

HORIZON

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Guest-of-Honour Mr Khaw Boon Wan, Singapore's Coordinating Minister for Infrastructure and Minister for Transport, with Mr Kitack Lim, keynote speaker at the 2nd Maritime Administrators' Forum and Secretary-General of the IMO.



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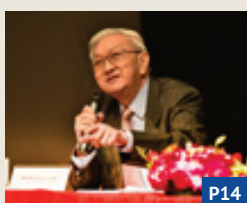
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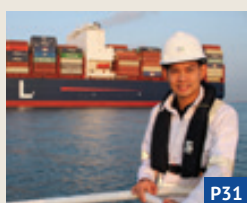
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01: EDITOR'S NOTE

GEARING UP FOR CHANGE

This is an exciting time for the maritime industry. While the industry still faces challenges from industry consolidation and regulatory pressures, it is slowly transforming to embrace new capabilities and to better understand disruptive technologies and emerging trends. Therefore, the new maritime workforce must be re-skilled and up-skilled to remain relevant and future-ready.

Recognising this, our *Feature* story spotlights on the 2nd Maritime Administrations' Forum where maritime leaders from around the world gathered in April 2018 in Singapore to discuss important maritime issues and exchange best practices in this fast changing world. The event featured several notable speakers with each touching on diverse topics that cover the future of shipping. Held in conjunction with the 13th Singapore Maritime Week, the forum also coincided with the 70th anniversary of the adoption of the International Maritime Organization (IMO) Convention and the 20th anniversary of the Singapore-IMO Third Country Training Programme Memorandum of Understanding.

I am delighted to share that some 18 officials from eight countries who had previously attended MPA Academy's flagship programmes, reunited at an alumni gathering held during the Singapore Maritime Week. In *Interview*, we spoke to two of them- Capt Ko Ko Naing from Myanmar and Capt Nirmal Silva from Sri Lanka. They told us how the alumni gathering had provided exceptional opportunities to connect with their peers, and the invaluable experience of attending a slew of maritime events.

01: EDITOR'S NOTE

Innovation and technology will be the main drivers of growth in the future. Given the growing drive for digitalisation in the maritime industry, MPA Academy organised the inaugural Maritime Blockchain Forum that brought together leading practitioners in blockchain to promote awareness and adoption of the technology. We bring you the highlights of the *Forum* in this issue of Horizon.

As the training arm of MPA, the MPA Academy spearheads the organisation's efforts to sharpen the competencies of MPA officers. In *People*, we heard from marine surveyor Biondi Phua from the Flag State Control Department in the MPA Shipping Division, who gave us an inside look into his training and experience, in ensuring safety and regulatory compliance for Singapore-flagged ships.

The Academy has been conducting oral history interviews with several key maritime leaders and personalities to capture their personal recollections and experiences about the growth and development of Maritime Singapore. We had the privilege of speaking to maritime veteran Mr David Chin, who was the Executive Director of the Singapore Maritime Foundation, about the genesis and evolution of the organisation.

The presence of a strong ship management core is vital to Singapore as an International Maritime Centre. In *Contribution*, MPA Visiting Professor in Shipping Economics Professor Photis M. Panayides shared with us the key ingredients in driving performance improvements in ship management.

We hope you will enjoy reading this issue of Horizon.

Tan Suan Jow
Dean, MPA Academy





02: FEATURE

CHARTING THE COURSE FOR SUSTAINABLE SHIPPING

By Angela Chew

MPA Academy organised the 2nd Maritime Administrators' Forum on 25 April. In line with the event's theme, "IMO 70: Our Heritage – Better Shipping for a Better Future", the forum looked back on the sector's achievements in promoting safe, secure, efficient and sustainable shipping, while building on the International Maritime Organization's (IMO's) leadership in anticipating and tackling tomorrow's challenges.

The forum was held in conjunction with the 13th Singapore Maritime Week. This year's forum was particularly significant as it coincided with two anniversaries – the 70th anniversary of the adoption of the IMO Convention and the 20th anniversary of the Singapore-IMO Third Country Training Programme (TCTP) Memorandum of Understanding (MOU).

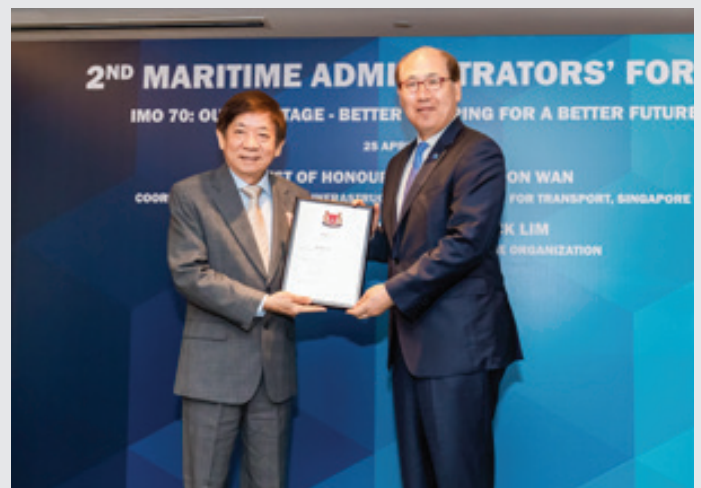
Graced by Guest-of-Honour Mr Khaw Boon Wan, Singapore's Coordinating Minister for Infrastructure and Minister for Transport, the event featured several notable speakers with each touching on diverse topics that cover the IMO's impact to date and the future of shipping.

02: FEATURE

CHARTING THE COURSE FOR SUSTAINABLE SHIPPING

Singapore Pledges US\$5 million Enhanced Training Package to IMO

Marking the 70th anniversary of the adoption of the IMO Convention and the 20th anniversary of the Singapore-IMO MOU on TCTP, Mr Khaw announced Singapore's pledge of an enhanced technical cooperation and training package for the IMO and its member states valued at up to US\$5 million (approximate S\$6.5 million) over the next five years. Singapore has benefited from the IMO's capacity building programmes and the move is part of the country's efforts to pay it forward. This package will comprise a mixture of fellowships, scholarships and training courses, which includes cooperation with both IMO and the World Maritime University.



IMO's Drive for Sustainability

With an eye on the future, Mr Kitack Lim, keynote speaker and Secretary-General of the IMO, noted that the IMO's strategic focus ranged from integrating new technologies into the regulatory framework to responding to climate change and engaging in ocean governance.

The IMO has strived to foster environmental sustainability through initiatives ranging from lowering greenhouse gas emissions from ships, to adopting the Polar Code and the Global Partnership on Marine Litter. At the same time, support from the industry is crucial to the IMO's efforts to champion sustainability. While technological disruptions such as artificial intelligence offer opportunities for a safer and more sustainable future for shipping, the IMO needs to balance this against the potential costs to the industry, environment and personnel, while upholding safety and security. Mr Lim also emphasised that it was also important to take into account the needs of developing countries in the drive for sustainability.

02: FEATURE

CHARTING THE COURSE FOR SUSTAINABLE SHIPPING



70 Years of Championing Sustainable Shipping and Beyond

Commemorating the 70th anniversary, Secretary-General Emeritus of the IMO, Mr Koji Sekimizu reflected on the past seven decades of shipping and IMO's achievements in his speech read by Mr Andrew Tan, Chief Executive of the Maritime and Port Authority of Singapore (MPA). Over this period, shipping became increasingly globalised with international shipping being a major contributor to world trade. Along with this came environmental challenges which the IMO tackled through a number of initiatives to safeguard the environment and prevent marine pollution. The United Nations (UN) has also played a part in marine governance with the UN Convention on the Law of the Sea.

To build on the UN and IMO's successes, Mr Sekimizu mooted a doctorate course on maritime governance of the UN and the IMO. The programme would serve to highlight the past achievements in this field, while allowing the lessons learnt to be applied to the current context, to secure sustainable shipping in the future.

The Global Trade Outlook

Addressing factors that affect the global trade outlook and trade growth for the maritime industry, Mr Marcus Bartley Johns, Senior Trade Specialist at the World Bank emphasised that while the short-term global GDP growth forecast is improving, there are risks of lower potential growth over the next decade which need to be addressed through long-term structural reforms such as human and capital investments. Meanwhile, the long-term structural trend of globalisation of trade over the past six decades, the growing centrality of developing countries in international trade and the role of globalisation in poverty reduction bode well for global trade.

However, global trade faces risks from policy uncertainty, the weaker pace of global trade liberalisation and mixed public opinion on the benefits of trade. Additionally, long-term structural changes are expected to impact the future of manufacturing, with the emergence of Industry 4.0 projected to contribute to the rising trend of automation, and trade increasingly shifting towards services, technology and data rather than manufactured goods. Three possible strategies were proposed to mitigate against the structural and cyclical challenges to global trade: renewing trade cooperation, pushing for deeper trade agreements and addressing low-income countries' high trade costs.

02: FEATURE

CHARTING THE COURSE FOR SUSTAINABLE SHIPPING

Harnessing Technology for Greater Effectiveness in Estonia's Public and Maritime Sector

The focus then shifted to the digital age, with Captain Rene Arikas, Director General of the Estonian Maritime Administration, sharing insights about how Estonia harnessed technology and digitisation to increase efficiency, effectiveness and sustainability across its public and maritime sector. Faced with a small and shrinking population of 1.3 million, Estonia needed to develop a digital society that was not only secure, but transparent.

Estonia embraced e-solutions ranging from cross-border digital governance to paperless shipping and a web-based maritime navigational system to reap time savings, improved efficiency and labour productivity. Meanwhile, the launch of the Estonian Maritime Document Exchange enabled swift, costless and transparent exchange of information across port authorities and other regulatory agencies. Beyond driving enhanced safety, efficiency and sustainability, these digital initiatives helped to minimise the manpower needed for Estonia's public services and shipping sector.



During the panel discussion moderated by Vice-President from the Office of Business Development and Professor of Finance (Practice) of the Singapore Management University Professor Annie Koh, Mr Sobantu Tilayi, Chief Operations Officer of the South African Maritime Safety Authority, joined the speakers on stage to tackle questions on topics including the initiatives of South Africa's maritime sector, the transformation of Singapore's maritime industry, digital disruption, the global economy, deep trade agreements, maritime governance, the impact of a US-China trade war, the hub and spoke strategy and Estonia's relevance in the European context.

At the close of the event, Mr Andrew Tan emphasised the need for the next generation to have hope in the maritime industry's prospects in light of transformative efforts to realise a future-ready sector. Noting that the past was an important part of the day's conversation, Professor Koh summed up the thoughts of the speakers with the acronym "ABC" – Agility and adaptation, boldness to try new things amidst an uncertain future and the need to work collaboratively as we cannot tackle the future alone.

02: FEATURE

CHARTING THE COURSE FOR SUSTAINABLE SHIPPING



A Word from Our Presenters and Participants

“I truly hope that the tradition of arranging these meetings on a regular basis will continue, enabling maritime experts from all over the world to come together and share their experience of best practices. Thank you for the extremely useful forum that produced fruitful discussions on the ongoing challenges in the maritime field and provided an opportunity to establish contacts with colleagues from all over the world.”

Capt. Rene Arikas, Director-General, Estonian Maritime Administration

“The Maritime Administrators’ Forum provided an opportunity for a stimulating, high-level discussion on several important trends affecting the maritime industry. I was very happy to have been invited to participate on behalf of the World Bank.”

Mr Marcus Bartley Johns, Senior Trade Specialist, World Bank

“The Maritime Administrators’ Forum provided an opportunity to hear and gain the experiences of international maritime experts from a wide perspective.”

Goh Leng Yeu, Board Member, Kuching Port Authority, Malaysia and MPA Academy Alumni





CONVERSATIONS WITH ALUMNI

By Rahita Elias

Some 18 officials from eight countries, who had previously attended the Advanced Maritime Leaders' Programme, Maritime Public Leaders' Programme (MPLP), and the Port Management Programme (PMP), reunited at an alumni gathering held during the 13th Singapore Maritime Week (SMW) 2018. They had the opportunity to renew ties with their peers while attending a slew of key maritime events. Horizon speaks to two of them.



03: INTERVIEW

CONVERSATIONS WITH ALUMNI



Capt Ko Ko Naing
Director,
Department of Marine
Administration,
Myanmar

The friendships and bonds established among MPLP participants are both long lasting and deep. So much so, that these relationships have sparked off greater cooperation among the different countries from which the participants came.

In 2016, I was in Singapore to attend the MPLP. The lesson that left the deepest impression on me was the one on Governance in the 21st Century, which emphasised value creation through operational efficiency and strategic effectiveness. My take away from that lecture was that greater efficiency that did not create greater effectiveness was worthless.

On the subject of infocomm technology, I learnt about the importance of leveraging on late-comer advantage by learning best practices from others, and utilising readily available tools, rather than wasting time with ineffective effort.

Other lessons I brought back to my home country was Singapore's human resource recruitment strategy of identifying talents for leadership development, and its use of new technologies and automation to enhance operational efficiency and overcome its manpower constraints.

Overall, the MPLP gave me a more strategic vision. Every lecture and discussion was priceless as it was obvious that the various speakers were extraordinary in their respective fields.

Even as the MPLP was a great avenue for expanding our knowledge base, it was also a great forum for participants to get to know each other and our respective countries. For me, I wanted my peers to know that Myanmar, with our democratically elected government, is located at the crossroads of the Indian and the Pacific Oceans, and plays an essential role in facilitating international shipping. Myanmar seafarers make up a significant portion of the world's seafarers, and have gained an impeccable reputation of being both skilled and reliable.

03: INTERVIEW

CONVERSATIONS WITH ALUMNI



While my MPLP course mates learnt more about Myanmar, they also helped me to get to know their countries. Certainly, the networking during the MPLP course has been beneficial for all of us. In fact, the programme has served as a catalyst for promoting cooperation amongst the various countries, MPA staff, and the participating industry experts. It was wonderful to meet my peers from different countries with diverse ideologies, put our differences aside, and participate in friendly and stimulating discussions.

That is why I was pleased to have the opportunity to meet my course mates again at the alumni gathering this year. Apart from catching up with each other, we also got to attend the Maritime Administrators' Forum, where we met not only Singapore's maritime top leaders but also IMO Secretary General, Kitack Lim. It was wonderful to listen to their excellent speeches, and thinking of ways to adapt the ideas raised to our country's maritime industry and change the status quo.

The alumni gathering was held in conjunction with SMW, which is an annual milestone for the maritime industry in Singapore. The Week was filled with the signing of various memorandums and partnership agreements, discussions on policies and regulations as well as programmes to raise public awareness of the industry. It is a good example of a successful maritime event, and I will propose to hold a similar all-in-one event in my country.

For future alumni gatherings, I think that it would be great if presentations from alumni could be included. These presentations would be about what they had learnt from the programme, and how they applied these lessons in their respective countries.

03: INTERVIEW

CONVERSATIONS WITH ALUMNI



Capt Karunanayanake Michael Nirmal Priyantha Silva,
Senior Deputy Harbour Master,
Sri Lanka Ports Authority

His passion for the maritime world started when he was just 11 visiting his sea-going uncle's ship. Ultimately this interest led him to embark on a seafaring career himself. Now a senior port official in Sri Lanka, he came to Singapore to attend the PMP where he made new friends and expanded his understanding of the workings of the industry.

I attended the 2017 edition of the Port Management Programme (PMP), and found it to be well structured. The programme covered a wide spectrum of topics which were both relevant and important to the maritime industry.

Among the many topics covered, I found the lesson on crisis management to be particularly interesting. I learnt so much about the importance of leadership, the role of the media, and the partisan approach in managing crises. I also found the use of a five-step crisis communication toolkit and the 10 key considerations in formulating a crisis communication strategy to be both thought provoking and enjoyable.

During the programme, I also got to know about the best practices in terms of implementing a proper regulatory framework, and innovative planning for the future. Singapore has adopted these practices to achieve a high standard for its shipping industry.

In addition to the wealth of knowledge I gained from the programme itself, I also benefited from networking with my fellow participants. Participants from 16 different nations across the globe had attended the programme. I got to know about the different types of practices and systems adopted in their respective countries and ports.

At the same time, I wanted my course mates to know more about Sri Lanka. My country is strategically located along the main trade routes, particularly the so-called maritime silk route. The major hub port for this region is our Colombo port. It was important for my course mates to know the developments in the maritime industry in Sri Lanka, especially those in the port sector.

03: INTERVIEW

CONVERSATIONS WITH ALUMNI



I believe that such an exchange of ideas and information is mutually beneficial.

I am pleased that my classmates and I got the opportunity to renew ties this year at the Alumni gathering during the Singapore Maritime week 2018 and also to meet new friends who have attended other programmes successfully conducted by MPA. The events included in the gathering, and its timing to coincide with the Singapore Maritime Week were ideal. I particularly enjoyed the Singapore Maritime Lecture, and the Maritime Administrators' Forum. However, it would have been good if the Terminal Operators' Forum could have also been included as part of our itinerary.



04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY

By Rahita Elias

As part of MPA Academy's efforts to document institutional knowledge of the MPA and the maritime sector, the Academy has been conducting oral history interviews with key maritime leaders and personalities, to capture their personal recollections and experiences about the growth and development of Maritime Singapore. We speak to Mr David Chin, who was the Executive Director of the Singapore Maritime Foundation (SMF) from February 2007 until January 31, 2018, as he talks about the genesis and evolution of the organisation. Created as a private sector champion for the maritime industry, SMF's roles and responsibilities have grown in tandem with the needs and demands of the industry.



04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY



Q: Perhaps you can start off by telling us when the idea of forming the Singapore Maritime Foundation (SMF) first came up?

The first time the idea of forming the SMF arose was when the Singapore Government decided to merge commercial shipping with technical shipping within the Maritime and Port Authority of Singapore (MPA), which comes under the Ministry of Transport. This was around 2002.

However, it wasn't the first time that such a merger had been discussed. The first time was pre-1997 because, in 1997, the then Port of Singapore Authority (PSA) was to be corporatised. There was therefore a need to transfer the regulatory role of PSA out of the corporatised entity, PSA Corporation, into another government body. It was decided that MPA would be formed to take over this role.

At that time, the possibility of technical and commercial shipping being merged and becoming part of MPA was also discussed. However, the regulatory or technical aspects already involved three entities – Directorate of Shipping, Marine Department, and the National Maritime Board. It was decided that merging three outfits into a new single statutory board would already be a handful. It was thought then that adding commercial shipping to the equation would have overloaded the nascent statutory board.

Commercial shipping, therefore, remained under Trade Development Board (TDB).

04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY

Q: What was your role at that time?

At that time, I was Deputy Chief Executive Officer (CEO) at TDB. Five directorates – International Trading, Shipping, Administration, Trade Policy, and Export Development – reported to me. I, in turn, reported to the CEO.

Because of my background as a marine engineer, and having been involved very heavily in the trading sector, the two directorates that were closest to my heart were International Trading and Shipping. So although all five directorates reported to me, these were the two that I worked more actively on.

So between 1997 and 2002, technical and commercial shipping were split between two entities. TDB was the face of the Government for commercial operations while MPA was the face of the Government for the technical aspects of shipping. Even so, there was always a great deal of coordination between the two agencies.

Q: Who was involved in the coordination, and why was there a need for coordination between technical and commercial shipping?

Ms Tan Beng Tee, who was then TDB's Director of Shipping, and I, represented commercial shipping, and Mr Chen Tze Penn (then MPA Chief Executive (CE)) and Ms Mary Seet-Cheng (then, MPA Director – Policy), represented technical shipping. We would meet every six months to discuss how we could coordinate and cooperate our efforts. That way, both commercial and technical shipping could move together even though we were housed in different organisations.

So while technical and commercial shipping were physically separated, in spirit, we were not. That was why the merger when it came later on turned out to be quite easy – it was because we had been so used to working together for all those years.

Q: When the technical and commercial shipping merged, did you see any change in the mindsets of the people involved?

When technical and commercial shipping finally merged in 2002, one of two things could have happened. We from TDB could have made those in MPA more pro-enterprise, or they could have made us more regulatory-minded.

Fortunately for MPA, the pro-enterprise way happened. I think we have influenced the regulatory side to be more helpful, to the extent that now they work past regular office hours – into the night and even early morning, if necessary. That's why people are now saying that Singapore is one of the few places where if you need something done, the government servants will stay up until 2 or even 3 a.m. to do it for you.



04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY

That's why MPA has won several Pro-Enterprise Panel-Singapore Business Federation awards (which recognise pro-enterprise government bodies). It all starts from the top down, from the CE. Since technical and commercial shipping have been merged into MPA, all the CEs have been very pro-enterprise. I don't think any CE of the MPA can afford not to be pro-enterprise.



Q: So the merger led to the formation of SMF? Why was this so?

It really was in response to calls from the shipping industry for an organisation to undertake the promotional activities that had been done previously by TDB. The industry also wanted an organisation through which they could influence the Government to do what they thought needed to be done to benefit the maritime community here.

Q: Weren't there industry associations, such as Singapore Shipping Association, which did that already?

The difference between SMF and an association that they could form themselves – an industry association – is that our funding comes from the Government. So the industry was saying to the Government, “To ensure that you do the things that we need, and help the maritime community, could you put aside a sum of money every year, and we will decide how to spend that money to work in our best interest?” This is why SMF is a foundation.

And while MPA gives us a sum of money every year, it doesn't decide how the money is to be spent. The SMF Board of Directors does. Initially, we had eight board members because we didn't have representatives from the insurance and port sectors then. Now we do, so we have a total of 10 board members.

The MPA CE is automatically on our board, but he is still outnumbered nine to one because the rest of the Board are from the private sector. In this way, the private sector has a lot of say in what the SMF does. As our mission statement says, we are to serve as the intermediary or bridge between MPA and the private sector.

We have also been fortunate. All the CEs that we've had from MPA have been, and continue to be very supportive.

04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY

**Q: Are there any organisations in Singapore or abroad that are similar to SMF?
Is there a particular organisation that you can liken SMF to?**

I think SMF is quite unique. I don't know of an organisation like SMF anywhere else in the world. It is a pure Singapore invention. Even within Singapore, there is nothing of its equivalent for the other industries.

Look at it this way – TDB supports all industries but has never gotten around to forming a foundation for each industry. I mean you don't see a Singapore Tourism Foundation or a Singapore Manufacturing Foundation.

But because the shipping industry felt that they might be losing some support when commercial shipping was moved to MPA, they suggested that we covered the potential loss by having a foundation to do the things that TDB used to do for them.

Q: It sounds that you were almost like a TDB substitute? Would you consider SMF a kind of an expanded TDB?

TDB, by its nature as a trade promoter, was more interested in export development, and business growth. Over the years, SMF's role has grown so much – beyond what TDB used to do. We have moved into new areas in response to suggestions from our board members and the shipping community.

Q: Could you give some examples of this expanded role?

One of our biggest undertakings is the Sea Asia event, which is held every odd year. The Government decided that as an international maritime centre, Singapore needed a physical manifestation of its status, so we had to have a physical activity that everybody would associate with Maritime Singapore. As a result, Sea Asia was launched in 2005, and we are now well into our seventh show which will take place next year in 2019.

04: INTERVIEW

CHAMPIONING THE MARITIME INDUSTRY

Q: So SMF itself organises this event?

No, no. SMF itself is actually quite small. We have only 12 people in our organisation. This type of event is really large – that’s why it can only be held every two years.

What we did was to appoint a seasoned maritime conference organiser from the UK, Seatrade (now known as Seatrade UBM), to organise and market the event. We decided on an experienced organiser because we wanted them to be able to hit the ground running. I think we have made the right decision.

We started out as the No. 11 maritime show in size in the world, and I am happy to say that we are now No. 5. Not only that, we are now firmly established as *the* maritime event in Asia. Our success, I think, also comes from the fact that at the outset we decided to differentiate ourselves from all the other shows by having a very good conference segment.

If you have a good conference, and you’ve got excellent speakers, all the top maritime leaders would want to come and listen. When the maritime leaders come to listen, they will attend the exhibition. They will then attract exhibitors who want to get them to see what they are exhibiting. So it’s a virtuous cycle.

Q: Aside from Sea Asia, what else is SMF doing that is new and different from TDB’s traditional function?

In addition to Sea Asia, we have also gone into talent development. We established our Maritime Singapore Connect portal, which is a bridge linking maritime employers, industry associations, the government, and schools, with students, jobseekers, and the general public. We administer the MaritimeOne scholarships on behalf of our members who sponsor these awards. In total, we have given out more than 308 scholarships. We have also developed commercial shipping forms, and a maritime arbitration centre – the Singapore Chamber of Maritime Arbitration (SCMA).

Q: It does look like the depth and breadth of SMF’s roles, and responsibilities have grown exponentially over the years? Do you see this evolution continuing, and what would the SMF of the future look like?

In the years ahead, I think SMF’s role will continue to evolve. How exactly, I cannot say. But we have always been very open to suggestions from our board, and the maritime community.

We just got to keep looking, keep thinking, and keep trying. Some will succeed, some will not. We will keep the successful ones, and drop the unsuccessful. The important thing is that we keep on working to ensure we come up with programmes that will attract the best people into the industry, and that we keep pushing Maritime Singapore to the world.



LOOKING AT 2018

Maritime
Outlook Forum



World Maritime
University Study Visit



05: HIGHLIGHTS

LOOKING AT 2018



2nd Maritime Administrators' Forum



MPA Academy Alumni Gathering



5th Port Management Programme



8th Maritime Public Leaders' Programme



Regional Workshop on Safety Management Systems and the International Safety Management (ISM) Code at Port Moresby, Papua New Guinea

05: HIGHLIGHTS

LOOKING AT 2018



Regional Workshop on the Implementation of the ISM Code



Fireside Chat with Mr Ooi Boon Hoe, CEO of Jurong Port Pte Ltd and Mr Terence Moo, Chief Strategy Officer of Jurong Port



RSIS-MPA Distinguished Lecture by Mr Koji Sekimizu, Secretary-General Emeritus of IMO and RSIS-MPA Distinguished Visiting Fellow



Centre for Liveable Cities 13th Executive Development & Growth Exchange (EDGE)



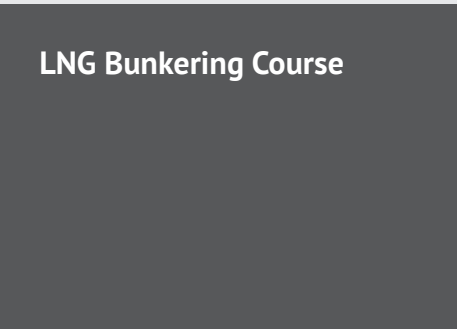
Blockchain Sharing Session

05: HIGHLIGHTS

LOOKING AT 2018



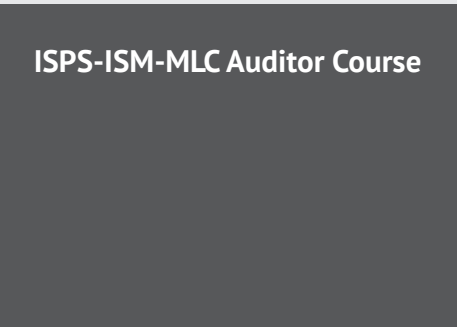
Sharing Session
on Startups



LNG Bunkering Course



Internal Auditor International
Safety Management Code/
ISO 9001 Course



ISPS-ISM-MLC Auditor Course



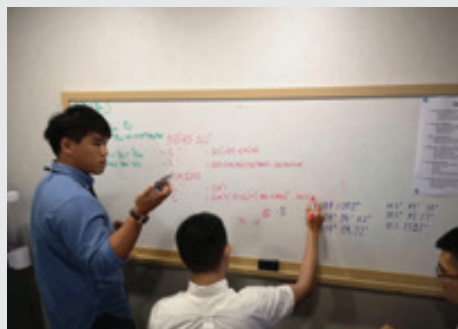
International Law of
the Sea Course

05: HIGHLIGHTS

LOOKING AT 2018



International Hydrographic Organization Cat 'B' Course



East Asia Hydrographic Commission Basic Cartography & Hydrography Cat 'C' Course



East Asia Hydrographic Commission Workshop on Satellite Derived Bathymetry (SDB) and Light Detection and Ranging (LIDAR)



Technical Workshop on Aids to Navigation



Aids to Navigation Manager Training

05: HIGHLIGHTS

LOOKING AT 2018



**Ship Security
Officer Course**



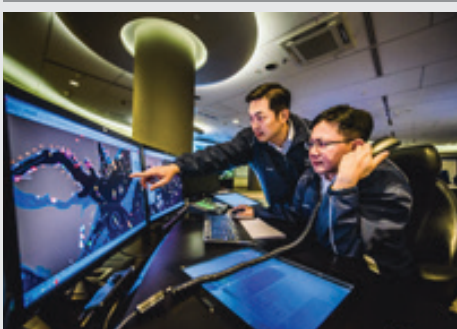
**Port Facility
Security Course**



**Ship Structure and
Stability Course**



**Design of Maritime
Structures Course**



**Vessel Traffic Service
Refresher Training Sessions**

06: CONTRIBUTION

UNDERSTANDING AND DELIVERING VALUE – THE CASE FOR THE THIRD-PARTY SHIP MANAGER

By Professor Photis M. Panayides

MPA Visiting Professor in Shipping Economics from National University of Singapore Professor Photis M. Panayides shares with HORIZON the key ingredients in driving performance improvements in ship management.

Ship management is the shore-based and shipboard management of the day-to-day operations of a vessel. Ship owners either manage their own ships in-house or outsource to a third-party specialist. The idea behind outsourcing is to capitalise on the expertise of and the economies of scale offered by an independent ship manager.



06: INTERVIEW

UNDERSTANDING AND DELIVERING VALUE – THE CASE FOR THE THIRD-PARTY SHIP MANAGER

Shipmanagement companies undertake functions such as crewing, technical and commercial management, the scheduling of vessel repair and maintenance, among others. Current reports place the number of ships under third-party shipmanagement to be around 10,000, with 45 per cent of them under technical only management, and the rest under full management (crew and technical management). In addition, Maritime Industry Knowledge Centre¹ estimates that around a quarter of the world's internationally trading fleet relies on services provided by third party managers in whole or part.

SINGAPORE AS A SHIPMANAGEMENT CENTRE

Given the importance of third-party ship managers to the industry, the presence of a strong shipmanagement core is vital to Singapore as an International Maritime Centre (IMC). After all, a true IMC offers a comprehensive range of maritime ancillary services to provide a one-stop hub for all port, shipping and maritime activities.

Singapore, which already has a significant number of reputable ship managers, continues to draw more to its shores.

*Fairplay*² reported in April, "Singapore continues to attract shipmanagement companies from all over the world, with an almost constant flow of new and existing ship managers setting up or expanding their operations in the city state."

For example, Wilhelmsen Ship Management moved its global head office from Kuala Lumpur to Singapore in the first quarter of 2018, citing Singapore's advanced digitalisation facilities and networks.

Mr Claes Eek Thorstensen, president of Thome Group, told *Fairplay* that the main advantages of a Singapore base are the maritime cluster, the ease of doing business, communication and logistics, easy access to vessels, good available talent pool, and the ease in recruiting foreign expertise to Singapore. While increasing costs pose a challenge, this is mitigated by moving support services overseas, digitalisation, and working smarter and more efficiently.

¹ <https://www.maritimeinfo.org/en/Maritime-Directory/third-party-ship-managers-1>

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UNDERSTANDING AND DELIVERING VALUE – THE CASE FOR THE THIRD-PARTY SHIP MANAGER

Mergers and Acquisitions

Through the services they provide, shipmanagement companies seek to deliver value to their customers – the shipowners. In particular, they recognise the benefits of large scale and synergy to deliver this value. Towards this goal, the shipmanagement industry has been undergoing a period of consolidation in the form of mergers and acquisitions.

- Marlow and Columbia Ship Management – September 2017
- V.Group's acquisition of Graig Ship Management – August 2017
- Advent International's acquisition of V.Group – December 2016
- V.Group's acquisition of Selandia Group – November 2016
- V.Group's acquisition of Bibby Ship Management – March 2016
- Anglo-Eastern and Univan merger – August 2015

Following this consolidation, this industry of more than 200 companies now has the top 20 companies managing fleets of at least 100 ships or more.

Managing Costs and Operational Reliability

The need to reap economies of scale is linked directly to the necessity to manage costs and deliver value. Indeed, many customer requirements focus on issues of cost and operational reliability, thus guiding the development of performance measures for them. This is also reflected in the development of the industry standards for measuring and managing performance such as the TMSA or the BIMCO Shipping KPI system.

As such, managers have somewhat limited options in terms of either focusing on either operational or accounting performance. Such systems appear to be independent of measuring overall business performance despite the link between operational and business performance.

Defining Value

Ship managers are mindful that it is their customers that define value. They know that shipowners, in handing over a high-value asset, would demand:

- Asset preservation,
- Operational reliability to maximise the earning period,
- Cost efficiency,
- Risk reduction,
- Quality, time-saving and simplified ship operation procedures,
- Provide optimal operational solutions,
- Respond to their requests, and
- Own and develop the necessary resources and capabilities.

06: INTERVIEW

UNDERSTANDING AND DELIVERING VALUE – THE CASE FOR THE THIRD-PARTY SHIP MANAGER

Creating Value

To meet these demands, ship managers have introduced various value-creating innovations. The most impactful of which involves the use of big data analysis and real-time information exchange to facilitate management decision-making.

For instance, by leveraging on the Internet of Things, where different machines, devices and equipment are connected and communicate data to each other, information from various sources can be captured seamlessly. Big data analytics can then be used to reduce operational costs, improve vessel performance, and undertake green initiatives.

Through such digitisation, shipmanagement companies can focus on one or more of the following areas to deliver performance improvements.

- Fuel consumption: Data can be collected using sensors to determine under what conditions a vessel would be able to achieve optimal fuel consumption.
- Route optimisation: Ships tend to sail following specific routes, particularly in liner shipping. Big data analytics and optimisation techniques can be applied on relevant data (speed, consumption, weather, sea state) to chart out an optimal route.
- Operational efficiency: Using data collected on ship and port-related operations, marine operations can be optimised through the efficient management of staff time, and the identification and minimisation of time-consuming operations.
- Maintenance prediction: Sensors can be used to collect data. Combining this data with advanced predictive analysis, maintenance tasks can be prioritised and planned to take place at the optimum moment, preventing delays, reducing time on maintenance, and increasing efficiency.

However, challenges remain in the use and analysis of big data. Given the mountain of data generated and collected in the daily operations of a ship, ship managers have to separate the digital wheat from the digital chaff. They need to identify what particular data are important, and then use that data effectively to enhance operational performance and deliver optimal results.

² <https://fairplay.ihs.com/commerce/article/4300241/singapore-remains-magnet-for-ship-management>

06: INTERVIEW

UNDERSTANDING AND DELIVERING VALUE – THE CASE FOR THE THIRD-PARTY SHIP MANAGER

The Way Ahead

Clearly, the creation, delivery and realisation of value is critical in driving performance improvements in ship management. After all, ship managers are being entrusted with high-value assets. They must therefore show that they are not just preserving but also creating value for their customers. It is imperative then that value drivers are incorporated in the performance measurement approach of the ship management company.

Ultimately, shipmanagement companies need to have a clear vision, mission and strategic goals that incorporate the ability to create and deliver value to customers and stakeholders, including employees and communities. This can only be accomplished by adopting a top-down, rather than the traditional bottom-up, approach in measuring performance.

The views and opinions expressed in this article are those of the author and does not necessarily reflect the policy or position of the Maritime and Port Authority of Singapore (MPA).

Professor Photis M. Panayides

Photis M. Panayides is Professor in Shipping and Maritime Economics at the Cyprus University of Technology. Prof. Panayides has 23 years of experience in teaching and research in the fields of maritime economics, ship management, management of maritime companies, and chartering. He has held appointments or had research collaborations at The University of Plymouth, The Hong Kong Polytechnic University, and the National University of Singapore, among others.

Prof. Panayides has authored four books, namely Principles of Chartering 3rd edition (2018, available from Amazon.com), International Shipping Finance (2002); Professional Ship Management: Marketing and Strategy (2001); and International Ship Management: Market Analysis and Strategic Opportunities (1999). He has edited Routledge Handbook of Maritime Management (2018), Shipping Operations Management (2017), Maritime Logistics: Contemporary Issues (2012), and Maritime Logistics: A Complete Guide to Effective Shipping and Port Management (2015).

He is contracted to author the book Shipping Performance Management (Series: Lloyd's List Practical Guides, 2018).

He has published several scientific journal papers in such journals as Transportation Research Part E, Maritime Economics, and Logistics and Maritime Policy and Management, among others.

Prof. Panayides served as Vice-President of the Board of Directors of the Cyprus Ports Authority (2009-2016), and on the Council of the International Association of Maritime Economists (2004-2010). He has also undertaken business consulting with several shipping and ship management companies.



07: PEOPLE

ENSURING THINGS ARE SHIPSHAPE AT SEA

By Chris Chua

Marine surveyors play an integral role in implementing and enforcing national laws and regulations, including applicable International Maritime Organization (IMO) instruments which Singapore is a party. The MPA Academy offers courses to staff from the Maritime and Port Authority of Singapore (MPA) to equip or hone their necessary competencies to excel in their jobs. Their training is based on the Key Domain Expertise (KDE) framework which identifies the key technical competencies and training required for surveyors to discharge their duties and responsibilities effectively. The technical training programmes that were identified include the Internal Auditor ISM-ISPS-MLC course, the International Law of the Sea course and Liquefied Natural Gas (LNG) Shipping Familiarisation course, which were facilitated by the MPA Academy.

One graduate of these courses is marine surveyor Biondi Phua from the Flag State Control (FSC) department, who gave us an inside look into his training and experience in ensuring safety and regulatory compliance for Singapore-flagged ships.

07: PEOPLE

ENSURING THINGS ARE SHIPSHAPE AT SEA



Q: What made you pursue a scholarship and career in MPA?

I found the MPA scholarship interesting as it involved ports and shipping, and this was an area I wanted to explore. With the scholarship, I had the privilege of studying overseas in the United States. After getting my degree in marine engineering, I joined MPA as a marine surveyor in the Port State Control (PSC) department, before transferring to the FSC department.

Q: What do you do as a marine surveyor?

We have several levels of responsibilities. First, we conduct inspections of Singapore-flagged ships to verify that they are complying with the international maritime conventions and national standards required of them. This includes ensuring that the ship's safety equipment, machinery and systems are operated and maintained properly in accordance with their onboard Safety Management Systems. Second, we carry out technical surveys and audits for small passenger craft to verify their safe operating condition, and issue relevant safety certificates and permit-to-operate licenses to these passenger craft.

Third, we also handle technical queries, including assessment of exemptions and dispensations when ships are not able to fully comply with the regulations based on applicable provisions in the international instruments. Finally, being a responsible and proactive Member State of the IMO, we also undertake to contribute to formulation of technical policies that govern international shipping at the IMO and provide training and technical expertise as part of IMO's third country technical cooperation programmes.

07: PEOPLE

ENSURING THINGS ARE SHIPSHAPE AT SEA



Q: What does it take to be a good marine surveyor?

Importantly, you must not mind going out into the field – for example, to ships in the anchorages as well as ports, terminals and shipyards – and getting your hands dirty at times. You need to have some degree of physical fitness as the job involves climbing pilot and accommodation ladders and entering the ships' tanks. Personality-wise, you need to be able to relate and connect well with people, being firm and tactful yet understanding.

Q: What are the challenges you face in your job?

As shipping is an international business, sometimes the shipping companies can be very demanding in wanting us to issue them with an exemption or dispensation immediately, when their ships encounter problems in other ports. In such cases, we have to be firm and assess the situation objectively, so as to find an appropriate way to resolve the issue. There are occasional times when very senior and experienced shipboard crew interact with you but you would have to hold your own ground, and it can be slightly challenging or intimidating, especially when you are alone.

Q: What is the most interesting experience in your job so far?

We had a shipboard attachment programme for graduates without sailing experience to gain hands-on experience sailing together with the crew of an ocean-going ship. My boss also took the initiative to bring us to visit and learn more about the different types of ships in the local shipyards. This allowed us to see the ships being prepared for surveys, inspections and repairs, which was something that I don't get to see normally during my inspections, as the ship is already closed up and operational. These were very valuable learning experiences, giving me a deeper appreciation and understanding of ships, their operations and a more holistic view of the industry.

07: PEOPLE

ENSURING THINGS ARE SHIPSHAPE AT SEA



Q: What is your involvement in formulating regulatory policies at MPA?

As a marine surveyor, I get to formulate certain technical policies governing Singapore-flagged ships. For example, I was involved in a policy to enhance the inspection and safety regime of life rafts for Singapore ferries following an incident along the Singapore-Batam route. On an international and regional level, I am privileged to attend IMO meetings and ASEAN maritime transport meetings to shape certain technical policies in the interest of maritime safety.

Q: How is the environment at work?

It's a favourable environment. I have smart and supportive colleagues, and there is quite a good and healthy culture of knowledge sharing and collaboration. We also get to bond over futsal sessions organised by our division, which are very enjoyable.

Q: What do you like most about your job?

I like that when I contribute to the formulation of policies, I can see these policies being implemented on the ground when I'm onboard the ships for inspection. It is quite fulfilling for me to know that safety standards are improved for the shipowners, operators, crew and for the public good. I also like that my job allows me to be outdoors and isn't deskbound.

07: PEOPLE

ENSURING THINGS ARE SHIPSHAPE AT SEA

Q: How has your training benefitted you in your work?

The training has helped me to acquire new knowledge and skill sets and keep me updated on certain new regulatory developments, which is important for me in staying relevant and especially to promote and safeguard the Singapore Quality Flag status.

Q: Where do you see your career going in the future?

I hope to continue honing my technical skills and knowledge in the Shipping Division and perhaps have more opportunities to contribute to policy-making and the international relations functions of MPA. Having strong technical knowledge and competency is important. In the future, I hope to progress to a supervisory or managerial role where I can impart and share my knowledge with new marine surveyors.





BLOCKCHAIN INSIGHTS, INITIATIVES AND IMPLEMENTATIONS

By Chris Chua

26 June 2018 saw 180 participants across the shipping industry coming together for the inaugural Maritime Blockchain Forum organised by the MPA Academy. Offering a platform for leading blockchain practitioners to share initiatives and learning points to foster experimentation and collaboration, the event featured three speakers: Mr Francois Decorps, Head of IT Strategy at APL; Mr Patrice Choong, Director of Sandbox at the Ministry of Education; and Mr Richard Koh, Chief zTechnology Officer at Microsoft Singapore. The presentations were followed by a panel discussion joined by Mr Gaurang Torvekar, CEO of Indorse and Mr Chua Thian Yee, Mentor at NTUitive.

Harnessing Blockchain to Streamline the Trade Documentation Process

Kicking off the forum was Mr Francois Decorps, Head of IT Strategy at APL, who highlighted APL's use of blockchain in the supply chain documentation process. The initiative saw APL partnering with AB InBev, Keuhne + Nagel, a European customs authority and Accenture to form a consortium to test a bill of lading (B/L) blockchain solution in 2017. Besides addressing inefficiencies in the paper documentation and Electronic Data Interchange process, the pilot focused on tackling complexities arising from the trust boundaries between the multiple parties involved in the shipment process. The pilot tested 12 B/L transactions, and yielded various benefits, including an 80% reduction in data entry, lower penalties for customs compliance and a more streamlined cargo release process. Moving forward, APL will be partnering with other participants to co-create the IT blueprint and build the blockchain product for launch.

08: FORUM

BLOCKCHAIN INSIGHTS, INITIATIVES AND IMPLEMENTATIONS

Authenticating Educational Certificates through Blockchain

The second speaker, Mr Patrice Choong, Director of Sandbox at the Ministry of Education, discussed how Ngee Ann Polytechnic (NP) employed blockchain to verify the authenticity of its graduates' certificates. NP initiated a pilot project to establish a digital certificate platform using blockchain, which allowed users to verify the certificate themselves. In the second phase of the project, NP embarked on an inter-agency blockchain pilot, in collaboration with GovTech and Skills Future SG and in partnership with 10 institutions, to develop a one-stop service to verify students' learning records. Following this, NP will focus its efforts on deploying its blockchain solution for educational certificates in the various institutions.



Facilitating Interoperability of Blockchain Engines

In the final presentation, Mr Richard Koh, Chief Technology Officer at Microsoft, shared insights about the importance of an interoperability framework for blockchain engines. Businesses face several obstacles in embracing blockchain technology, ranging from the huge investment costs and development time needed, to the fact that existing blockchain standards are not suited for enterprise needs. Beyond helping firms resolve these pain points, Microsoft assists businesses in standing up their IT infrastructure and deploying the blockchain technology of their choice, so that they can focus on the business logic of the project. To this end, Microsoft's Coco framework facilitates scalable and confidential blockchain networks, while Microsoft's Azure Blockchain Workbench provides the scaffolding for companies' easy deployment of an end-to-end blockchain solution.

08: FORUM

BLOCKCHAIN INSIGHTS, INITIATIVES AND IMPLEMENTATIONS



Panel Discussion

At the panel discussion moderated by Mr Kenneth Lim, Chief Technology Officer of MPA, the speakers were joined onstage by Mr Gaurang Torvekar, CEO of Indorse and Mr Chua Tian Yee, Mentor at NTUitive to address questions on topics ranging from the application and benefits of blockchain technology, to project team organisation for blockchain, legal validity and standards development for blockchain, to cybersecurity and technology partners selection.

There are benefits of using blockchain technology in businesses. Mr Torvekar said that blockchain provides a common standard, streamlines processes and provides a trusted platform for counterparties. Mr Koh added that a potential good use case for blockchain is when data needs to cross trust boundaries across different organisations in an industry. Mr Decorps said that modern methods such as blockchain provide a one-stop solution that is readily accessible

Replying to a question about 3D printing using blockchain, Mr Chua Tian Yee, Mentor at NTUitive, said that linking the product designer, printer and customer together in a blockchain infrastructure enabled a smart contract to be executed upon order placement, ensuring that the customer got the right product with the correct specifications.

When queried about how companies can kick-start blockchain capabilities, Mr Decorps said it was important for firms to focus on what they want to achieve from a business standpoint and build trust between companies before starting the blockchain project. Mr Choong added that it was key to learn by doing.

About validity issues on blockchain, particular for Bill of Lading, Mr Torvekar said that a smart contract is legally valid if it is accepted by both parties, but the legal complexity arises when blockchain projects are across multiple jurisdictions. Mr Decorps added that by pushing these kinds of initiatives, governments will start exploring how to make blockchain transactions legal.

08: FORUM

BLOCKCHAIN INSIGHTS, INITIATIVES AND IMPLEMENTATIONS

As to when the maritime industry can be expected to overcome the legal validity issues of Bill of Lading, Mr Koh said he believes that the technology is running ahead of the legal considerations. Mr Torvekar added that there are ongoing initiatives to develop International Organization for Standardization (ISO) standards for blockchain technologies and look into whether smart contracts are legally binding and compliant with regulations on maritime supply chain issues. Mr Andrew Tan, Chief Executive of MPA, said that it is key to involve the legal aspect when looking at blockchain at the international level and that with the confluence of developments and technology in today's context, countries may be receptive to considering such legislation.

When asked about how companies can go about selecting suitable blockchain solution providers, Mr Decorps said that it was more important to focus on the process of constructing the blockchain project together with the technology partner. Mr Choong said that it was crucial for companies to choose a suitable vendor that meets their needs, learn from it and move ahead. Mr Koh added that Microsoft focuses on the business challenges that companies want to solve, ensuring that their technical needs are well taken care of, while giving customers a choice of distributed ledger technology.

In response to a question about what companies can look forward to regarding standards development for blockchain in Singapore, Mr Torvekar said that the Singapore blockchain committee for technical standards is working on standardising terminology, developing standards for the smart contract system and addressing security and privacy issues.

Rounding off the forum, Mr Andrew Tan, emphasised that MPA will encourage more blockchain pilots to obtain more data points and identify issues that need to be addressed through the technical standards committees. At the same time, MPA will also work together with the maritime industry to develop an interoperable framework.



09: UPCOMING EVENTS

BY INVITATION

World Maritime University Study Visit for MSc students specialising in Port Management

Venue: MPA Academy
Date: 4 – 8 March 2019
Participants: WMU MSc students specialising in Port Management

World Maritime University Study Visit for MSc students specialising in Shipping Management and Logistics

Venue: MPA Academy
Date: 21 – 24 May 2019
Participants: WMU MSc students specialising in Shipping Management and Logistics

9th Maritime Public Leaders' Programme

Venue: MPA Academy
Date: November 2019
Participants: Senior maritime officials

Maritime Outlook Forum

Venue: MPA Academy
Date: January 2019
Participants: Maritime Industry

3rd Advanced Maritime Leaders' Programme

Venue: MPA Academy
Date: 7-12 April 2019
Participants: Senior maritime officials

6th Port Management Programme

Venue: MPA Academy
Date: August 2019
Participants: Port masters, harbour masters, middle management personnel

FOR MPA STAFF

Marine Officers

ISO9001 Course: Q1 2019
International Ship and Port Facility Security-International Safety Management course: Q1 2019
Port Facility Security Officer Course: Q1 2019
Maritime Search and Rescue Course: Q2 2019

Vessel Traffic Officers

Vessel Traffic Service Operator Course: Q1 2019
Vessel Traffic Service Supervisor Course: Q2 2019
OJT Instructor Course: Q4 2019

09: UPCOMING EVENTS



About Us

As the training arm of the Maritime and Port Authority of Singapore (MPA), the MPA Academy was repositioned in 2014 to be a full-fledged academy with a dedicated premise with a focus on global maritime leadership training. The academy's vision is to be a global learning centre for maritime and port administration. The academy's mission is to enhance the specialist skills and knowledge of MPA officers and to conduct flagship training programmes for overseas port and maritime officials, including supporting the training needs of the International Maritime Organization (IMO) as a Council member. The MPA Academy's dedicated facility is located at PSA Building and was officially launched in October 2015.

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