation and creativity into their work or who have been pivotal in promoting the ExCEL spirit within their agencies.

PS21 ExCEL Awards - Most Innovative Project/Policy (Merit)

15 Oct 2015

This Awards Ceremony celebrates and recognises public officers and agencies for their innovations and excellence in public service delivery. The Most Innovation Project/Policy is to recognise projects or policies that best exemplify the ExCEL spirit as well as to affirm/commend inter-agency collaboration efforts demonstrated by the project teams. Our project "Transforming Maritime Singapore with Connectivity and Mobility" was awarded the Merit Award.

PS21 ExCEL Awards - Most Innovative Project/Policy (Bronze)

15 Oct 2015

This Awards Ceremony celebrates and recognises public officers and agencies for their innovations and excellence in public service delivery. The assessment was based on the impact the project has on Singapore and its citizens, the potential for expanding its application, and how the team overcame challenges to achieve the breakthroughs.

The team from MPA, A*STAR (National Metrology Centre) and SPRING won the Bronze award for the PS21 Excel Innovative Project/Policy with the project "Setting of the world first standard for mass flow metering for bunkering."

Singapore Sustainability Awards 2015 (Large Enterprise)

21 Oct 2015

MPA is a winning organisation in the Singapore Sustainability Awards 2015, under the Sustainable Business Awards category – Large Enterprise.

This award is given out annually by the Singapore Business Federation, in recognition of companies for their commitment to sustainable business practices.

PEP-SBF Pro-Enterprise Award

26 Nov 2015

The Pro-Enterprise Panel - Singapore Business Federation (PEP-SBF) Awards 2015 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. MPA emerged top again for the fourth consecutive time, with the highest score of 94.9% to date.

Happy Toilet Re-certification

10 Dec 2015

The Happy Toilet certification is awarded by the Restroom Association of Singapore (RAS) and it is a star-grading (from 3-star to 6-star) initiative for toilets which focuses on five main areas – Design, Cleanliness, Effectiveness, Maintenance and User Satisfaction. MPA has received a 5-star certification for all toilets (5 floors) at PSAB, an improvement over the 4-star certification which we received in 2014. Toilets at TPC and POCC Vista were also included in the exercise, and the assessors also awarded MPA with 5-star certification for toilets at these 2 locations.



STRONG PARTNERSHIPS

MPA has achieved the Top Rank for the 4th consecutive time at the Pro-Enterprise Ranking Survey in 2015, reflecting the organisation's strong emphasis in growing the maritime industry through constant engagement with our stakeholders and strong pro-enterprise initiatives.

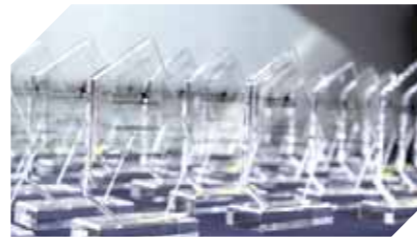
CHAPTER 8



STAKEHOLDER ENGAGEMENT [G4-24, G4-25]

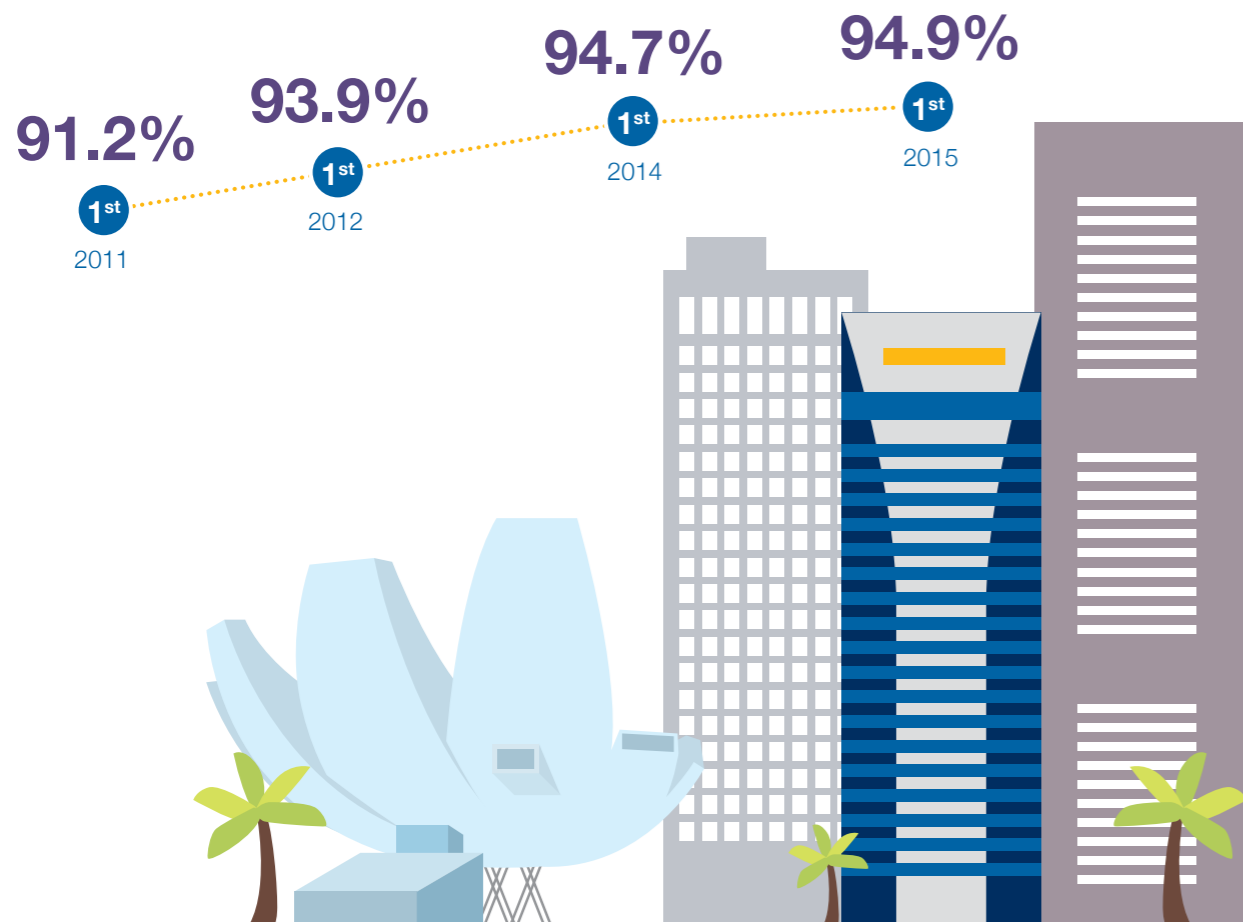
As a pro-business enterprise, MPA constantly reaches out to our key stakeholders who are namely our customers, the maritime community, partner organisations, vendors, and employees for their feedback and interests. Regular stakeholder engagements are scheduled over 2015 on issues such as sustainability and potential influence and impact MPA can have on them. Our FY2015 stakeholder engagement activities are summarised in page 78-79.

built up a customer centric and pro-business enterprise culture. MPA has retained our first position in Pro-Enterprise Ranking (PER) Survey 2015 with an improved score of 94.9%, a new record score which is 0.2% above our previous record at 94.7% in 2014.



The rigorous and all-rounded stakeholder engagements with strong senior management presence have

MPA's PER Ranking Score
Note: no PER survey in 2013



MPA'S SERVICE EXCELLENCE FRAMEWORK

The Service Excellence Framework revolves around 3 customer management tenets which are:-

- Stay close to our customer's needs
- Go the extra mile
- No challenge too difficult; no task too small

The framework incorporates 4 key strategic thrusts that serve as drivers:-

- Strategy** – MPA's leadership team developing and driving customer-focused values, goals and principles
- Satisfaction** – Understanding its customer segment and requirements, and the future trends to create customer experiences that are aligned with its service values and positioning.
- Skills** – Equipping staff with the necessary service skills and competencies to undertake the role of providing good customer service.
- Systems** – Putting in place a structured system to coordinate people, processes and technology to deliver the customer experiences it intends to create.



The foundation of this would be the Strategic Service Intent of "We Care, We Listen, We Serve, We are MPA!" which focuses and directs our employees' behaviours towards striving for service excellence.

SERVICE EXCELLENCE BOOTCAMP



As part of MPA's service excellence journey, five series of service excellence bootcamp was conducted at the Civil Service College Auditorium. Close to 500 staff across all divisions were introduced to the Service Excellence Framework (see above), the value of customer service and the fundamentals of providing excellent service.

Our FY2015 stakeholder engagement activities are summarised in the following table:

[G4-24, G4-25, G4-26, G4-27]

Stakeholder Category	Stakeholders	Topics Discussed	Platforms	Frequency
Maritime Enterprise	Shipping lines, ship agencies, ship management companies	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Port marine and shipping circulars ERM Forum Navigational safety dialogues Singapore International Bunkering Conference and Exhibition Singapore Maritime Week Offshore Marine Forum Event for key finance partners Tax Seminar 	Monthly, Annually
	Maritime service providers	<ul style="list-style-type: none"> Work with service providers to develop Maritime Singapore into a premium one-stop centre that offers a comprehensive and sophisticated suite of services 	<ul style="list-style-type: none"> Meetings Singapore Maritime Week 	Quarterly, Annually
Non-Enterprise	Shipmasters	<ul style="list-style-type: none"> Ensure prompt and reliable vessel traffic information services and navigational aids 	<ul style="list-style-type: none"> Meetings Singapore Maritime Week 	Quarterly, Annually
	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) 	<ul style="list-style-type: none"> Day of Seafarer Celebration International Sports Week International bowling tournament 	Annually
	Pleasure/harbor craft owners and license holders	<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 	<ul style="list-style-type: none"> Briefing session on Certificate of Competency (CoC) Career fairs Tea sessions 	Quarterly, Annually
Partner	Port terminal: PSA & JP	<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 	<ul style="list-style-type: none"> Briefing sessions Learning journeys Port marine and shipping circulars Informal events such as sports and recreational activities 	Quarterly, Annually
	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 	<ul style="list-style-type: none"> Briefing sessions Learning journeys 	Quarterly, Annually
Local Communities	Government agencies (MOT, A*star, MTI, MOF and MFA)	<ul style="list-style-type: none"> Collaborate with government agencies to share ideas and build long term relationships 	<ul style="list-style-type: none"> Cross-agencies meetings Ministerial Committee on Services (MCS) 	Adhoc, Annually
	Institutes of higher learning (SMA, SIT, ITE and polytechnics)	<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 	<ul style="list-style-type: none"> Career and scholarship fairs MPA Global Internship Programme Open house events Singapore Maritime Dialogue 	Annually
	Unions and private organizations (SMF, ASMI, SMOU, SMA and SGX)	<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 	<ul style="list-style-type: none"> Industry consultation Young mariners' networking event MaritimeONE open house 	Annually
	Members of the public	<ul style="list-style-type: none"> Champion maritime interest and educate the general public about the maritime industry 	<ul style="list-style-type: none"> Singapore Maritime Week Singapore Maritime Trails Singapore Heritage Festival MPA Learning Journeys Smart Port Hackathon 	Monthly, Annually
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 	<ul style="list-style-type: none"> Technical briefings Teleconference Meetings 	Adhoc (as required)
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 	<ul style="list-style-type: none"> Intranet Townhall session 	Daily, Monthly, Annually

CHOICE EMPLOYER

MPA seeks to develop human capital and bring out the best in its people through meaningful jobs with equal opportunities for career progression.

CHAPTER 9



OUR PEOPLE [G4-9, G4-10]

We recognise that our people are vital to the organisation. Accordingly, we believe the successful recruitment and retention of our staff is critical for the sustainable development of organisation.

Our human resource practices are guided by four strategic drivers:

- To provide our employees with
 - Growth and advancement opportunities
 - A fair system for rewards and recognition
 - A comprehensive benefits package
 - Policies and programmes that cater for work-life harmony

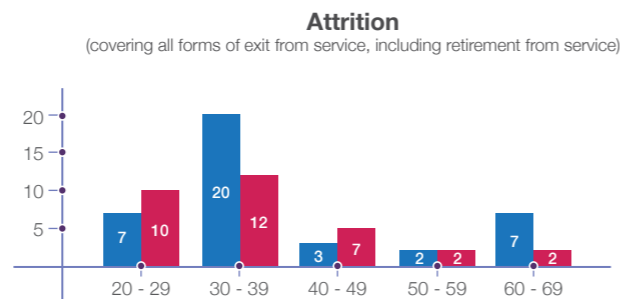
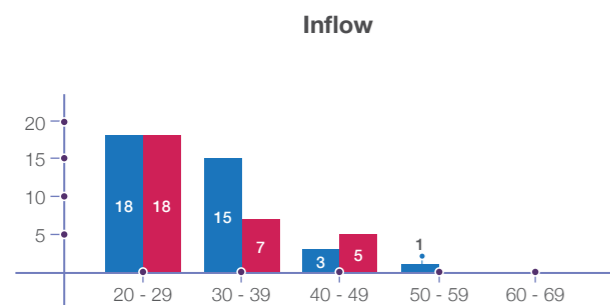
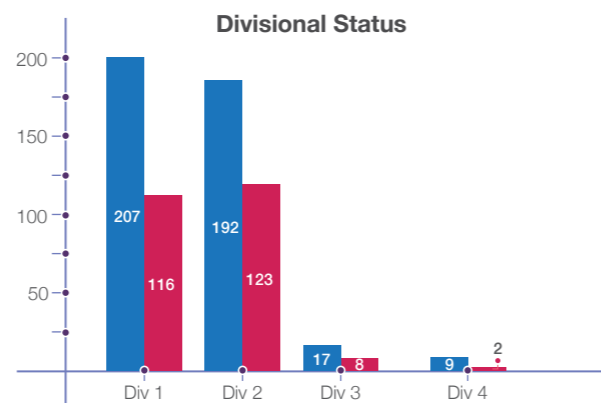
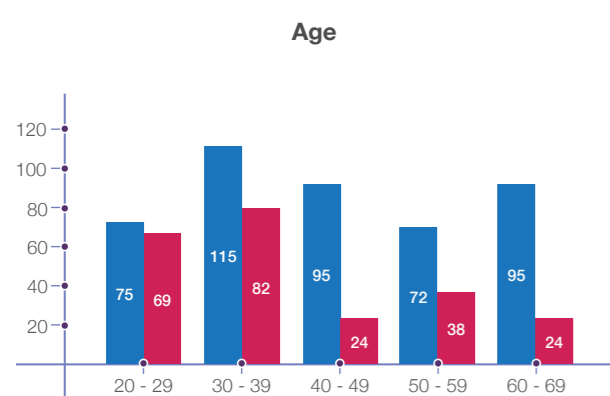
MPA employs a workforce of over

600

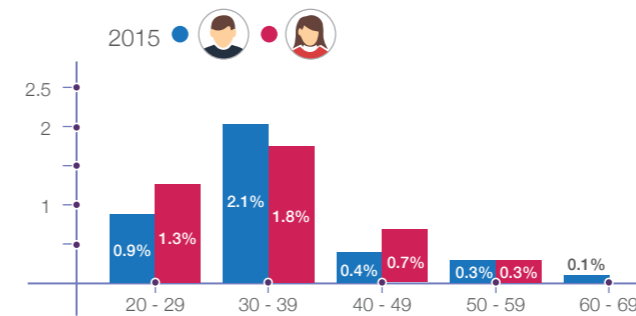


PROVIDING FAIR EMPLOYMENT AND MEANINGFUL CAREERS [G4-LA1]

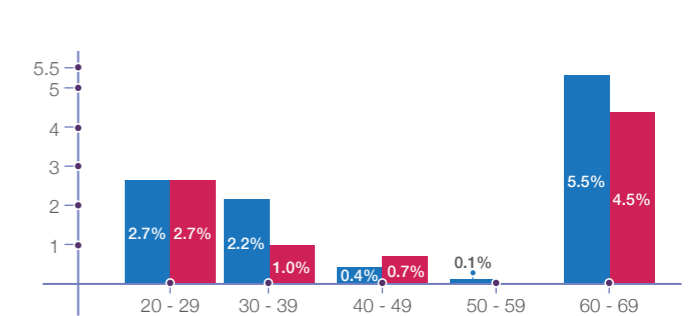
2015



Rate of Turnover by Gender and Age Group
(defined as number of resignees/staff strength as at end of current year)



Rate of New Hires by Gender and Age Group
(defined as number of new hires/staff strength as at end of current year)

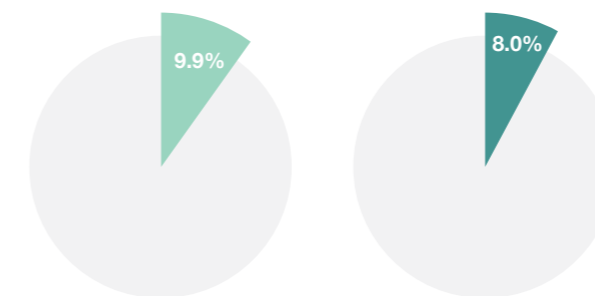


New Hires & Turnover

- Rate of new hires (%)
- Turnover rate (%)

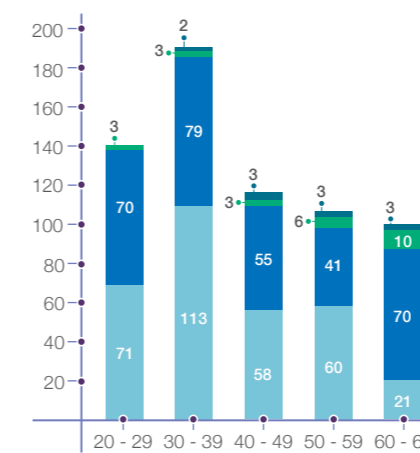
2015 Workforce by Education and by Age Group

- Degree/Postgraduate Diploma
- COC
- Polytechnic/Diploma
- Pre-University Education
- ITE
- Secondary Education
- Others

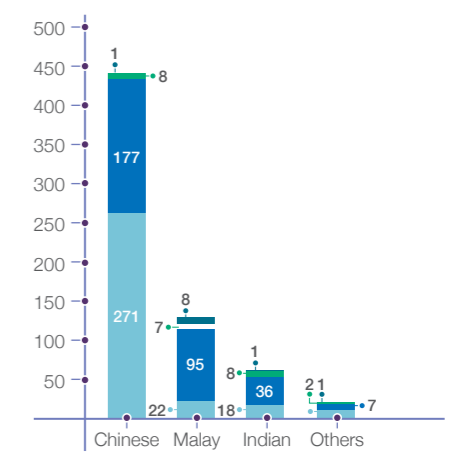


2015 Workforce by Divisional Status and by Age Group

- Divisional 1
- Divisional 2
- Divisional 3
- Divisional 4



2015 Workforce by Divisional Status and by Ethnicity



GROWING AND LEARNING WITH MPA

FAIR EMPLOYMENT

MPA strongly advocates fair employment practices, high standards of productivity, a progressive wage model and a safe workplace. We have sought to extend these values to our business partners, consultants, suppliers and contractors by incorporating them as mandatory requirements in our tender and

quotation specifications. These include the Ministry of Manpower's Workplace and Safety and Health Act, the Building and Construction Authority's Public Sector Standard Conditions of Contract for Construction Works, and the National Environment Agency's Clean Mark Accreditation Scheme.



TOTAL LEARNING AND DEVELOPMENT MAP

MPA places a high priority on providing relevant training to all staff and targets all staff to go through 100h of training per year. On average, staff undergone 104h and 110h of training respectively. It adopts a competency driven approach to developing the capability of all its employees. The MPA Competency

Framework was first formulated in 2007 following the implementation of the Balanced Scorecard system. While the Balanced Scorecard system defines the performance outcomes to be achieved, the MPA Competency Framework outlines the relevant training programmes for each employee based

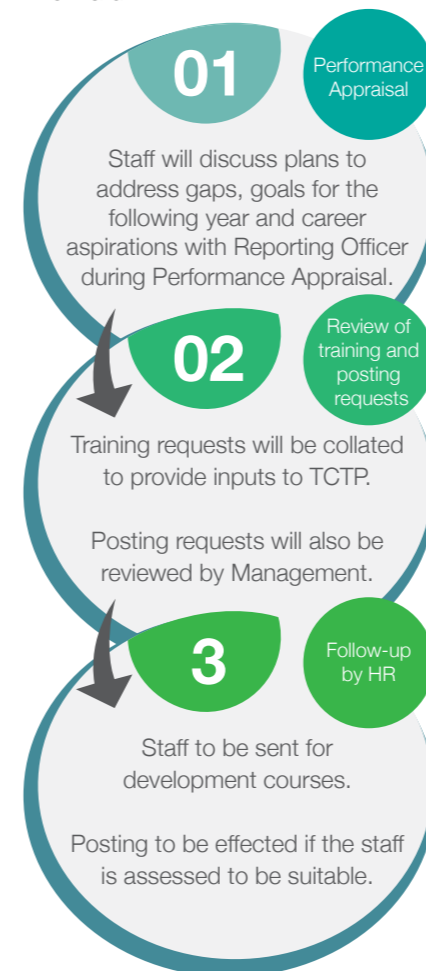
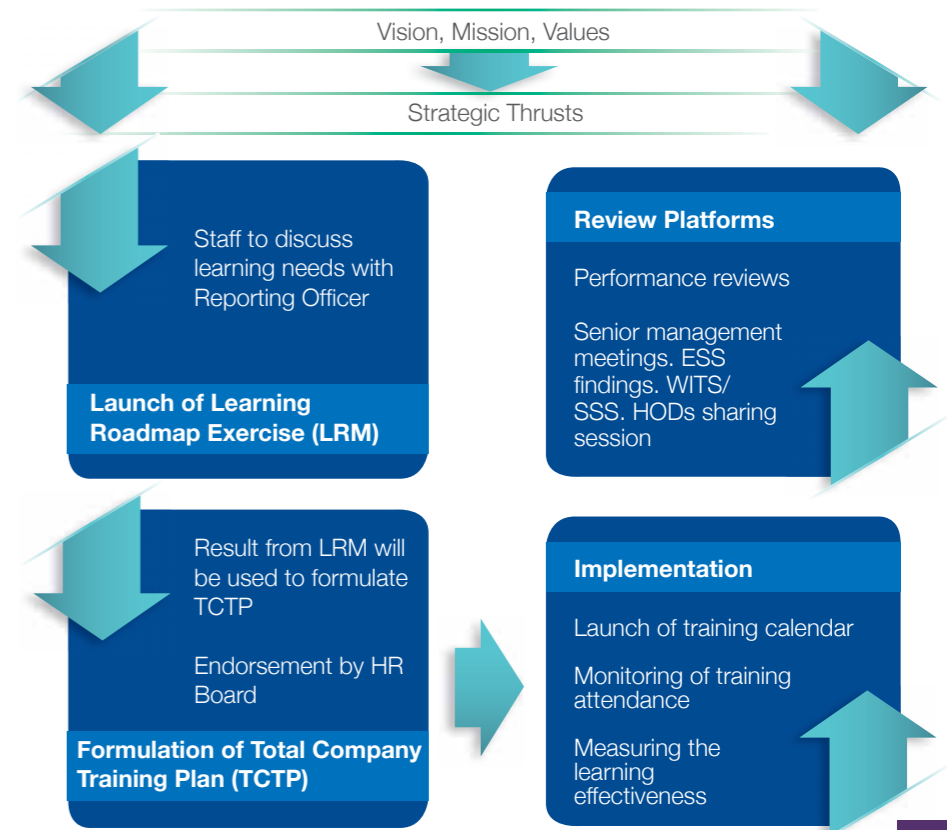
on the core knowledge, skills and behaviours required of the individual in order for him or her to achieve key performance indicator targets. The Competency Framework for all MPA staff is presented below:

Programme Categories	Milestone Development Programmes (MDP)	Corporate Development Programmes (CDP)	Functional Development Programmes (FDP)	Other Development Programmes (ODP)
Objective	To prepare the staff for the role that they are taking	To address the gaps identified for the core skills and knowledge	To address the gaps identified for the functional skills and knowledge that is directly relevant to the staff's work	To address the gaps that are identified for staff's development
Programme Identification	HR	HR	Division / Department/ Staff	Division / Department/ Staff
Criteria	Within 1st 2 years at the level (Identification by HR, in consultation with line managers.)	Based on competency gaps identified during LNA Exercise	Based on functional gaps identified during LNA Exercise	Based on specific focus area/gaps identified during LNA Exercise

LEARNING NEEDS ANALYSIS

MPA adopts both the top-down and bottom-up approach in identifying staff learning needs. In identifying these needs, MPA must also take into account MPA's future ready framework, strategic thrusts, objectives and organisational and departmental work plan.

The top-down approach is taken when addressing organisational level needs, such as needs related to service excellence and enterprise risk management. These needs are identified as emerging competencies that the organisation as a whole will require to achieve its objectives moving forward.



TECHNICAL TRAINING BY MPA ACADEMY



MPA Academy conducts technical training for MPA staff as part of its mission to enhance the specialist skills and knowledge of MPA officers. The training courses involved MPA's Port Inspectors, Marine Surveyors, Marine Officers, Vessel Traffic Officers and Hydrographers.

As part of knowledge sharing, MPAA organised talks for MPA staff and the industry. Prominent industry figures such as Mr Choo Chiau Beng, BG Ishak Ismail and Dato Jude P Benny were invited to share their experiences and knowledge with MPA staff under the MPAA Fireside Chat Series.

MPA seeks to continuously improve the effectiveness of the training that it provides its employees. Hence it requires all employees to submit a course evaluation form at the end of each training session. Based on this feedback and other recommendations, MPA will then fine-tune its training programmes.

In addition, MPA requires all new officers to undergo the MPA foundation programme, which introduces new recruits to MPA's core business, corporate culture and values. They also undertake on-the-job training to arm themselves with the basic skills required for them to perform their job effectively. In addition to the

courses offered to employees, other development opportunities such as overseas study trips, job rotations, stints on cross-functional project teams and secondments to other government agencies are also made available to staff who have been assessed to be suitable.

CORE COMPETENCY FRAMEWORK



CONTINUOUS EDUCATION

MPA supports continual and lifelong learning among its employees. This support comes in the form of providing all employees with ample opportunities for personal and professional development beyond their vocational needs.

For example, in 2009 MPA introduced an interest-free study loan scheme to motivate officers to upgrade themselves through higher education.

MPA also launched in-service sponsorships for part-time studies to encourage lifelong learning among its employees. Those who undertake certifiable maritime-related courses approved under the Maritime Cluster Fund training grant, part-time master's

and bachelor's degree programmes and programmes leading to the Singapore Qualification Programme are eligible to apply for sponsorship. Employees on the MPA In-Service Sponsorship Scheme may also enjoy paid study and examination leave to allow them to focus on their studies. Officers who meet specified criteria may be sponsored for up to 100% of course fees under this scheme.

Employees who have completed a minimum of two years of service are provided a quantum of \$1,500 in their UPGRADE account for general self-development courses, specialised programmes and diploma/degree programmes funded by or registered

with the Ministry of Education. Officers may pay up to 75% of the nett course fees using this fund. Officers are also able to pay for self-improvement courses, books and magazines using their flexible benefits, up to 75% of cost. Employees above 45 years old can also make use of their UPGRADE account to pay up to 75% of the fees for vocational courses such as taxi or bus driver certification training, as well as courses offered by the Singapore Workforce Development Agency. Each year, MPA tops up each UPGRADE account with a sum of up to \$750, subject to a maximum balance of \$1,500.

**LEARNING JOURNEYS
LED BY MANAGEMENT**

INNOVATION LEARNING JOURNEY TO 3M



On 31 August 2015, 31 participants comprising both MPA's senior management and officers visited the 3M office to discover the 3M Innovation story.

The participants learnt that at 3M, innovation is fostered in four ways:

- By building a culture of innovation where risk taking is encouraged and mistakes are tolerated
- By investing generously in research and development to boost the innovation pipeline
- Through a policy of allowing its people to work on ideas that are unrelated to their core job
- By encouraging collaboration, with open sharing of ideas

**LEADING THE WAY IN DESIGN
THINKING EXPLORATION**



As part of MPA's Service Excellence Framework direction in demonstrating leadership commitment through role modelling, the Senior Management Members led by MPA's Chief Executive paid a visit to the Ministry of Manpower (MOM) Service Centre on 23 Jun 2015. The visit allowed MPA to learn how Design Thinking was used as a tool to develop better ways to support foreigners who choose Singapore as a destination to live, work and set up businesses. The visit also allowed MPA to take a leaf out of MOM's page to better design our own work processes and improve customer experience.

WORK-LIFE HARMONY



WELL-ON-WORK LIFE WEEK –

To celebrate the importance of work-life harmony in MPA, we have been holding an annual Well-On-Work Life Week (WOW) since 2009. This is a week in June packed with activities that our people and their families can participate in for their physical, emotional, mental and social well-being. During the week, all employees are given time off for WOW activities. One of the key highlights of the WOW week is Juniors@Work, where employees are invited to bring their children to the office to get a glimpse of their parent's work environment. Other WOW activities vary from year to year. In 2014, among the highlights were Movie Nite Out for the staff, an outing to the SEA Aquarium for the family and a charity flea market where the staff and their children ran mini stalls on MPA premises to raise funds for charity. The flea market event raised \$2,240.



WAVES -

Wednesdays Are Very Special, or WAVES in short, is a testament to management's commitment to promote

work-life harmony. On Wednesdays, meetings must end by 5:30pm so that all employees can leave work on time. This

MPA recognises our people to be the organisation's most important asset.

In line with our conviction that good work-life harmony will allow our people to perform better at work, we have actively taken steps to ensure that our employees enjoy work-life balance. Through the years, we have launched numerous schemes and programmes to help our employees achieve a healthy work-life balance.



scheme allowed our people to confidently make plans for social or personal pursuits on Wednesdays

INTEREST GROUPS

MPA also developed an Interest Group Framework to promote bonding and camaraderie among its employees. The framework allows the organisation to actively support its employees in

pursuing their passions and interests. Any group of MPA staff can propose to form an MPA Interest Group and employees are free to join any Interest Groups of their choice.



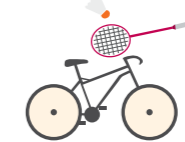
Currently, there are Interest Groups for the following categories:



a) Arts and Lifestyle



b) Performing Arts



b) Sports

FUNDING

All registered MPA Interest Groups are eligible for funding support from MPA. To qualify for funding, each MPA Interest Group must organise activities at least six times a year and each of these activities must be attended by at least four members or 50% of the members, whichever

number is higher. The activities may take the form of lessons facilitated by internal or external instructors, friendly games, competitions, practice sessions, gatherings and field trips. To encourage work-life harmony, activities are conducted either during lunch hour or outside office hours.

For each MPA Interest Group, the basic funding available is up to \$60 per member per year, capped at \$2,000 per MPA Interest Group per year. This fund can be used for event registration fees, essential materials, refreshments, the cost of training sessions and the rental of venue or facility.

CHARITY IDEATHON AND MPA CHARITY DAY

MPA had our first charity ideathon on 17 Apr 2015 with the theme "MPA's collaboration with our adopted charities". A total of 24 participants attended the ideathon and brainstormed for ideas on interesting activities for our adopted charities. From the ideathon, the two most popular activities supported by the participants were

Nature Walks – Learning and Interactive and Handicraft/Souvenirs Making.

MPA had our first MPA Charity Day on 22 Jun 2015. During MPA Charity Day, various charity activities such as Charity Flea Market, SHARE Programme Luncheon Talk and KIP Visit to POCC-Vista was held throughout the day.

Taking into consideration the ideas from our charity ideathon held earlier, we had a kite making session after the KIP Visit to POCC-Vista. The kite making session was facilitated by MPA volunteers. After the beneficiaries completed their kites, everyone had a good time at West Coast Park flying their newly made kites!

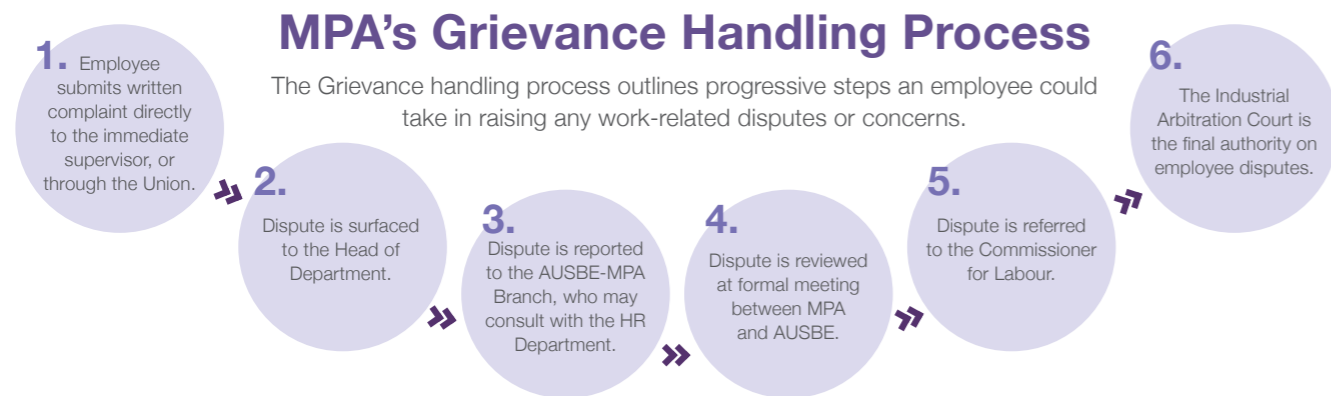
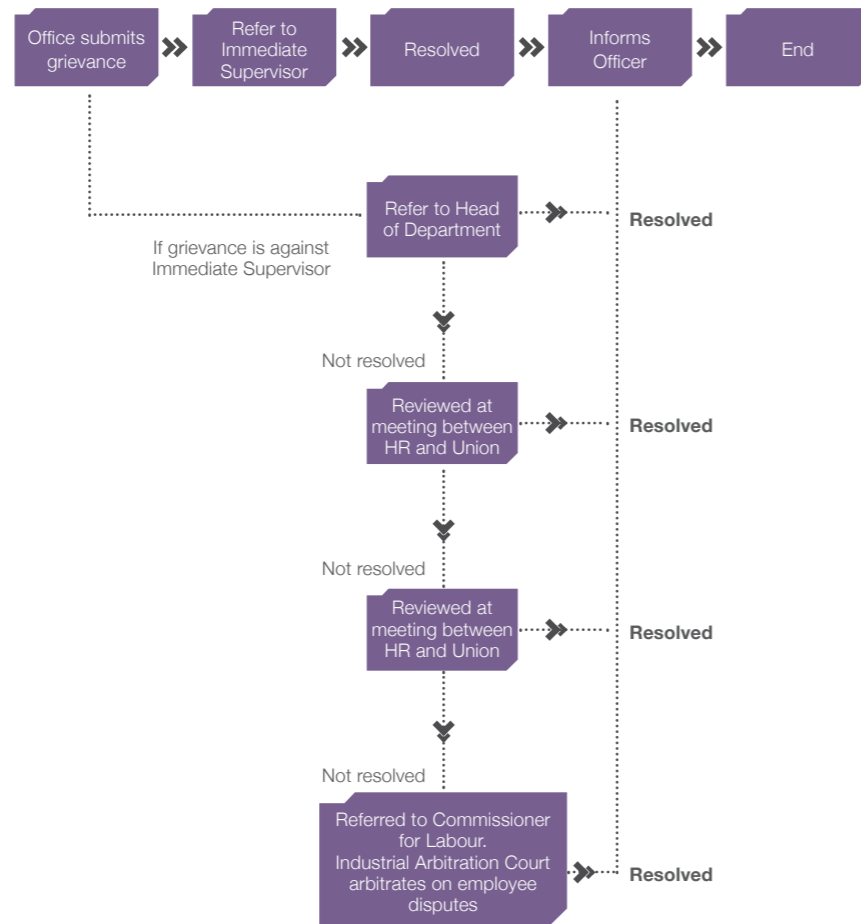


MANAGING LABOUR RELATIONS [G4-11]

MPA views the union as a strategic partner and has always enjoyed a harmonious relationship with the Amalgamated Union of Statutory Board Employees (AUSBE) and the MPA branch of AUSBE. In 2015, about 60.5% of MPA staff are members of AUSBE.

Both MPA and AUSBE share the same objective of fostering a motivated and dedicated workforce to meet the challenges involved in developing Singapore as a global hub port and international maritime centre. MPA highly values the contributions of AUSBE, especially the contributions of the union branch committee, which has always provided MPA with constructive feedback.

This close working relationship saw to the speedy finalisation of the new employees' agreement in January 2015. The agreement takes into account the interests of both MPA and the union, ensuring a win-win arrangement for both parties. The many tripartite dialogue sessions between the union, the management and the staff of MPA bear strong testimony to the harmonious relationship between MPA and the union.



ENSURING WORKPLACE SAFETY AND HEALTH [G4-LA6]

MPA is committed to integrating Workplace Safety and Health considerations in all its projects. In 2014, to better ensure workplace safety and health for its staff, MPA reconstituted the Workplace Safety and Health Committee. Chaired by the Director of Human Resource at MPA,

the revamped committee comprises representatives from the Human Resource Division, the operations cluster, the Facilities Management Department and the union branch. The committee meets monthly to review and update MPA's Workplace Safety and Health programmes.



Workplace incidents
2013: 0 | 2014: 2 | **2015: 3**



Number of man-days lost
2013: 0 | 2014: 5 | **2015: 3**



Work-related fatalities
2013: 0 | 2014: 0 | **2015: 0**

The 5 key safety and health principles of MPA are:

Beyond work-related incidents of MPA's staff, MPA started to track and report incidents in Singapore waters to the management on a daily basis. The nature and frequency of the incidents are analysed and presented to the Safety@Sea Council for follow ups each year. From the data collected in 2014, MPA identified collision and contact hotspots and trends related to weather and timing of the day. Recommendations implemented include issuing advisories on Northeast monsoon and reminding Masters and officers to keep vigilant watch and proper lookout. Changes were also made to the Singapore eastern pilot boarding grounds to enhance safety of navigation for the eastern approaches of the Port of Singapore.



A HEALTHY WORKPLACE

Besides providing medical benefits, MPA also takes care of the emotional well-being of our staff. Staff could seek

professional counselling provided by a third party service provider through a 24-hour dedicated hotline. Staff could

share their personal or work related problems with the counsellors in strict confidence.

GLOSSARY

Term & Abbreviation	Definition
Agency for Science, Technology and Research (A*STAR)	A Singapore statutory board under the Ministry of Trade and Industry.
Amalgamated Union of Statutory Board Employees (AUSBE)	The AUSBE looks after the interests 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.
Emission Control Area (ECA)	Emission Control Area is an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO _x or SO _x and particulate matters or all three types of emissions and their attendant adverse impacts on human health and the environment.
National Environment Agency (NEA)	A Singapore statutory board under the Ministry of the Environment and Water Resources.
Environmental Impact Assessment (EIA)	An evaluation on the environmental consequences of a plan or project before the decision on the next course of action.
Global Reporting Initiative (GRI)	The GRI is a non-profit organisation that promotes the use of sustainability reporting in organisations to achieve sustainable development and operations.
Greenhouse Gas (GHG)	Greenhouse gases" are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation.
Harbour craft	A category of vessels that ply within the waters of Singapore only, and do not travel into international waters.
International Maritime Centre (IMC)	A global maritime hub that provides comprehensive and high quality maritime services and support.
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, businesses and accounting professionals to develop a globally-accepted Integrated Reporting framework.
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.
Information Sharing Centre (ISC)	The ISC is the executive unit of ReCAAP based in Singapore.
Jurong Port (JP)	A Singapore port operator owned by Jurong Town Corporation.
Land Transport Authority (LTA)	A Singapore statutory board under the Ministry of Transport.
Natural Gas (LNG)	A natural gas that has been converted to liquid form for ease of storage or transport.
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.

Term & Abbreviation	Definition
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.
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.
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.
Nanyang Technological University (NTU)	One of the two largest public and autonomous universities in Singapore.
Pleasure craft	A category of vessel used for sports or pleasure; it does not include crafts used for sightseeing by tour operators.
Port of Singapore	The collective facilities and terminals that conduct maritime trade and handle shipping in Singapore.
Port Operations Control Centre (POCC)	A 24-hour operational unit under MPA's Port Division, and the headquarters for a maritime search and rescue region covering Singapore and over 1 million square kilometres of the South China Sea.
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.
PSA International (PSA)	One of the world's largest port operators headquartered 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.
Singapore Armed Forces (SAF)	The military arm of the Total Defence of the Republic of Singapore; as well as the military component of the Ministry of Defence.
Singapore Registry of Ships (SRS)	A 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.
Standards, Productivity and Innovation Board (SPRING Singapore)	A Singapore statutory board under the Ministry of Trade and Industry.
Twenty-foot Equivalent Unit (TEU)	A standard unit for describing a ship's cargo carrying capacity or a shipping terminal's cargo handling capacity.

OUR APPROACH TO INTEGRATED REPORTING

We are pleased to continue on our journey in Integrated Reporting <IR>. We embrace <IR> as a continuous process to promote cohesive, streamlined and integrated thinking within the organisation and communication to our stakeholders.

As the world's busiest ports and a leading international maritime centre,

it is important that MPA takes the lead in promoting good practices within the maritime community that will enhance our position as a clean, efficient and safe port. Progressing from the FY2014 narrative that sets out MPA's plans to move the maritime community Towards a Future Ready Maritime Singapore, FY2015 edition communicates initiatives and work done towards Building a

Future Ready Maritime Singapore that is competitive as it is sustainable.

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 Foreword Chief Executive's Foreword About MPA Singapore 2015 Maritime Performance
B. Governance	Corporate Governance
C. Business Model	Mapping Key Material Issues
D. Risks and Opportunities	Examples of Risk Mapping Key Materials Corporate Governance
E. Strategy and Resource Allocation	Chief's Executive Foreword Sustainability Mapping Key Material Issues
F. Performance	Singapore 2015 Maritime Performance FY2015 Financial Statements (published separately)
G. Outlook	Chairman's Foreword Chief's Executive Foreword
H. Basis of Preparation and Presentation	About this Report Mapping Key Material Issues Statutory Board Financial Reporting Standards (FY2015 Financial Statements)

Like 2014, we faced the challenge in delivering concise information. Unlike a corporate organisation for which investors are identified as IIRC as the

target audience, our readers range from United Nation agencies and local government agencies, customer and partners, general public and employees.

Thank you for joining us in this journey. We look forward to your support and feedback on areas that would be able to meet your needs.

GRI G4 CONTENT INDEX



Standard Disclosure Title	Where in MPA'S Report	External Assurance	
GENERAL STANDARD DISCLOSURES			
STRATEGY AND ANALYSIS			
G4-1	Provide a statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	<ul style="list-style-type: none"> Chairman's Foreword, page 03 Chief Executive's Foreword, page 04 	NO
G4-2	Provide a description of key impacts, risks, and opportunities	<ul style="list-style-type: none"> Chairman's Foreword, page 03 Chief Executive's Foreword, page 04 Mapping Key Material Issues, page 16 	NO
ORGANISATIONAL PROFILE			
G4-3	Report the name of the organization	<ul style="list-style-type: none"> About MPA, page 12 	NO
G4-4	Report the primary brands, products, and services	<ul style="list-style-type: none"> About MPA, page 12 	NO
G4-5	Report the location of the organization's headquarters	<ul style="list-style-type: none"> MPA is headquartered in Singapore 	NO
G4-6	Report the number of countries where the organisation operates, and names of countries where either the organisation has significant operations or that are specifically relevant to the sustainability topics covered in the report	<ul style="list-style-type: none"> All of MPA's operations are in Singapore 	NO
G4-7	Report the nature of ownership and legal form	<ul style="list-style-type: none"> About MPA, page 12 	NO
G4-8	Report the markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	<ul style="list-style-type: none"> About MPA, page 12 Strong Partnerships > Stakeholder engagement, page 78 	NO
G4-9	Report the scale of the organization	<ul style="list-style-type: none"> Singapore's 2015 Maritime Performance, page 14-15 Choice Employer > Our People, page 84 	NO
G4-10	a. Report the total number of employees by employment contract and gender b. Report the total number of permanent employees by employment type and gender c. Report the total workforce by employees and supervised workers and by gender. d. Report the total workforce by region and gender e. Report whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors f. Report any significant variations in employment numbers (such as seasonal variations in employment in the tourism or agricultural industries)	<ul style="list-style-type: none"> Choice Employer > Our People, page 82-83 	NO
G4-11	Report the percentage of total employees covered by collective bargaining agreements	<ul style="list-style-type: none"> Our People > Managing Labour Relations, page 92 60.5% of our workforce is covered by the Union 	NO
G4-12	Describe the organization's supply chain	<ul style="list-style-type: none"> This has been disclosed in page 77 to 78 for FY2014 report. Please retrieve the report from www.mpa.gov.sg>Publications> Annual Report, http://www.mpa.gov.sg/web/portal/home/about-mpa/annual-report 	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title		Where in MPA'S Report	External Assurance
GENERAL STANDARD DISCLOSURES			
ORGANISATIONAL PROFILE			
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	<ul style="list-style-type: none"> About this Report, inside front cover Safe, Efficient & Sustainable Global Hub Port > Emissions/Air Quality, page 28 Safeguard Strategic Maritime Interests & an Influential Voice > Engaging international and regional maritime stakeholders, page 41 	NO
G4-16	List memberships of associations (such as industry associations) and national or international advocacy organizations	<ul style="list-style-type: none"> Safeguard Strategic Maritime Interests & an Influential Voice, page 34-41 	NO
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	List all entities included or not included in organization's financial statements	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-18	Describe process for defining Report Content	<ul style="list-style-type: none"> About this Report, inside front cover Mapping Key Material Issues, page 16 	NO
G4-19	List all the material Aspects identified in the process for defining report content	<ul style="list-style-type: none"> Mapping Key Material Issues, page 16 	NO
G4-20	For each material Aspect, report the Aspect Boundary within the organization	<ul style="list-style-type: none"> Mapping Key Material Issues, page 16 	NO
G4-21	Report the Aspect Boundary outside the organization	<ul style="list-style-type: none"> Mapping Key Material Issues, page 16 	NO
G4-22	Report the effect of any restatements of information provided in previous reports, and the reasons for such restatements	<ul style="list-style-type: none"> There have been no restatements of information provided in previous reports 	NO
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	<ul style="list-style-type: none"> There have been no significant changes from previous reporting periods. 	NO
STAKEHOLDER ENGAGEMENT			
G4-24	List of stakeholder groups engaged by the organisation	<ul style="list-style-type: none"> Strong Partnerships > Stakeholder Engagement, page 78-79 	NO
G4-25	Basis for identification and selection of stakeholders with whom to engage	<ul style="list-style-type: none"> In determining key stakeholders, we consider their interests in sustainability, the potential influence and extent to which MPA can impact them. Strong Partnerships > Stakeholder Engagement, page 78-79 	NO
G4-26	Approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group	<ul style="list-style-type: none"> Strong Partnerships > Stakeholder Engagement, page 78-79 	NO
G4-27	Key topics and concerns raised through stakeholder engagement, and how the organization has responded	<ul style="list-style-type: none"> Strong Partnerships > Stakeholder Engagement, page 78-79 	NO

Standard Disclosure Title		Where in MPA'S Report	External Assurance
GENERAL STANDARD DISCLOSURES			
REPORT PROFILE			
G4-28	Reporting period for information provided	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-29	Date of most recent previous report	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-30	Reporting cycle/type and by stakeholder group	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-31	Contact point for questions regarding the report or its contents	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-32	Report on 'In accordance' option, GRI Content Index, reference to External Assurance	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
G4-33	Policy and current practice with regard to seeking external assurance for the report	<ul style="list-style-type: none"> About this Report, inside front cover 	NO
GOVERNANCE			
G4-34	Governance structure of the organization	<ul style="list-style-type: none"> MPA's organisation structure, page 10-11 Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 	NO
G4-35	Process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 	NO
G4-36	Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	<ul style="list-style-type: none"> Culture of Excellence > Sustainability, page 62 	NO
G4-37	Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics	<ul style="list-style-type: none"> Mapping Key Material Issues, page 16 Culture of Excellence > Corporate Governance > Organisation and Structure, page 69 	NO
G4-38	Composition of the highest governance body and its committees	<ul style="list-style-type: none"> MPA's organisation structure, page 10-11 Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 	NO
G4-39	Whether Chair of the highest governance body is also an Executive Officer	<ul style="list-style-type: none"> Chairman of the MPA Board, the highest governance body, is a non-executive officer for MPA 	NO
G4-40	Nomination and selection process for the highest governance body and its committees, and the criteria used for nominating and selecting highest governance body members	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 	NO
G4-41	Processes in place for the highest governance body to ensure conflicts of interest are avoided	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity > Zero tolerance for corruption, page 66 Choice Employer > Managing Labour Relations, page 90 	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title		Where in MPA'S Report	External Assurance
GENERAL STANDARD DISCLOSURES			
GOVERNANCE			
G4-42	Highest governance body's and senior executive's roles in the development, approval and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental, and social impacts	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 	NO
G4-43	Measures taken to develop and enhance the highest governance body's collective knowledge of economic, environmental and social impacts	<ul style="list-style-type: none"> Sustainability issues have been discussed at the board level during the financial year, raising awareness towards these issues. 	NO
G4-44	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	<ul style="list-style-type: none"> Such an evaluation has not been carried out 	NO
G4-45	Highest governance body's role in the identification and management of economic, environmental, and social impacts, risks and opportunities. Whether stakeholder consultation is used to support the highest governance body's identification and management of economic, environmental and social impacts, risks and opportunities	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 Culture of Excellence > Corporate Governance > Risk Management Process, page 68-69 About this Report, inside front cover Stakeholder consultation by the Board is not part of the Materiality Assessment process 	NO
G4-46	Highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Risk Management Process, page 68-69 	NO
G4-47	Frequency of the highest governance body's review of economic, environmental and social topics	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Organisation and Structure, page 67 Culture of Excellence > Corporate Governance > Risk Management Process, page 68-69 	NO
G4-48	Highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered	<ul style="list-style-type: none"> Mapping Key Material Issues, page 16 The CE reviews and approves the sustainability report and ensures that all material Aspects are covered 	NO
G4-49	Process for communicating critical concerns to the highest governance body	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity > Zero tolerance for corruption, page 66 	NO
G4-50	Nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity > Zero tolerance for corruption, page 66 	NO
G4-51	Remuneration policies for the highest governance body and senior executives	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO

Standard Disclosure Title		Where in MPA'S Report	External Assurance
GENERAL STANDARD DISCLOSURES			
GOVERNANCE			
G4-52	Process for determining remuneration	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO
G4-53	How stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO
G4-54	Ratio of the annual total compensation for the organisation's highest-paid individual in each country of significant operations to the median total compensation for all employees (excluding the highest-paid) individual in the same country	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO
G4-55	Ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO
ETHICS AND INTEGRITY			
G4-56	Organization's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity, page 66 	NO
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity, page 66 	NO
G4-58	Internal and external mechanisms for reporting concerns about ethical and lawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines	<ul style="list-style-type: none"> Culture of Excellence > Developing a Culture of Ethics and Integrity, page 66 	NO
SPECIFIC STANDARD DISCLOSURES			
CATEGORY: ECONOMIC			
ASPECT: ECONOMIC PERFORMANCE			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Culture of Excellence, page 62 	NO
G4-EC1	Direct economic value generated and distributed	<ul style="list-style-type: none"> Vibrant IMC Eco-system, page 30-33, Refer to Financial Report 	NO
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	<ul style="list-style-type: none"> MPA has not formally assessed the financial implications of climate change to the organisation. 	NO
G4-EC3	Coverage of the organization's defined benefit plan obligations	<ul style="list-style-type: none"> Choice Employer > Our People, page 82-83. Benefit plan financial obligations are not relevant in the local context. 	NO
G4-EC4	Financial assistance received from government	<ul style="list-style-type: none"> MPA receives no financial assistance from the government. 	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title		Where in MPA'S Report	External Assurance
SPECIFIC STANDARD DISCLOSURES			
ASPECT: MARKET PRESENCE			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not Material - MPA's operations are only in Singapore 	NO
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	<ul style="list-style-type: none"> Not Material - MPA's operations are only in Singapore. There is no minimum wage in Singapore 	NO
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	<ul style="list-style-type: none"> Not Material - MPA's operations are only in Singapore 	NO
ASPECT: INDIRECT ECONOMIC IMPACTS			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Vibrant IMC Eco-system, page 30-33 	NO
G4-EC7	Development and impact of infrastructure investments and services supported	<ul style="list-style-type: none"> Vibrant IMC Eco-system, page 32-33 	NO
G4-EC8	Significant indirect economic impacts, including the extent of impacts	<ul style="list-style-type: none"> Vibrant IMC Eco-system, page 32-33 MPA's development of the port has significant positive impact on the maritime community, including the support of jobs, foreign investments and promotion of environmental and social best practices. 	NO
ASPECT: PROCUREMENT PRACTICES			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Culture of Excellence > Sustainability, page 62 	NO
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	<ul style="list-style-type: none"> We do not currently measure this. 	NO
CATEGORY: ENVIRONMENTAL			
ASPECT: MATERIALS			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative, page 27 	NO
G4-EN1	Materials used by weight or volume	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative, page 33 	NO
G4-EN2	Percentage of materials used that are recycled input materials	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative, page 33 	NO

Standard Disclosure Title		Where in MPA'S Report	External Assurance
SPECIFIC STANDARD DISCLOSURES			
ASPECT: ENERGY			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > LNG Bunkering, page 21, Reducing GHG Emissions and Energy Usage, page 28, The Next Chapter of Our Sustainability, page 65 	NO
G4-EN3	Energy consumption within the organization	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > Environmental Sustainability, page 27 	NO
G4-EN4	Energy consumption outside of the organization	<ul style="list-style-type: none"> Not applicable 	NO
G4-EN5	Energy intensity	<ul style="list-style-type: none"> Culture of Excellence, Environmental Sustainability, page 64 	NO
G4-EN6	Reduction of energy consumption	<ul style="list-style-type: none"> Culture of Excellence >The Next Chapter of Our Sustainability, page 29 Culture of Excellence> Environmental Sustainability> Targets for Sustainability KPIs, page 64 	NO
G4-EN7	Reductions in energy requirements of products and services	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > Reducing GHG Emissions and Energy Usage, page 29 	NO
ASPECT: WATER			
G4-EN8	Total water withdrawal by source	<ul style="list-style-type: none"> Not material. MPA's only water use is in its offices. 	NO
G4-EN9	Water sources significantly affected by withdrawal of water	<ul style="list-style-type: none"> Not material. MPA does not withdraw water. Our water use is only for office use, supplied by public utilities. 	NO
G4-EN10	Percentage and total volume of water recycled and reused	<ul style="list-style-type: none"> Not Material. MPA is not a significant user of water. 	NO
ASPECT: BIODIVERSITY			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > Maintaining Biodiversity & Recycling Excavated Materials, page 29 	NO
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port> Maintaining Biodiversity & Recycling Excavated Materials, page 29 	NO
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port> Maintaining Biodiversity & Recycling Excavated Materials, page 29 	NO

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Standard Disclosure Title		Where in MPA'S Report	External Assurance
SPECIFIC STANDARD DISCLOSURES			
ASPECT: BIODIVERSITY			
G4-EN13	Habitats protected or restored	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port> Maintaining Biodiversity & Recycling Excavated Materials, page 29 	NO
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	<ul style="list-style-type: none"> Not Material. MPA's do not affect any IUCN Red List species or national conservation list species 	NO
ASPECT: EMISSIONS			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > Reaping the benefits, page 30, The Maritime Singapore Green Initiative, page 27 	NO
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	<ul style="list-style-type: none"> Culture of Excellence> Environmental Sustainability, page 64 	NO
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	<ul style="list-style-type: none"> Culture of Excellence> Environmental Sustainability, page 64 	NO
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	<ul style="list-style-type: none"> Scope 3 emissions have not been included in this report. 	NO
G4-EN18	Greenhouse gas (GHG) emissions intensity	<ul style="list-style-type: none"> Culture of Excellence> Environmental Sustainability, page 64 	NO
G4-EN19	Reduction of greenhouse gas (GHG) emissions	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative, page 27 	NO
G4-EN20	Emissions of ozone-depleting substances (ODS)	<ul style="list-style-type: none"> Not Material. MPA is not a significant emitter of ODS. 	NO
G4-EN21	NO _x , SO _x , and other significant air emissions	<ul style="list-style-type: none"> Not Material. MPA is not a significant emitter of NO_x or SO₂. We have addressed our role in influencing local air quality through our regulatory role on page 28. 	NO
ASPECT: EFFLUENTS AND WASTE			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Examples of Risk > Marine Collisions and Spills, page 13 Safe, Efficient & Sustainable Global Hub Port > Contingency Planning and Emergency Response, page 24-25 Safe, Efficient & Sustainable Global Hub Port> Maintaining Biodiversity & Recycling Excavated Materials> Inter-agency Collaboration to Recycle Excavated Materials, page 33 	NO

Standard Disclosure Title		Where in MPA'S Report	External Assurance
SPECIFIC STANDARD DISCLOSURES			
ASPECT: EFFLUENTS AND WASTE			
G4-EN22	Total water discharge by quality and destination	<ul style="list-style-type: none"> Not material. MPA does not discharge water 	NO
G4-EN23	Total weight of waste by type and disposal method	<ul style="list-style-type: none"> Not material. Our waste generation is only from our offices, and is not material. 	NO
G4-EN24	Total number and volume of significant spills	<ul style="list-style-type: none"> Not material. MPA has not had any significant spills. 	NO
ASPECT: EFFLUENTS AND WASTE			
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	<ul style="list-style-type: none"> Not material. MPA does not transport, import or export waste deemed hazardous. 	NO
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	<ul style="list-style-type: none"> Not material. MPA does not discharge water 	NO
ASPECT: PRODUCTS AND SERVICES			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative page 27, Safe, Efficient & Sustainable Global Hub Port > Reaping the Benefits, page 28, Culture of Excellence > The Next Chapter of Our Sustainability, page 65 	NO
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > The Maritime Singapore Green Initiative page 27, Reaping the Benefits, page 28, Culture of Excellence > The Next Chapter of Our Sustainability, page 65 	NO
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	<ul style="list-style-type: none"> Not Applicable. MPA does not sell products 	NO
ASPECT: COMPLIANCE			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Safe, Efficient & Sustainable Global Hub Port > LNG Bunkering, page 21 As a public agency, compliance is fundamental to all MPA's operations 	NO
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	<ul style="list-style-type: none"> MPA has not received any significant fines or non-monetary sanctions for non-compliance during the reporting period 	NO

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Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
ASPECT: TRANSPORT			
G4-DMA	Generic Disclosures on Management Approach	• Not Material	NO
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	• Not Material	NO
ASPECT: OVERALL			
G4-DMA	Generic Disclosures on Management Approach	• About this Report, inside front cover	NO
G4-EN31	Total environmental protection expenditures and investments by type	• MPA's organisation structure, page 10-11 • About MPA, page 12 • Safe, Efficient & Sustainable Global Hub Port > Reaping the Benefits page 28	NO
ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT			
G4-DMA	Generic Disclosures on Management Approach	• Culture of Excellence> Upholding Standards Throughout Supply Chain, page 62	NO
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	• We do not currently measure this.	
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	• Culture of Excellence> Green Goods & Services, page 62	NO
ASPECT: ENVIRONMENTAL GRIEVANCE MECHANISMS			
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	• MPA has not received any grievances about environmental impacts during the reporting period	NO
CATEGORY: SOCIAL			
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK			
ASPECT: EMPLOYMENT			
G4-DMA	Generic Disclosures on Management Approach	• Choice Employer > Our People, page 82-83	NO
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	• Choice Employer > Our People > Providing fair employment and meaningful careers, page 82-83	NO
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	• Not applicable. MPA provides the same benefits to part-time workers as to full-time workers	NO

Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK			
ASPECT: LABOR/MANAGEMENT RELATIONS			
G4-DMA	Generic Disclosures on Management Approach	• Choice Employer > Managing Labour Relations, page 90	NO
G4-LA3	Return to work and retention rates after parental leave, by gender	• 16 female staff went on maternity leave in 2015, of which one left MPA shortly after her maternity leave. • 19 male staff went on paternity leave in 2015, of which all returned to MPA after their leave.	NO
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	• If there were to be any operational changes we would give staff at least three months notice.	NO
ASPECT: OCCUPATIONAL HEALTH AND SAFETY			
G4-DMA	Generic Disclosures on Management Approach	• Safe, Efficient & Sustainable Global Hub Port > Contingency Planning and Emergency Response, page 24-25 • Choice Employer > Ensuring Workplace Safety and Health, page 92	NO
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	• Choice Employer > Ensuring workplace safety and health, page 91 • All of our employees are represented by our Workplace Safety and Health programmes.	NO
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	• Choice Employer > Ensuring workplace safety and health, page 91	NO
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	• Not material	NO
G4-LA8	Health and safety topics covered in formal agreements with trade unions	• Not material	NO
ASPECT: TRAINING AND EDUCATION			
G4-DMA	Generic Disclosures on Management Approach	• Safeguard Strategic Maritime Interests & An Influential Voice > Engaging international and regional maritime stakeholders, page 41 • Quality Maritime Workforce, page 48-53 • Choice Employer > Growing and Learning with MPA, page 84-86, Funding, page 89 • Culture of Excellence > Corporate Governance > Risk Management Process, page 71	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK			
ASPECT: TRAINING AND EDUCATION			
G4-LA9	Average hours of training per year per employee by gender, and by employee category	<ul style="list-style-type: none"> Choice Employer > Growing and Learning with MPA, page 84 	NO
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	<ul style="list-style-type: none"> Safeguard Strategic Maritime Interests & An Influential Voice > Engaging international and regional maritime stakeholders, page 41 Quality Maritime Workforce, page 54-57 Choice Employer > Growing and Learning with MPA, page 84-86, Funding, page 91 Culture of Excellence > Corporate Governance > Risk Management Process > Advancing MPA's Risk Culture, page 71 	NO
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	<ul style="list-style-type: none"> All employees received annual performance reviews. 	NO
ASPECT: DIVERSITY AND EQUAL OPPORTUNITY			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Culture of Excellence > Upholding Standard Throughout Supply Chain, page 62 Choice Employer > Fair Employment, page 84 	NO
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	<ul style="list-style-type: none"> Board of Directors, page 06 	NO
ASPECT: EQUAL REMUNERATION FOR WOMEN AND MEN			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Choice Employer > Our People, page 82-83 	NO
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	<ul style="list-style-type: none"> Culture of Excellence > Corporate Governance > Disclosure on Compensation, page 68 	NO
ASPECT: SUPPLIER ASSESSMENT FOR LABOR PRACTICES			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Culture of Excellence > Sustainability, page 62 	NO
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	<ul style="list-style-type: none"> At present we do not screen new suppliers for labour practices. 	NO
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	<ul style="list-style-type: none"> At present we do not screen new suppliers for labour practices. 	NO
ASPECT: LABOR PRACTICES GRIEVANCE MECHANISMS			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Choice Employer > Managing Labour Relations, page 90 	NO

Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK			
ASPECT: LABOR PRACTICES GRIEVANCE MECHANISMS			
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	<ul style="list-style-type: none"> There were no grievance about labour practices filed during the FY. 	NO
SUB-CATEGORY: HUMAN RIGHTS			
ASPECT: INVESTMENT			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not material 	NO
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	<ul style="list-style-type: none"> Not material 	NO
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	<ul style="list-style-type: none"> Not material 	NO
ASPECT: NON-DISCRIMINATION			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not material 	NO
G4-HR3	Total number of incidents of discrimination and corrective actions taken	<ul style="list-style-type: none"> Not material 	NO
ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not material 	NO
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	<ul style="list-style-type: none"> Not material 	NO
ASPECT: CHILD LABOR			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not material 	NO
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	<ul style="list-style-type: none"> Not material 	NO
ASPECT: FORCED OR COMPULSORY LABOR			
G4-DMA	Generic Disclosures on Management Approach	<ul style="list-style-type: none"> Not material 	NO
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	<ul style="list-style-type: none"> Not material 	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: HUMAN RIGHTS			
ASPECT: SECURITY PRACTICES			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	• Not material	NO
ASPECT: INDIGENOUS RIGHTS			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	• Not material	NO
ASPECT: ASSESSMENT			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	• Not material	NO
ASPECT: SUPPLIER HUMAN RIGHTS ASSESSMENT			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	• Not material	NO
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	• Not material	NO
ASPECT: HUMAN RIGHTS GRIEVANCE MECHANISMS			
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	• MPA has not received any grievances about impacts on society during the reporting period	NO
SUB-CATEGORY: SOCIETY			
ASPECT: LOCAL COMMUNITIES			
G4-DMA	Generic Disclosures on Management Approach	• Safe, Efficient & Sustainable Global Hub Port > Promoting Safety@Sea Singapore, page 23 • Strong Maritime Singapore Identity > Community Engagement, page 56-57	NO
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	• MPA's operations are only in Singapore, hence our local community engagement is focused around Singapore.	NO
G4-SO2	Operations with significant actual and potential negative impacts on local communities	• MPA's overall mission is to have a positive impact on Singapore Community.	NO

Standard Disclosure Title	Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: SOCIETY			
ASPECT: ANTI-CORRUPTION			
G4-DMA	Generic Disclosures on Management Approach	• Culture of Excellence > Developing a culture of ethics and integrity > Zero tolerance for corruption, page 66	NO
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	• Culture of Excellence > Developing a culture of ethics and integrity > Zero tolerance for corruption, page 66	NO
G4-SO4	Communication and training on anti-corruption policies and procedures	• Culture of Excellence > Corporate Governance > Zero tolerance for corruption, page 66 • Each year, all employees are required to acknowledge and submit the MPA Code of Ethics and declare any potential conflict of interest to the HR Division	NO
G4-SO5	Confirmed incidents of corruption and actions taken	• Culture of Excellence > Corporate Governance > Zero tolerance for corruption, page 66	NO
ASPECT: PUBLIC POLICY			
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO
G4-SO6	Total value of political contributions by country and recipient/beneficiary	• Not applicable - MPA does not make any political contributions.	NO
ASPECT: ANTI-COMPETITIVE BEHAVIOR			
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	• Not applicable	NO
ASPECT: COMPLIANCE			
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	• MPA has not received any significant fines or non-monetary sanctions for non-compliance during the reporting period	NO

GRI G4 CONTENT INDEX

Standard Disclosure Title		Where in MPA'S Report	External Assurance	
SPECIFIC STANDARD DISCLOSURES				
SUB-CATEGORY: SOCIETY				
ASPECT: SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY				
G4-DMA	Generic Disclosures on Management Approach	• Strong Maritime Singapore Identity> Community Engagement, page 56-59	NO	
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	• At present we do not currently screen new suppliers for impact on society	NO	
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	• At present we do not formally conduct supplier impact assessment for impacts on society	NO	
ASPECT: GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY				
G4-DMA	Generic Disclosures on Management Approach	Number of grievances about	• Not applicable	NO
G4-SO11	impacts on society filed, addressed, and resolved through formal grievance mechanisms	• MPA has not received any grievances about impacts on society during the reporting period	NO	
SUB-CATEGORY: PRODUCT RESPONSIBILITY				
ASPECT: CUSTOMER HEALTH AND SAFETY				
G4-DMA	Generic Disclosures on Management Approach	• Not applicable	NO	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	• Not applicable	NO	
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	• Not applicable	NO	
ASPECT: PRODUCT AND SERVICE LABELING				
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO	
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	• Not material	NO	
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	• Not material	NO	
G4-PR5	Results of surveys measuring customer satisfaction	• Not material	NO	

Standard Disclosure Title		Where in MPA'S Report	External Assurance
SPECIFIC STANDARD DISCLOSURES			
SUB-CATEGORY: PRODUCT RESPONSIBILITY			
ASPECT: PRODUCT AND SERVICE LABELING			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-PR6	Sale of banned or disputed products	• Not material	NO
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	• Not material	NO
ASPECT: CUSTOMER PRIVACY			
G4-DMA	Generic Disclosures on Management Approach	• Not material	NO
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	• Not material	NO
ASPECT: COMPLIANCE			
G4-DMA	Generic Disclosures on Management Approach	• As a public agency, compliance is fundamental to all MPA's operations	NO
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	• MPA has not received any significant fines or non-monetary sanctions for non-compliance during the reporting period	NO

OUR CONTRIBUTORS

BROUGHT TO YOU BY:

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FINANCIAL
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FINANCIAL REPORT 2015

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STATEMENT BY BOARD OF MEMBERS

For the financial year ended 31 December 2015

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 4 to 60 are properly drawn up so as to present fairly, in all material respects, the state of affairs of the Authority as at 31 December 2015 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,



Lucien Wong
Chairman

7 March 2016



Andrew Tan
Chief Executive and Board Member

INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE BOARD OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE

Report on the Financial Statements

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 4 to 60, which comprise the consolidated balance sheet as at 31 December 2015, 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 a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the provisions of the Maritime and Port Authority of Singapore Act, Chapter 170A (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.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Singapore Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the consolidated financial statements of the Authority are properly drawn up in accordance with the provisions of 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 2015 and the results, changes in reserves and cash flows of the Authority for the year ended on that date.

INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE BOARD OF THE MARITIME AND PORT AUTHORITY OF SINGAPORE

Report on Other Legal and Regulatory Requirements

Management's Responsibility 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.

Auditors' Responsibility

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We conducted our audit in accordance with Singapore Standards on Auditing. 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.

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

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.



Deloitte & Touche LLP
Public Accountants and Chartered Accountants
Singapore, 7 March 2016

CONSOLIDATED BALANCE SHEET

As at 31 December 2015

	Note	2015 \$	2014 \$
ASSETS			
Non-current assets			
Property, plant and equipment	4	95,845,113	106,143,918
Capital work-in-progress	4	17,026,555	15,683,030
Financial assets	7	658,007,576	587,783,886
		770,879,244	709,610,834
Current assets			
Financial assets	7	38,000	88,000
Trade receivables	8	45,859,140	39,552,725
Deposits, prepayments and other receivables	9	17,665,977	6,270,685
Cash and cash equivalents	10	681,599,012	678,346,081
		745,162,129	724,257,491
Total assets		1,516,041,373	1,433,868,325
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		11,781,548	14,743,450
Accumulated surplus		1,245,903,017	1,171,896,237
Total capital and reserves		1,409,038,336	1,337,993,458
LIABILITIES			
Non-current liabilities			
Employment benefits	13	422,377	422,377
Deferred capital grant	14	21,815,104	23,202,484
		22,237,481	23,624,861
Current liabilities			
Trade and other payables	15	52,409,447	36,364,670
Advances, deposits and unearned income	16	14,346,805	14,329,531
Provision for contribution to Consolidated Fund	20	18,009,304	21,555,805
		84,765,556	72,250,006
Total liabilities		107,003,037	95,874,867
Total equity and liabilities		1,516,041,373	1,433,868,325
Funds managed/held on behalf of others	25	12,092,647	9,045,582
Funds' net assets managed/held on behalf of others	25	(12,092,647)	(9,045,582)

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the financial year ended 31 December 2015

	Note	2015 \$	2014 \$
Operating revenue			
Port dues and marine services		275,217,543	263,941,008
Shipping services		7,709,816	8,123,775
Rental income		3,960,724	3,768,346
Training		1,026,574	1,055,263
Miscellaneous revenue		339,623	534,579
		288,254,280	277,422,971
Operating expenditure			
Staff cost	17	78,370,685	74,411,580
Depreciation of property, plant and equipment	4	22,790,954	23,208,987
Hire of marine craft and sea garbage services		9,454,727	9,212,741
Fuel, repairs and maintenance		10,087,947	9,483,112
Other operating expenses	18	81,831,116	49,354,088
		202,535,429	165,670,508
Operating surplus		85,718,851	111,752,463
Other operating surplus	19	18,790,853	13,624,007
Surplus from operations		104,509,704	125,376,470
Amortisation of deferred capital grant	14	1,387,380	1,387,380
Surplus before contribution to Consolidated Fund		105,897,084	126,763,850
Contribution to Consolidated Fund	20	(18,009,304)	(21,555,805)
Surplus for the year		87,887,780	105,208,045
Other comprehensive income/(loss):			
Items that may be reclassified subsequently to income or expenditure:			
Net change in fair value of:			
- Available-for-sale debt and equity securities placed by fund managers		(17,823,051)	(9,437,488)
- Available-for-sale equity securities managed internally		-	386,308
Transfer to income or expenditure on sale of available-for-sale debt and equity securities placed by fund managers		9,784,683	9,563,948
Transfer to income or expenditure on sale of available-for-sale equity securities managed internally		-	(1,647,490)
Impairment loss on available-for-sale debt and equity securities placed by fund managers transferred to income or expenditure	7a	5,076,466	3,145,925
Other comprehensive (loss)/income for the year		(2,961,902)	2,011,203
Total comprehensive income for the year		84,925,878	107,219,248

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

CONSOLIDATED STATEMENT OF CHANGES IN RESERVES

For the financial year ended 31 December 2015

	Establishment account \$	Equity financing account \$	Fair value reserve \$	Accumulated surplus \$	Total \$
2015					
Beginning of financial year	147,375,155	3,978,616	14,743,450	1,171,896,237	1,337,993,458
Total comprehensive income	-	-	(2,961,902)	87,887,780	84,925,878
Dividends paid	-	-	-	(13,881,000)	(13,881,000)
Return of surplus funds to government	-	-	-	-	-
End of financial year	147,375,155	3,978,616	11,781,548	1,245,903,017	1,409,038,336
2014					
Beginning of financial year	147,375,155	3,978,616	12,732,247	1,078,271,192	1,242,357,210
Total comprehensive income	-	-	2,011,203	105,208,045	107,219,248
Dividends paid	-	-	-	(11,583,000)	(11,583,000)
Return of surplus funds to government	-	-	-	-	-
End of financial year	147,375,155	3,978,616	14,743,450	1,171,896,237	1,337,993,458

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

CONSOLIDATED STATEMENT OF CASH FLOWS

For the financial year ended 31 December 2015

	Note	2015 \$	2014 \$
Cash flows from operating activities			
Surplus before contribution to Consolidated Fund		105,897,084	126,763,850
Adjustments for:			
- Depreciation of property, plant and equipment	4	22,790,954	23,208,987
- Provision/(write-back) for employee benefits	13	8,697	(109,797)
- Amortisation of deferred capital grant	14	(1,387,380)	(1,387,380)
- (Write back)/impairment loss on trade receivables	18	(406,596)	983
- Net investment gain from funds with fund managers	19	(17,469,990)	(8,981,444)
- Net gain on disposal of equity securities, managed internally	19	(60,032)	(1,647,490)
- Interest income on bank deposits and staff loans	19	(1,229,285)	(2,103,377)
- Dividend income on equity securities, managed internally	19	-	(77,262)
- Loss/(gain) on disposal of property, plant and equipment	19	85,056	(234,972)
- Write off of capital work-in-progress	4	1,815,631	1,097,435
		110,044,139	136,529,533
Changes in working capital:			
- Trade receivables		(5,899,819)	(4,984,392)
- Deposits, prepayments and other receivables		(174,705)	358,871
- Trade and other payables		15,789,777	4,919,284
- Advances, deposits and unearned income		17,274	(383,909)
Cash generated from operations		119,776,666	136,439,387
Payment of employee benefits	13	(8,697)	(531,401)
Contribution paid to Consolidated Fund	20	(21,555,805)	(25,730,706)
Net cash provided by operating activities		98,212,164	110,177,280
Cash flows from investing activities			
(Deposit)/withdrawal of industry funds with Accountant-General's Department		(97,789,246)	89,826
Proceeds from sale of property, plant and equipment		900	243,089
Purchases of property, plant and equipment and capital work-in-progress		(15,737,261)	(16,808,878)
Sale of unquoted equity securities, managed internally		50,000	-
Sale of quoted equity securities, managed internally		60,032	4,544,800
Proceed from withdrawal/(deposit) of funds with fund managers		58,859,896	(303,172,168)
Interest received		1,645,699	1,734,469
Dividends received		-	77,262
Net cash used in investing activities		(52,909,980)	(313,291,600)
Cash flows from financing activities			
Dividends paid		(13,881,000)	(11,583,000)
Return of surplus funds to Government		-	-
Net cash used in financing activities		(13,881,000)	(11,583,000)
Net increase/(decrease) in cash and cash equivalents		31,421,184	(214,697,320)
Cash and cash equivalents at beginning of financial year		68,962,581	283,659,901
Cash and cash equivalents at end of financial year	10	100,383,765	68,962,581

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

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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 2015

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

Interpretations and amendments to published Standards effective in 2015

On 1 January 2015, 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, INT SB-FRSs and amendments to SB-FRS that are relevant to the Authority were issued but not effective:

- SB-FRS 109 Financial Instruments¹
- SB-FRS 115 Revenue from Contracts with Customers¹
- Amendments to SB-FRS 1 Presentation of Financial Statements: Disclosure Initiative²
- Amendments to SB-FRS 27 Separate Financial Statements: Equity Method in Separate Financial Statements²
- Amendments to SB-FRS 16 Property, Plant and Equipment and SB-FRS 38 Intangible Assets: Clarification of Acceptable Methods of Depreciation and Amortisation²
- Amendments to SB-FRS 110 Consolidated Financial Statements and SB-FRS 28 Investments in Associates and Joint Ventures: Sale or Contribution of Assets between an Investor and its Associate or Joint Venture²
- Improvements to Financial Reporting Standards (November 2014)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 2016, with early application permitted.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

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 profit or loss.
- 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 profit or loss.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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.

The Authority is assessing the impact of SB-FRS 109 on its accounting policies.

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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

2. Significant accounting policies (continued)

2.1 Basis of preparation (continued)

SB-FRS 115 Revenue from Contracts with Customers (continued)

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 is assessing the impact of SB-FRS 115 on its accounting policies.

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 maritime welfare fees

Port dues and maritime welfare fees are recognised as and when services are performed.

(b) Marine services

Marine services 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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

2. Significant accounting policies (continued)

2.2 Revenue recognition (continued)

(d) Interest income

Interest income is recognised using the effective interest method.

(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.

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.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

2. Significant accounting policies (continued)

2.4 Group accounting (continued)

(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.

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 2015

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	5 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 "Other operating surplus".

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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 2015

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 2015

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 2015

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 2015

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 2015

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 2015

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 2015

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 2015

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 \$5,545,303 (2014: \$3,635,465) 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 2015

4. Property, plant and equipment

	Leasehold land	Building structures	Wharves, hard-standing and roads	Renovations	Plant, machinery and equipment	Vehicles	Computers	Furniture and fittings	Floating crafts	Capital work-in-progress	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
2015											
Cost											
Beginning of financial year	7,641,956	57,587,417	98,101,572	10,813,297	13,348,825	291,435	67,721,314	1,796,807	9,871,825	15,683,030	282,857,478
Additions	-	933,061	946,258	37,785	758,473	175,080	2,862,062	48,699	-	9,975,843	15,737,261
Transfers	-	1,711,296	83,763	71,842	963,247	-	3,963,539	23,000	-	(6,816,687)	-
Disposals/write-off	-	-	-	-	(494,602)	(252,235)	(3,343,096)	(83,432)	-	(1,815,631)	(5,988,996)
End of financial year	7,641,956	60,231,774	99,131,593	10,922,924	14,575,943	214,280	71,203,819	1,785,074	9,871,825	17,026,555	292,605,743
Accumulated depreciation											
Beginning of financial year	2,775,737	32,795,924	52,125,242	7,900,811	10,391,738	259,422	48,676,844	755,702	5,349,110	-	161,030,530
Depreciation charge	241,296	1,764,430	7,768,756	1,073,849	1,009,241	5,379	10,225,551	160,582	541,870	-	22,790,954
Disposals/write-off	-	-	-	-	(494,602)	(252,235)	(3,304,560)	(36,012)	-	-	(4,087,409)
End of financial year	3,017,033	34,560,354	59,893,998	8,974,660	10,906,377	12,566	55,597,835	880,272	5,890,980	-	179,734,075
Net book value											
End of financial year	4,624,923	25,671,420	39,237,595	1,948,264	3,669,566	201,714	15,605,984	904,802	3,980,845	17,026,555	112,871,668
2014											
Cost											
Beginning of financial year	7,641,956	56,748,073	95,466,860	10,667,864	12,279,244	291,435	60,911,354	1,750,068	11,845,613	11,965,586	269,568,053
Additions	-	818,583	-	-	938,237	-	2,367,033	30,442	45,900	12,608,683	16,808,878
Transfers	-	20,761	2,634,712	149,186	372,565	-	4,578,753	37,827	-	(7,793,804)	-
Disposals/write-off	-	-	-	(3,753)	(241,221)	-	(135,826)	(21,530)	(2,019,688)	(1,097,435)	(3,519,453)
End of financial year	7,641,956	57,587,417	98,101,572	10,813,297	13,348,825	291,435	67,721,314	1,796,807	9,871,825	15,683,030	282,857,478
Accumulated depreciation											
Beginning of financial year	2,534,441	31,128,396	44,116,023	6,851,017	9,731,942	255,501	38,189,574	600,857	6,827,693	-	140,235,444
Depreciation charge	241,296	1,667,528	8,009,219	1,050,982	901,017	3,921	10,623,095	170,824	541,105	-	23,208,987
Disposals/write-off	-	-	-	(1,188)	(241,221)	-	(135,825)	(15,979)	(2,019,688)	-	(2,413,901)
End of financial year	2,775,737	32,795,924	52,125,242	7,900,811	10,391,738	259,422	48,676,844	755,702	5,349,110	-	161,030,530
Net book value											
End of financial year	4,866,219	24,791,493	45,976,330	2,912,486	2,957,087	32,013	19,044,470	1,041,105	4,522,715	15,683,030	121,826,948

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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 \$9,975,843 (2014: \$12,608,683).

6. Investments in subsidiary and associated companies

(a) Subsidiary

	2015 \$	2014 \$
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	
		2015 %	2014 %
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"), a company limited by guarantee. The principal activity of SMI is to develop strategies and programmes related to the academic, policy and research and development aspects of the maritime industry. As at 31 December 2015, the Authority had contributed a total amount of \$19.5 million (2014: \$13.4 million) of grants to SMI.

(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 2015, the Authority had not made any direct contribution to SCMA.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

7. Financial assets

	Note	2015 \$	2014 \$
Non-current investments			
Available-for-sale securities:			
- Quoted equity securities managed by fund managers	7(a), 21	215,594,250	183,839,279
- Quoted debt securities managed by fund managers	7(b), 21	442,413,326	403,944,607
- Unquoted equity securities managed internally	7(c)	-	-
		658,007,576	587,783,886
Current investments			
Unquoted debt securities		38,000	88,000
		658,045,576	587,871,886

(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 \$5,076,466 (2014: \$3,145,925) during the current year. The impairment loss is presented under "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 2015

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:

	2015		2014	
	\$	%	\$	%
Original cost				
Corporate bonds	244,756,812		254,616,603	
Government bonds	180,399,787		140,685,638	
	425,156,599		395,302,241	
Fair value				
Corporate bonds	259,285,331	59	262,023,093	65
Government bonds	183,127,995	41	141,921,514	35
	442,413,326	100	403,944,607	100

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015		2014	
	\$	%	\$	%
Fair value				
AAA/Aaa	168,054,327	38	120,858,438	30
AA/Aa	46,215,532	10	23,556,142	6
A/A	121,935,168	28	153,414,574	38
BBB+/Baa1	62,244,604	14	47,661,771	12
BBB/Baa2	31,156,924	7	27,816,107	7
BBB-/Baa3	10,808,074	2	10,988,956	2
Not rated	1,998,697	1	19,648,619	5
	442,413,326	100	403,944,607	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 76% (2014: 74%) 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 2015

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:

	2015		2014	
	\$	%	\$	%
Fair value				
Asia (mainly Singapore)	102,615,475	56	47,985,997	34
European union	19,711,060	11	14,418,977	10
Australia	7,274,690	4	6,367,635	4
United States of America	53,526,770	29	73,148,905	52
	183,127,995	100	141,921,514	100

(c) Available-for-sale unquoted equity securities managed internally

The investments in unquoted equity securities amounting to \$Nil (2014: \$Nil) are stated at cost less impairment losses. The investments at cost have been fully impaired in prior years. These securities represent investments in companies that are engaged in research and development activities and are involved in the commercial application of this knowledge. The fair value of these unquoted equity securities is not readily available as there are no quoted market prices in an active market. The recoverability of these investments is uncertain and is highly dependent on the outcome of the research and development activities, which cannot presently be determined. The Authority is also unable to disclose the range of estimates within which a fair value is highly likely to lie.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

8. Trade receivables

	2015 \$	2014 \$
Trade receivables	46,118,269	40,218,450
Less: Allowance for impairment of receivables	(259,129)	(665,725)
Trade receivables – net	45,859,140	39,552,725

The Authority's primary 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:

	2015 \$	2014 \$
Gross receivables		
Not past due	40,940,877	33,237,672
Past due 0 - 30 days	3,050,733	4,378,927
Past due 31 - 60 days	364,359	490,825
More than 60 days	1,762,300	2,111,026
	46,118,269	40,218,450
Impairment losses		
Not past due	214	-
Past due 0 - 30 days	1,756	67,096
Past due 31 - 60 days	1,551	1,499
More than 60 days	255,608	597,130
	259,129	665,725

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

8. Trade receivables (continued)

The change in allowance for impairment in respect of trade receivables during the year is as follows:

	2015 \$	2014 \$
Beginning of financial year	665,725	664,742
Allowance made	259,129	665,725
Amount written back	(352,305)	(95,472)
Allowance utilised	(313,420)	(569,270)
End of financial year	<u>259,129</u>	<u>665,725</u>

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

	2015 \$	2014 \$
Deposits	195,514	164,972
Prepayments	685,672	571,727
Other receivables	11,712,077	591,455
Amount due from associate & trust funds (non-trade)	679,584	299,358
	12,391,661	890,813
Interest receivable	4,393,130	4,643,173
	<u>17,665,977</u>	<u>6,270,685</u>

Other receivables mainly comprise dividends receivable, receivables on sale of financial instruments, receivables from forward foreign exchange purchases and derivative assets.

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

	2015 \$	2014 \$
Interest receivable (Note 21)	3,250,312	3,083,941
Receivables on sale of financial instruments (Note 21)	11,422,632	-
Other receivables (mainly dividend receivables and withholding tax receivables) (Note 21)	291,676	243,678
	<u>14,964,620</u>	<u>3,327,619</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

10. Cash and cash equivalents

	2015 \$	2014 \$
Cash at bank and on hand	20,592,253	10,263,117
Placement with Accountant-General's Department	619,052,054	491,640,190
- Statutory Board Approved Funds ("SBAF")	521,507,536	423,718,290
- Centralised Liquidity Management Framework ("CLMF")	97,544,518	67,921,900
Short-term bills and notes	16,505,317	49,406,892
Fixed deposits	20,695,435	122,347,015
Others	4,753,953	4,688,867
	<u>681,599,012</u>	<u>678,346,081</u>

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

	2015 \$	2014 \$
Cash and bank balances (as above)	681,599,012	678,346,081
Less: Cash and cash equivalents managed by fund managers	(59,707,711)	(185,665,210)
Less: Placement with Accountant-General's Department ("SBAF")	(521,507,536)	(423,718,290)
Cash and cash equivalents per consolidated statement of cash flows	<u>100,383,765</u>	<u>68,962,581</u>

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 \$97,544,518 (2014: \$67,921,900) 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 industry funds of \$521,507,536 (2014: \$423,718,290) 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 2015

10. Cash and cash equivalents (continued)

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

	2015 \$	2014 \$
Cash at bank and on hand (Note 21)	22,506,959	13,911,303
Short-term bills and notes (Note 21)	16,505,317	49,406,892
Fixed deposits (Note 21)	20,695,435	122,347,015
	59,707,711	185,665,210

The effective interest rates of fixed deposits placed directly by the Authority vary from 0.92% to 1.36% (2014: 0.60% to 0.81%) per annum. 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:

	2015 %	2014 %
Short-term bills and notes	0.24 – 1.20	0.07 – 0.64
Fixed deposits	0.08 – 0.35	0.06 – 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 2015

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

	2015 \$	2014 \$
Beginning of financial year	422,377	1,063,575
Provision made	8,697	29,609
Provision utilised	(8,697)	(531,401)
Over provision in prior financial years	-	(139,406)
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

	2015 \$	2014 \$
Beginning of financial year	23,202,484	24,589,864
Amortisation to income	(1,387,380)	(1,387,380)
End of financial year	21,815,104	23,202,484

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 2015

15. Trade and other payables

	2015	2014
	\$	\$
Trade payables	5,960,986	2,307,168
Forward foreign exchange purchases (net) (Note 21)	9,201,304	4,959,413
Accrued capital expenditure	2,748,923	5,398,741
Accrued operating expenses	31,753,829	21,385,639
Other payables	2,744,405	2,313,709
	<u>52,409,447</u>	<u>36,364,670</u>

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

Accrued operating expenses include accrual for performance bonus and group bonus of \$12,330,688 (2014: \$12,215,612) and accrued administrative fee payable to the fund managers and custodian bank amounting to \$722,000 (2014: \$467,000).

The following are the expected contractual undiscounted cash outflows of the financial liabilities, including interest payments and excluding the impact of netting agreements:

	2015	2014
	\$	\$
Undiscounted cash flows within 1 year		
Non-derivative financial liabilities		
Trade and other payables	<u>(43,208,143)</u>	<u>(31,405,257)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

16. Advances, deposits and unearned income

	2015	2014
	\$	\$
Advances and deposits	2,958,374	2,406,353
Unearned operating lease income [Note (a)]	10,047,361	10,903,269
Unearned annual port dues and Maritime Welfare Fee [Note (b)]	1,341,070	1,019,909
	<u>14,346,805</u>	<u>14,329,531</u>

(a) Unearned operating lease income mainly relates to sub-lease of a property to a third party for a period of 12 years (2014: 13 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 \$2,943,676 (2014: \$2,326,128).

17. Staff cost

	2015	2014
	\$	\$
Wages and salaries	64,868,769	62,300,435
Employer's contribution to Central Provident Fund	8,279,897	7,507,158
Employer's contribution to other defined benefit plans (Note 13)	8,697	29,609
Other benefits	5,213,322	4,574,378
	<u>78,370,685</u>	<u>74,411,580</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

18. Other operating expenses

Included in other operating expenses are the following:

	2015	2014
	\$	\$
Project grants	23,351,480	8,445,153
Contribution to Maritime Cluster Fund projects	12,050,444	8,765,545
Contribution to International Organisations	4,802,226	4,158,337
Transport & travel	1,846,602	1,641,795
Rental	5,867,279	4,282,724
Property tax	1,416,544	1,593,062
Telecommunication	2,630,021	2,445,196
Water cost & water sales service fee	1,669,182	1,668,548
Utility charges	1,032,951	1,240,180
Events & publicity	6,403,814	3,237,674
Professional & consultancy fees	4,989,993	4,640,101
Other administrative expenses	4,654,075	5,490,230
Other miscellaneous expenses	11,116,505	1,745,543
	81,831,116	49,354,088

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

19. Other operating surplus

	2015	2014
	\$	\$
Gain/(Loss) from sale of investments in:		
- Debt securities (a)	(1,443,260)	1,895,224
- Equity securities (a)	3,516,856	6,826,984
- Equity securities, managed internally	(60,032)	1,647,490
Realised gain(loss) on foreign exchange on disposal of available-for-sale financial assets – net (a)	15,147,827	(1,206,328)
Impairment loss on investments in available-for-sale equity securities (a)	(5,076,466)	(3,145,925)
Unrealised gain on foreign exchange on debt securities and other monetary assets held by fund managers – net (a)	16,490,548	5,646,883
Net gain on available-for-sale financial assets	28,695,537	11,664,328
Interest income:		
- Debt securities (a)	10,553,452	8,160,203
- Fixed deposits placed by fund managers (a)	32,768	72,498
- Fixed deposits and cash at bank	1,208,795	2,035,898
- Staff loans and trade receivables	20,490	67,479
Total interest income for financial assets that are not fair value through income or expenditure	11,815,505	10,336,078
Fair value loss on derivatives (a)	(23,695,576)	(10,970,104)
Investment expenses (a)	(3,523,309)	(1,996,372)
Dividend income for funds with fund managers (a)	5,467,150	3,698,381
Dividend income for equity securities, managed internally	-	77,262
Net (loss)/gain on disposal of property, plant and equipment	(85,056)	234,972
Gain/(loss) on foreign exchange on other monetary assets, managed internally – net	27,177	(37,928)
Income from liquidated damages received	97,821	268,119
Others	(8,396)	349,271
	18,790,583	13,624,007

The total net investment gain from funds with fund managers amounted to \$17,469,990 (2014: \$8,981,444) (refer to (a) above).

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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% (2014: 17%) of the surplus for the year.

	2015 \$	2014 \$
Beginning of financial year	21,555,805	25,730,706
Amount contributed	(21,555,805)	(25,730,706)
Provision for the year	18,009,304	21,555,805
End of financial year	<u>18,009,304</u>	<u>21,555,805</u>

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:

	2015 \$	2014 \$
Debt securities (Note 7)	442,413,326	403,944,607
Equity securities (Note 7)	215,594,250	183,839,279
Interest receivables (Note 9)	3,250,312	3,083,941
Receivables on sale of financial instruments (Note 9)	11,422,632	-
Other receivables (mainly dividend receivables and withholding tax receivables) (Note 9)	291,676	243,678
Fixed deposits (Note 10)	20,695,435	122,347,015
Cash balances (Note 10)	22,506,959	13,911,303
Short-term bills and notes (Note 10)	16,505,317	49,406,892
Forward foreign exchange purchases (net) (Note 15)	(9,201,304)	(4,959,413)
Accrued administrative fees (Note 15)	(722,000)	(467,000)
	<u>722,756,603</u>	<u>771,350,302</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Notional amounts		
Futures contracts	24,958,516	82,611,483
Foreign currency swap and forward contracts	<u>618,103,163</u>	<u>438,646,277</u>

22. Commitments

(a) Capital commitments

Capital expenditures contracted for at the balance sheet date but not recognised in the financial statements are as follows:

	2015 \$	2014 \$
Property, plant and equipment	<u>11,958,064</u>	<u>6,625,938</u>

(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.

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:

	2015 \$	2014 \$
Not later than one year	11,450,029	1,453,961
Between one and five years	3,336,018	2,529,653
Later than five years	-	-
	<u>14,786,047</u>	<u>3,983,614</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

22. Commitments (continued)

(c) *Operating lease commitments – Where the Authority is a lessor:*

The Authority leases out rental space and buildings to non-related parties under 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:

	2015 \$	2014 \$
Not later than one year	2,310,907	2,267,800
Between one and five years	4,428,750	3,975,284
Later than five years	6,136,615	6,988,937
	12,876,272	13,232,021

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 2015

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 2015

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:

	2015 \$	2014 \$
Australian Dollars	265,940	3,557,766
Euro	46,656,411	11,165,523
Hong Kong Dollars	21,809,938	14,875,103
Korean Won	5,822,720	15,824,249
Thai Baht	2,190,065	11,237,523
US Dollars	63,808,309	61,392,898
Various other foreign currencies	62,961,850	36,238,847
	203,515,233	154,291,909

The quoted debt securities managed by fund managers denominated in currencies other than the Authority's functional currency comprise the following:

	2015 \$	2014 \$
Australian Dollars	8,332,529	7,521,877
Chinese Yuan	17,909,766	19,496,074
Euro	7,602,416	7,440,264
Sterling Pound	8,391,618	6,735,605
Thai Baht	3,180,236	3,284,453
US Dollars	253,913,821	270,935,591
Various other foreign currencies	2,405,447	1,752,714
	301,735,833	317,166,578

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Euro	309,229	226,157
US Dollars	14,230,996	35,334,851
Various other foreign currencies	1,074,288	1,351,963
	15,614,513	36,912,971

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:

	2015 \$	2014 \$
+5% scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	10,175,762	7,714,595
-5% scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	(10,175,762)	(7,714,595)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
+5% scenario		
Managed by fund managers		
Debt securities	15,086,792	15,858,329
Cash and cash equivalents	780,725	1,845,649
	<u>15,867,517</u>	<u>17,703,978</u>
Cash and cash equivalents, managed internally	156,223	112,244
	<u>16,023,740</u>	<u>17,816,222</u>
-5% scenario		
Managed by fund managers		
Debt securities	(15,086,792)	(15,858,329)
Cash and cash equivalents	(780,725)	(1,845,649)
	<u>(15,867,517)</u>	<u>(17,703,978)</u>
Cash and cash equivalents, managed internally	(156,223)	(112,244)
	<u>(16,023,740)</u>	<u>(17,816,222)</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
+100 basis point scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	<u>(12,511,040)</u>	<u>(14,315,584)</u>
-100 basis point scenario		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	<u>12,573,691</u>	<u>14,934,105</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
+100 basis point scenario		
Income or expenditure	<u>146,165</u>	126,026
-100 basis point scenario		
Income or expenditure	<u>(139,707)</u>	(76,391)

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:

	2015 \$	2014 \$
+100 basis point scenario		
Income or expenditure	<u>(347,995)</u>	4,104,247
-100 basis point scenario		
Income or expenditure	<u>376,669</u>	(4,316,210)

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Fixed rate		
Maturing in less than 1 year	64,295,718	22,058,165
Maturing between 1 to 5 years	244,497,196	257,805,095
Maturing in more than 5 years	118,909,129	106,494,593
Floating rate		
Repricing in less than 3 months	14,158,844	17,062,599
Repricing between 3 to 6 months	552,439	524,155
	<u>442,413,326</u>	<u>403,944,607</u>

(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 2015

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:

	2015 \$	2014 \$
+5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	57,375	387,454
Income or expenditure	591,636	-
Equity securities, managed internally		
Income or expenditure	-	-
-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	(409,418)	(387,454)
Equity securities, managed internally		
Income or expenditure	-	-

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
+5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	8,322,899	8,804,510
Income or expenditure	-	-
Equity securities, managed internally		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	-	-
Income or expenditure	-	-
-5% scenario		
Equity securities, managed by fund managers		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	(6,127,204)	(6,626,513)
Income or expenditure	(2,195,695)	(2,177,997)
Equity securities, managed internally		
Other comprehensive income and presented in fair value reserve in consolidated statement of changes in reserves	-	-
Income or expenditure	-	-

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015	2014
	\$	\$
Trade receivable (Note 8)	45,859,140	39,552,725
Deposits (Note 9)	195,514	164,972
Other receivables (Note 9)	11,712,077	591,455
Interest receivable (Note 9)	4,393,130	4,643,173
Loans and receivables	<u>62,159,861</u>	<u>44,952,325</u>

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 2015

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 2015, 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 \$507,884,353 (2014: \$587,978,023).

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 2015

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 2015

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:

	2015 \$	2014 \$
Loans and receivables	744,438,457	723,597,764
Financial liabilities at amortised cost	<u>46,166,519</u>	<u>33,811,610</u>

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

	2015 \$	2014 \$
Provision of dumping and monitoring services to		
- Land Transport Authority	12,071,000	7,117,145
- Housing & Development Board	<u>17,842,372</u>	<u>27,947,153</u>

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Short-term employee benefits	3,970,547	4,027,305
Employment benefits	176,444	168,368
Directors' fees	188,641	185,635
	4,335,632	4,381,308

25. Funds managed/held on behalf of others - Funds held in trust

Funds held in trust and managed by the Authority comprise the following:

	2015 \$	2014 \$
Singapore Stranded Seafarers' Fund	335,628	334,543
Agency funds held in trust of Ministry of Transport	799,010	523,246
Aids to Navigation Fund	10,958,009	8,187,793
	12,092,647	9,045,582

These funds are placed with financial institutions.

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Accumulated fund	336,274	335,189
Current assets		
Interest receivable	646	646
Cash and cash equivalents	335,628	334,543
	336,274	335,189

(c) The results of the SSSF for the year ended 31 December are as follows:

	2015 \$	2014 \$
Interest income	1,085	1,085
Surplus for the year	1,085	1,085
Accumulated surplus as at 1 January	35,189	34,104
Accumulated surplus as at 31 December	36,274	35,189

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Accumulated fund	772,118	599,872
Current assets		
Cash at bank	799,010	523,246
Amount due from various Government bodies	288	7,572,813
GST receivable	3,414,167	-
	4,213,465	8,096,059
Current liabilities		
GST payable	(3,441,347)	(101,650)
Amount due to various Government bodies	-	(7,394,537)
Net assets	772,118	599,872

(c) The results of the agency funds held in trust for the year ended 31 December are as follows:

	2015 \$	2014 \$
Grants received	95,945,867	238,179,074
Interest income	58,796	54,424
	96,004,663	238,233,498
Grants disbursed	(93,528,768)	(246,151,247)
Agency fees paid/payable	(2,303,649)	(4,490,399)
Deficit for the year	172,246	(12,408,148)
Accumulated surplus as at 1 January	599,872	13,008,020
Accumulated surplus as at 31 December	772,118	599,872

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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 2015. Chairmanship would be extended for another year ending 31 December 2016.

(b) The assets and liabilities of the ANF as at 31 December are as follows:

	2015 \$	2014 \$
Accumulated fund	10,032,587	8,302,913
Current assets		
Cash at bank	10,958,009	8,187,793
Other receivables	192,537	252,825
	11,150,546	8,440,618
Current liabilities		
Other payables	(1,117,959)	(137,705)
Net assets	10,032,587	8,302,913

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 December 2015

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:

	2015 \$	2014 \$
Contribution received	2,789,055	982,276
Interest income	5,086	4,161
	<u>2,794,141</u>	<u>986,437</u>
Maintenance repair and miscellaneous expenses	(1,649,002)	(1,024,028)
(Deficit)/surplus for the year	1,145,139	(37,591)
Accumulated surplus as at 1 January	2,918,630	2,956,221
Accumulated surplus as at 31 December	<u>4,063,769</u>	<u>2,918,630</u>

26. Authorisation of financial statements

These financial statements were authorised for issue by the Board of Members on 7 March 2016.