

HORIZON

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OVERCOMING CHALLENGES, SEIZING OPPORTUNITIES

As the COVID-19 pandemic approaches its two-year mark, many countries are starting to develop a “new normal” of living with the virus. In line with increased rates of vaccination against the virus, countries are gradually lifting domestic restrictions and implementing international travel corridors. The global response to the different phases of the COVID-19 pandemic is testament to the resilience and resourcefulness of countries all over the world, often having to adapt and respond quickly to dynamic situations. At MPA Academy (MPAA), we remain committed to the important task of providing capacity building amidst the COVID-19 pandemic, while making adaptations and transformations to adjust to the ever-changing global situation.

The Feature Article highlights Singapore’s efforts in continuing to enhance capacity building through an extensive and ever-growing range of quality training programmes. Despite the challenging conditions resulting from the COVID-19 pandemic, Singapore continues to ramp up its capacity building efforts for the global maritime community. These efforts include Singapore’s commitment to pledge technical assistance to IMO Member Countries through a five-year enhanced technical cooperation and training package, expanding its cooperation with the World Maritime University, and boosting global leadership training through MPAA’s flagship programmes.

This issue features an article on the Single Window for Facilitation of Trade (SWiFT) Project, which is one of the initiatives under the aforementioned five-year enhanced package. Jointly launched by MPA and IMO in March this year, the SWiFT Project commenced its final pilot phase in the Port of Lobito in Angola on 15 November 2021. Under the pilot project, Angola will be advised on the requirements to

implement a Maritime Single Window (MSW) system. The Port of Lobito will also be provided with a functional MSW software, IT services, and training. The pilot will be supported by Singapore via in-kind contributions and by the IMO via the Integrated Technical Cooperation Programme (ITCP).

In this issue of Horizon, we look at some of MPAA's experiences in adapting and transforming our flagship programmes, which are traditionally conducted in-person, to a virtual format. It is our hope that the sharing of our challenges and learning points would be useful for those in other ports and maritime administrations who are undergoing similar experiences due to the ongoing COVID-19 pandemic.

We are pleased to publish an important piece by Mr Koji Sekimizu, Secretary-General Emeritus, IMO, RSIS-MPA Adjunct Senior Fellow and MPAA Senior Advisor, where he shares his thoughts on enhancing maritime governance during times of crisis. He highlights the COVID-19 pandemic and climate change as two crises currently faced by international shipping, and shares his views on how to handle these crises.

Mr Ong Kim Pong, Regional CEO of Southeast Asia, PSA International, and MPAA Senior Adjunct Fellow, also contributed a valuable article on PSA Singapore's experiences in overcoming challenges and seizing opportunities. He highlights the impact of the COVID-19 pandemic on global supply chains, and elaborates on the various measures that PSA has taken to overcome this challenging period.

In Highlights, we focus on the Industry Forums on Electronic Bills of Lading (eBLs) jointly organised by MPA's Innovation, Technology, and Talent Development (ITTD) Division and MPAA in March and June 2021. A wide range of stakeholders, including Allen & Gledhill, essDOCS, Ocean Network Express (ONE), Infocomm Media Development Authority (IMDA), Wave BL, MSC Mediterranean Shipping Company, #dltledgers, and Standard Chartered Bank (SCB), shared their experiences on starting and scaling-up eBL usage in cross-border trade. Some current challenges around digitalising eBLs include the lack of legal recognition for eBLs and the need for standards and interoperability in order to scale up adoption. This requires a concerted effort across the supply chain where key players, such as the shippers, carriers, banks and traders come together to do so.

We hope that you will enjoy reading this issue of Horizon. If you have any comments or suggestions for future issues, please send us an email at MPA_Academy@mpa.gov.sg.

We wish you safe and well.

Tan Suan Jow
Dean, MPA Academy

HORIZON

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02
FEATURE

ENHANCING CAPACITY BUILDING DURING THE GLOBAL PANDEMIC

BY RAHITA ELIAS

Regional Workshop on the Implementation of the International Safety Management Code, 5–9 Nov 2018, Singapore

The need for capacity building has become even more pressing as the COVID-19 pandemic has created new challenges for the global maritime community. Through an extensive and ever-growing range of quality training programmes, Singapore has been supporting and continues to support IMO's efforts to equip its Member States with the necessary capabilities and expertise to promote safe, secure and efficient shipping on clean oceans despite the pandemic.

Singapore continues to ramp up its capacity building efforts for the global maritime community despite the challenging conditions resulting from the COVID-19 pandemic. Underscoring its steadfast resolution to build capacity within the maritime industry, the country launched a five-year enhanced technical cooperation and training package for the International Maritime Organization (IMO) and its Member States in 2018.

More technical assistance to IMO Member countries

The US\$5 million package comprises fellowships, scholarships, workshops, and courses to boost both capacity building and human resource development. The package plays a major role in Singapore's capacity enhancing efforts.

The package builds on the Singapore-IMO Memorandum of Understanding on Third Country Training Program (TCTP) signed in 1998 with the IMO. At that time, the MOU was the first of its kind

in institutionalising a Member State's commitment to the IMO's Integrated Technical Cooperation Programme (ITCP). The training programmes conducted under the MOU complement the ITCP that aims to equip developing countries with the capabilities and expertise to implement IMO maritime rules and standards.

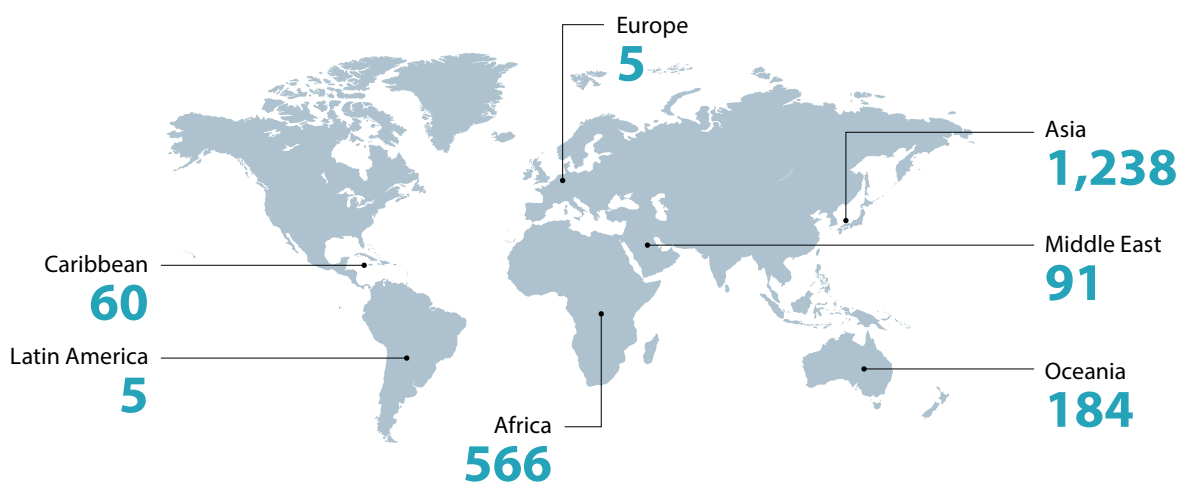
As an IMO Council member, Singapore is committed to supporting IMO by providing relevant value-added courses to IMO Member States under the TCTP MOU.

This commitment is evident since the MOU was extended indefinitely in 2000. The extension marks the continued cooperation between Singapore and the IMO in the provision of quality training to achieve the IMO's objective of promoting safe, secure and efficient shipping on clean oceans.

Since the establishment of the TCTP, Singapore has shared its maritime knowledge and experience with over 2,100 participants from more than 90 countries from Asia, Africa, the Americas, the Caribbean, Europe, the Middle East and the Pacific Islands. Four courses were conducted in 2019, namely:

- ◆ Regional workshop on the Implementation of the IMO Member State Audit Scheme, and Regional Train-The-Trainers Workshop on the delivery of The National Training Course focused on Implementation of IMO Conventions held in Singapore.
- ◆ Regional IMO Workshop on The International Safety Management (ISM) Code conducted in Tanzania.
- ◆ National Workshop on MARPOL Annex V and Port Reception Facilities held in the Philippines.

Breakdown of TCTP participants by region, from 1999 to 2019¹



¹ No TCTP courses have taken place since 2019 due to the COVID-19 pandemic.

Under the enhanced technical co-operation and training package for the IMO, MPA supports the capacity building efforts of the IMO's International Maritime Law Institute (IMLI). Through this cooperation, MPA hosts study visits to Singapore and sponsors two IMLI scholarships.

As the pandemic prevented Singapore from hosting a study visit this year, MPA experts shared their experiences at IMLI's course on the Law of Ports. The course emphasised the importance of IMO's work for the efficient management of ports, and the effective implementation by States of their obligations acquired under international treaties. Course participants included Representatives of States to IMO, senior members of various Maritime Transport Departments and Ports, Heads of Shipping Institutions, and other practitioners in the field.

Another initiative under the enhanced package is assisting countries to develop a digitalised system for electronic exchange of information in ports for ship clearance. The Single Window for Facilitation of Trade (SWiFT) project will allow for the electronic submission of all information required by various Government agencies when a ship calls at a port through one single portal. This pilot project will be implemented through a partnership between IMO and Singapore with Singapore providing in-kind contributions.

All these efforts underscore Singapore's unswerving commitment to supporting the IMO and its Member States to evolve and adapt to the new normal.

Expanded cooperation with WMU

In recent years, Singapore expanded its cooperation with the World Maritime University (WMU) through an MOU signed in April 2019.

WMU Scholarships provided by MPA



WMU-Koji Sekimizu PhD
in Maritime Governance
in Malmo, Sweden



Master of Science in
Maritime Studies at
NTU in Singapore



Master's programme in
Maritime Affairs at WMU
in Malmo, Sweden



Closing Ceremony of WMU Study Visit in March 2019



At Singapore Maritime Gallery during WMU Study Visit in May 2019

As part of this enhancement, the WMU-Koji Sekimizu PhD Fellowship on Maritime Governance was officially launched on 25 June 2019. Two candidates have been offered the Fellowship, which will focus on assessing the role and impact of maritime governance over the past 60 years.

Following this renewed MOU, Singapore doubled the number of study visits hosted for WMU students from one to two. Since

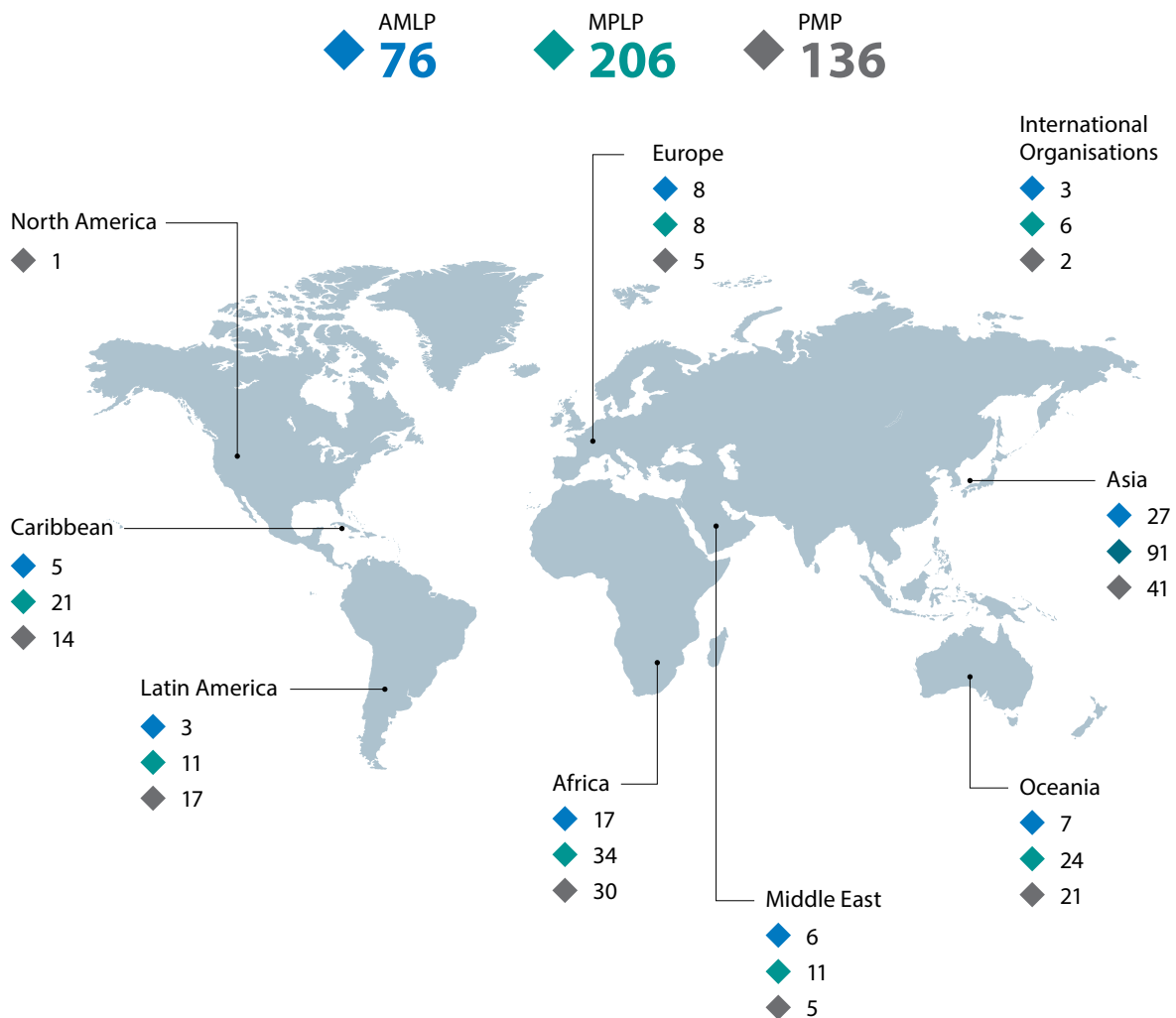
2004, MPA Academy had been hosting the week-long field studies in Singapore for WMU students specialising in Port Management. In 2019, the Academy also started hosting WMU students specialising in Shipping Management and Logistics for their field studies.

Boosting Global Leadership Training

Singapore’s other capacity building programmes for IMO Member States include providing new fellowships for maritime officials from Member States to attend MPA Academy’s three flagship programmes in Singapore.

The three programmes are the Advanced Maritime Leaders' Programme (AMLP), the Maritime Public Leaders' Programme (MPLP), and the Port Management Programme (PMP). This year, they were held virtually due to the COVID-19 pandemic. The sessions were shortened to take into consideration that the participants were in different time zones.

Breakdown of participation at MPAA Flagship Programmes by Region



The AMLP is the apex programme for global leadership training. It is designed especially for senior port and maritime officials at the Chief Executive and Deputy Chief Executive levels. The biennial AMLP, launched in 2015, reinforces the leadership skills of these C-suite officers, helping them develop new capacity to transform their organisations as they grapple with the challenges of an ever-evolving business environment. These challenges have become more serious and complex because COVID-19 has radically changed the world and the way it works. The 4th AMLP was held during Singapore Maritime Week in April this year.

The MPLP is a broad-based executive programme for senior officials in maritime administrations who are at least Director-level or equivalent. Launched in 2011, it covers many topics ranging from port planning and management, shipping economics and maritime law to public leadership and governance. The 10th MPLP was held in March 2021.

The third tier is the PMP that was launched in 2014 and is specially designed for port masters, harbour masters and middle management personnel from maritime administrations or port authorities. Participants gain insights into Singapore's maritime operations and broad planning strategies. The 7th PMP was held from 30 Aug to 2 Sep 2021 in conjunction with the International Safety@Sea (IS@S) Conference.

|| The Port Management Programme addresses current and future possible challenges for the ports in a very sustainable and practical manner. It is gratifying and indeed appropriate to note that Singapore identified the critical importance of IMO's participation in the Port Management Programme as such involvement provides the unique opportunity and platform for IMO officers to interact with participating delegations from a variety of regions and backgrounds for cross-fertilization of ideas on ports, shipping and indeed maritime, on a global level. The Port Management Programme should be enhanced for wider reach and in fact sustained"

— Mr William Azuh, Head (Africa Section), Subdivision for Maritime Development, Technical Cooperation Division, IMO and Participant of the 7th PMP

Singapore plays integral role in training

In all, Singapore has been playing a major role in capacity building for IMO and its Member States. As an IMO Council Member, we will keep on providing and widening the range of quality training to the global maritime community to help IMO achieve its mission of promoting safe, secure and efficient shipping on clean oceans.

03
HIGHLIGHTS

SWiFT PROJECT TAKES OFF

BY MARIA SETIANEGARA

| Source: Port of Lobito

Singapore implements MSW

Singapore recently implemented digitalPORT@SG™, a Maritime Single Window (MSW) system which streamlines the submission of documents for port clearances via a single platform. With digitalPORT@SG™ saving about 100,000 man hours annually, Singapore recognises how the maritime community could benefit from MSWs and is working with the International Maritime Organization (IMO) to support capacity-building efforts to accelerate the digitalisation of ports. This would also help ports to meet their obligations¹ under IMO's Convention on Facilitation of International Maritime Traffic (FAL Convention), while enhancing their efficiency and interconnectivity.

A deep dive into the SWiFT Project

The Single Window for Facilitation of Trade (SWiFT) Project was jointly launched by MPA and the IMO in March 2021 with a call for expressions of interest to participate. The SWiFT Project would help developing countries build their own MSWs, streamline port clearance processes and improve efficiency. In addition, the SWiFT Project also aims to offer technical training and advice on the policy reforms required to successfully implement a MSW and reap its benefits.

¹ Under the FAL Convention, the electronic exchange of information for clearance processes in Contracting Parties' ports became mandatory on 9 April 2019, and the Convention recommends using the Single Window concept.

The Objectives of the SWiFT Project



Support the digitalisation of ship clearance in ports to meet the mandatory requirements of the FAL Convention through a MSW system



Build human, organisational and technological capacity to allow public authorities and trade to benefit from the MSW system



Promote further collaboration and information sharing between maritime transport stakeholders to capture the benefits of the MSW system



Support the efficiency and resilience of maritime transport and ports in recipient countries

Following an overwhelming response from participants, the SWiFT project commenced its pilot phase in the Port of Lobito in Angola on 15 November 2021.



| Source: Port of Lobito

Pilot project – Port of Lobito, Angola

Under the pilot project, Angola will be advised on the legal, policy and institutional requirements to implement a MSW system. Meanwhile, the Port of Lobito will be provided with a functional MSW software and IT services configured to the country's needs and the technical requirements of its port. Training will be offered along with advice on policy reforms required to successfully implement a MSW.

The pilot project will be supported by Singapore via in-kind contributions and by IMO via the Integrated Technical Cooperation Programme (ITCP).

While past initiatives have helped smaller ports with less traffic, work must also be done to support medium-sized ports with higher vessel volumes and more complex operations. In this regard, Singapore will draw from its own experience running digitalPORT@SG™ to help the Port of Lobito implement a MSW that meets its needs.



| Source: Port of Lobito

When the pilot project is completed, Angola is expected to have the following:

- ◆ a fully operational and secure MSW system.
- ◆ a legal and operational framework for the operation and maintenance of the system.
- ◆ technical knowledge and operational know-how related to MSW systems.
- ◆ coordination established among the relevant stakeholders required for the smooth implementation of a MSW System

W The willingness and determination of the Republic of Angola to put forward the Port of Lobito as candidate for the IMO–Singapore pilot project to establish an efficient digitalized system for electronic exchange of information in ports for ship clearance, and consequently being selected, is in my humble opinion evidence that the country has (since opening its Permanent Representation to the IMO in London in 2005) been working very hard to make sure that our presence as a coastal State in the global economy is well noted and accounted for.

Although aware of the challenges and complexities of implementing the project, Angola is ready to listen to and learn under IMO’s and Singapore’s wise guidance. We therefore thank the IMO and Singapore for their trust and confidence in our abilities to deliver what the project will demand.”

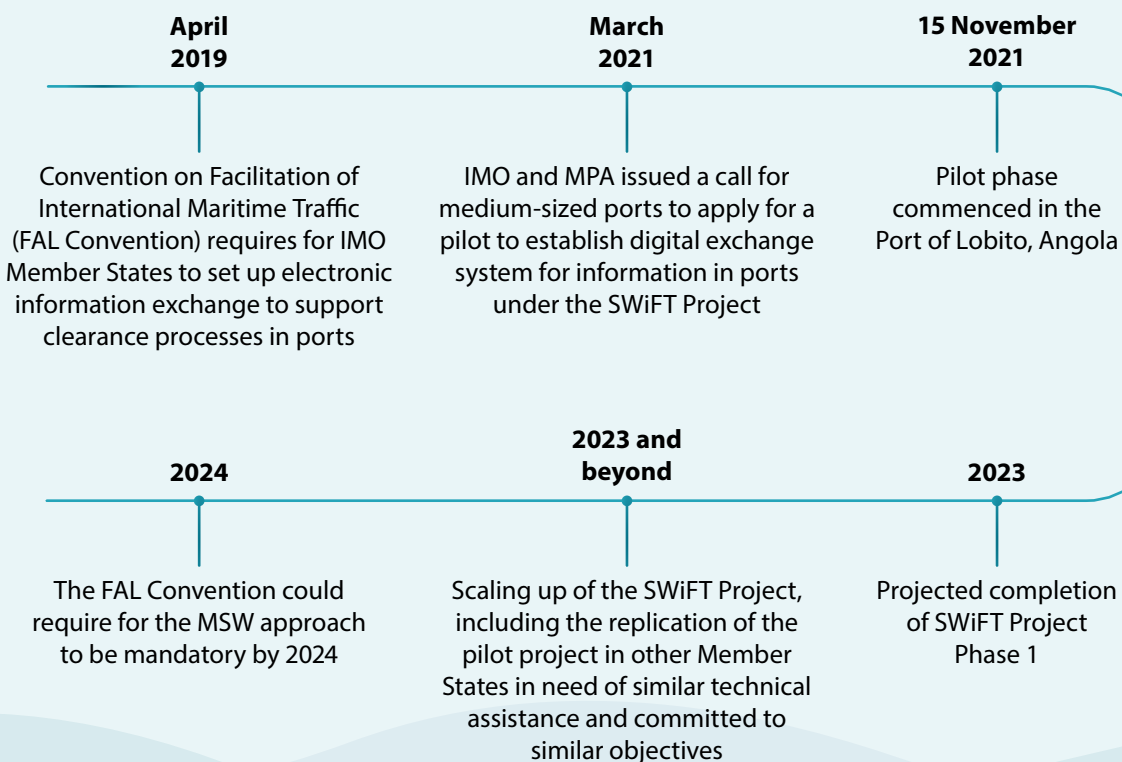
— *Olivio Jacinto, Deputy General Director for Technical Affairs,
Maritime Port Institute of Angola (IMPA)*

Scaling up and sharing MSW experience with more countries

Following the successful completion of the pilot project and proof of concept, the SWiFT Project will transit into Phase 2, where it would be expanded to benefit more IMO Member States and accelerate the implementation of MSW systems across the global maritime community. In the shorter term, Singapore is also looking at how its experience from the pilot project can be of help to others, such as through developing a resource kit containing learning points and guidance on the implementation of MSW systems.

Additionally, the pilot project with Angola will serve as a model for IMO to match donors with Member States for future partnerships for and beyond the domain of digitalisation. Given the interconnectedness of the global supply chain, Singapore recognises that an inclusive approach is key, as it is only when most, if not all ports undergo digital transformation that the full benefits and efficiency gains of digitalisation can be realised by the maritime community.

Timeline of SWiFT Project Milestones and Other Relevant MSW Milestones



04
HIGHLIGHTS

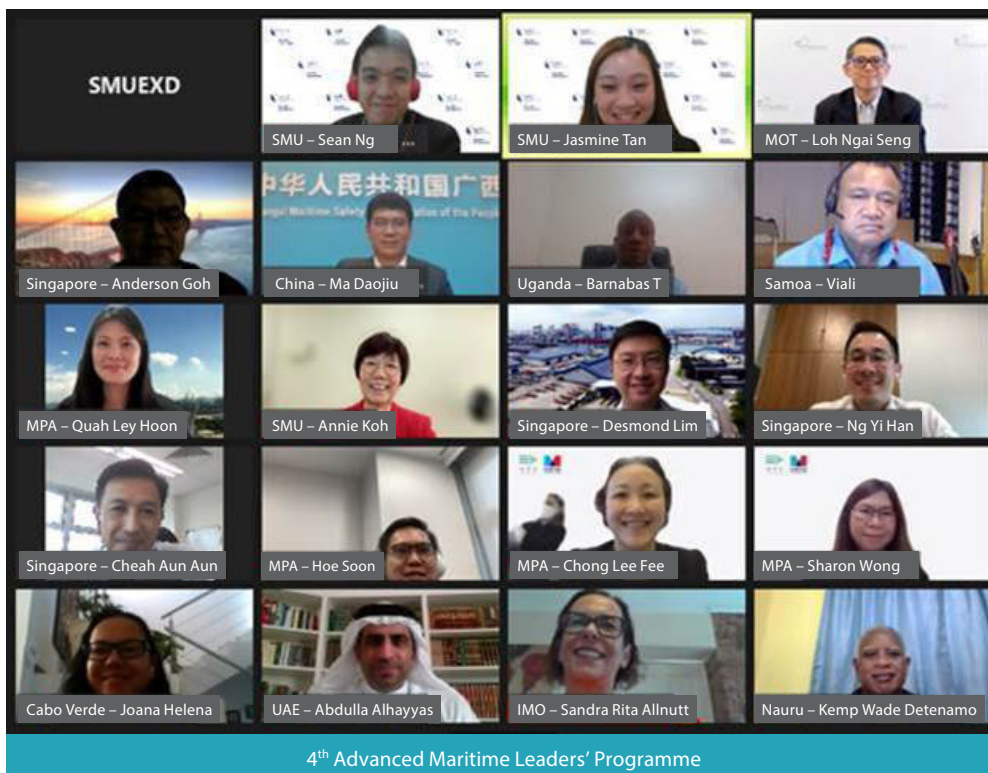
MPAA'S FLAGSHIP PROGRAMMES GO VIRTUAL

BY SHARON WONG

The global pandemic has caused seismic shifts in many aspects of business activities including the shutdown of international travel. The traditional face-to-face instructional methodology of learning came to a standstill with all countries battling the COVID-19 virus. Like most global higher institutes of learning, the Maritime and Port Authority of Singapore Academy (MPAA) had to adopt alternative ways to conduct its flagship programmes and transform its physical classes to virtual ones. Through the use of digital conferencing platforms such as Zoom, the MPAA delivered the 4th Advanced Maritime Leaders' Programme (AMLP), 10th Maritime Public Leaders' Programme (MPLP) and 7th Port Management Programme (PMP) to a total of 60 international maritime officials and administrators from around the world in 2021 till date.

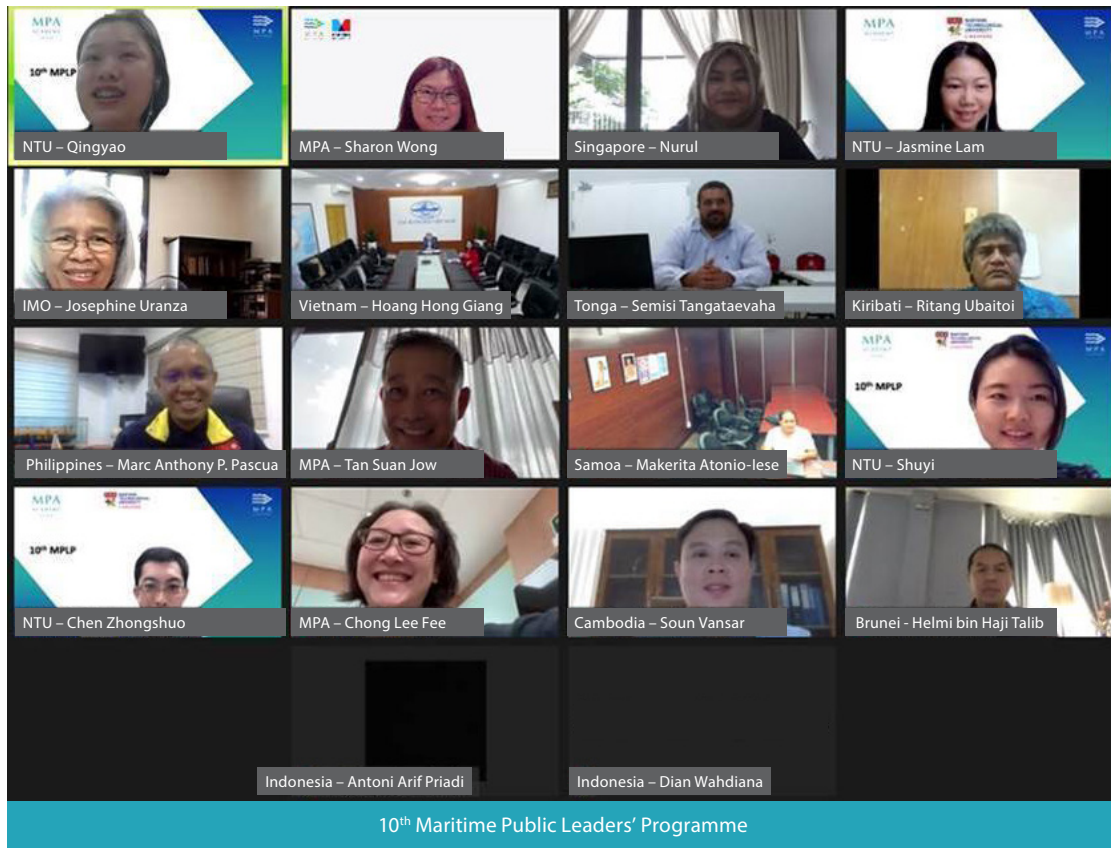
The programmes were not without challenges – a digital divide in technology adoption meant that some participants had less access to stable internet connection. Coupled with differing skills in IT competence, this led to some experiencing inconsistent participation in the remote classes. Where in previous years MPAA used to invite countries from across all regions of the world to participate in the physical programmes, peers in the same flagship programme are now limited to regions within a reasonable time-zone from one another. To minimise on-screen fatigue, instructional time has also been reduced to fewer hours for each programme day.

Despite the unprecedented disruption brought on by the COVID virus, the pandemic has also hastened MPAA's efforts to adapt to new modes of delivering its programmes and engagement of its participants. While we hope for the crisis to subside and for international travel restrictions to be gradually lifted, MPAA will continue to harness digital tools to reach out to IMO member states and ensure that our flagship programmes can be administered effectively in spite of any inherent issues e-learning may bring. MPAA strongly believes that training is essential and we should continue to do that especially in challenging times like these.



“ It was a week of great internship and constant learning with other leaders of the sector from different parts of the world, as well as experience sharing with experts from Singapore and IMO.”

— Mrs Joana Helena Guilherme de Morais de Carvalho, President of the Board of Directors, Cabo Verde Maritime Administration. Alumnus of 4th AMLP held in April 2021



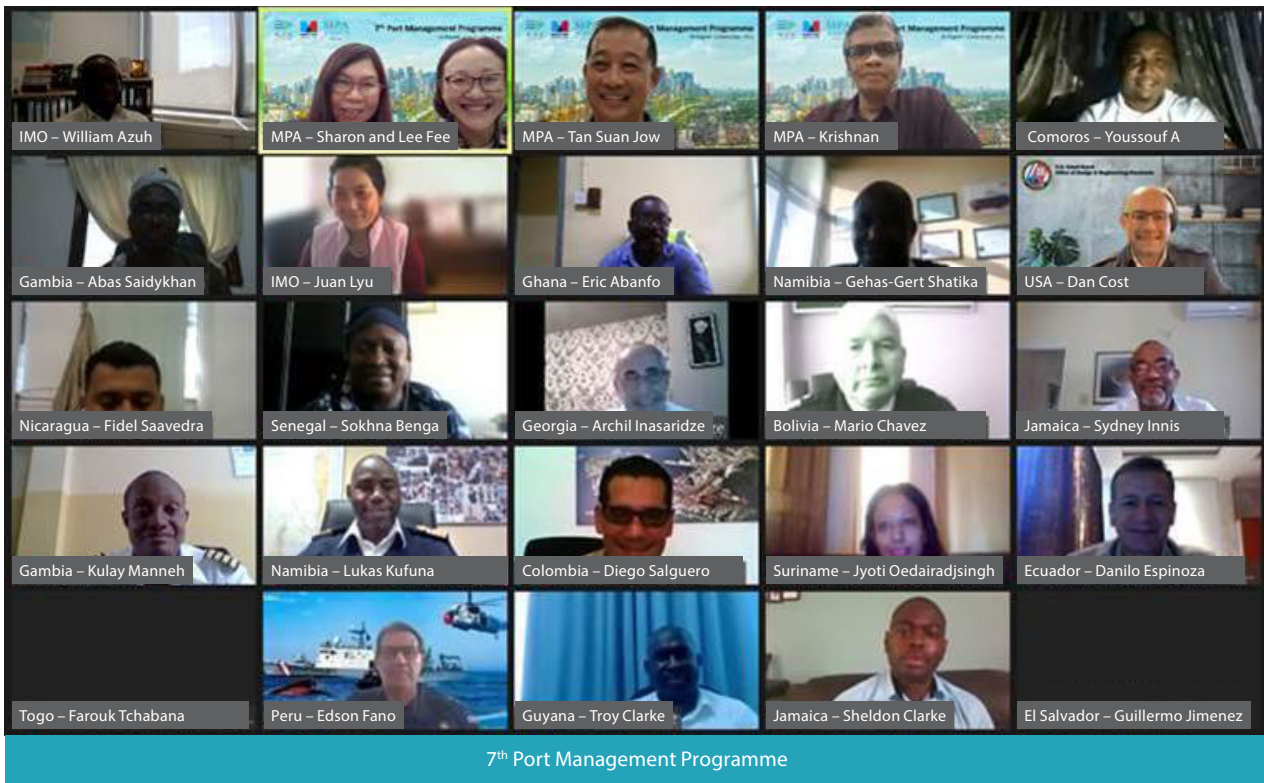
10th Maritime Public Leaders' Programme

Having completed this program, I can use the knowledge that I gained and apply relevant ideas to my organization. Also meeting maritime leaders from different countries will elevate the collaboration."

— Capt Semisi Tangataevaha,
Acting Chief Marine Officer, Ministry
of Infrastructure, Tonga. Alumnus of
10th MPLP held in March 2021

I am grateful to be included as a participant to the Maritime Public Leader's Programme, which gave me more insights about leadership perspective and at the same time shepherd me to navigate the ever evolving technological advancement such as Artificial Intelligence, Maritime Single Windows and others."

— Mr Marc Anthony P. Pascua, Regional
Director, Maritime Industry Authority,
Philippines. Alumnus of 10th MPLP held
in March 2021



“ The 7th Port Management Programme was an event that I enjoyed a lot from a personal and professional perspective, due to the quality of the speakers and the participating human group, as well as the relevance of the topics presented and the depth of its contents, expressed clearly in a way that was easy to understand and apply. The maritime ports and its impact on the quality of life of countries will be better appreciated, surely, in the next 20 to 100 years. Thank you very much for vision and knowledge shared and for the warmth and professionalism shown in the conduct and execution of the event.”

— Capt Mario Chavez, Head of International Affairs Unit, Bolivian International Ships Registry, Bolivia. Alumnus of 7th PMP held in August-September 2021

05
CONTRIBUTION

ENHANCING MARITIME GOVERNANCE DURING TIMES OF CRISIS – CHALLENGES AND OPPORTUNITIES

BY MR KOJI SEKIMIZU, SECRETARY-GENERAL EMERITUS, IMO, RSIS-MPA ADJUNCT SENIOR FELLOW AND SENIOR ADVISOR, MPA ACADEMY



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

Maritime Governance is a relatively new concept which I used frequently in recent speeches and articles. The first opportunity for me to mention this concept was at IMO Assembly in 2017 in my speech when receiving the 2016 International Maritime Prize. In that speech, I promoted studies of Maritime Governance at universities, law schools and educational institutions of the world. Upon my request and thanks to the significant financial support from MPA, Singapore, the World Maritime University (WMU) has established WMU-Koji Sekimizu PhD Fellowship for the study on Maritime Governance by UN and IMO. Currently, two promising PhD fellows are working under this Fellowship.

But, what is Maritime Governance? I used this concept as the governance of human activities in the field of shipping and maritime trade by ships with a view to ensuring the Sustainable Maritime Transportation System of the world.

The United Nations has provided the foundations of Maritime Governance including the United Nations Convention on the Law of the Sea adopted in 1982. Specialized agencies and programmes of UN, such



Awards Committee of the WMU-Koji Sekimizu PhD Fellowship for the study on Maritime Governance, Dec 2019

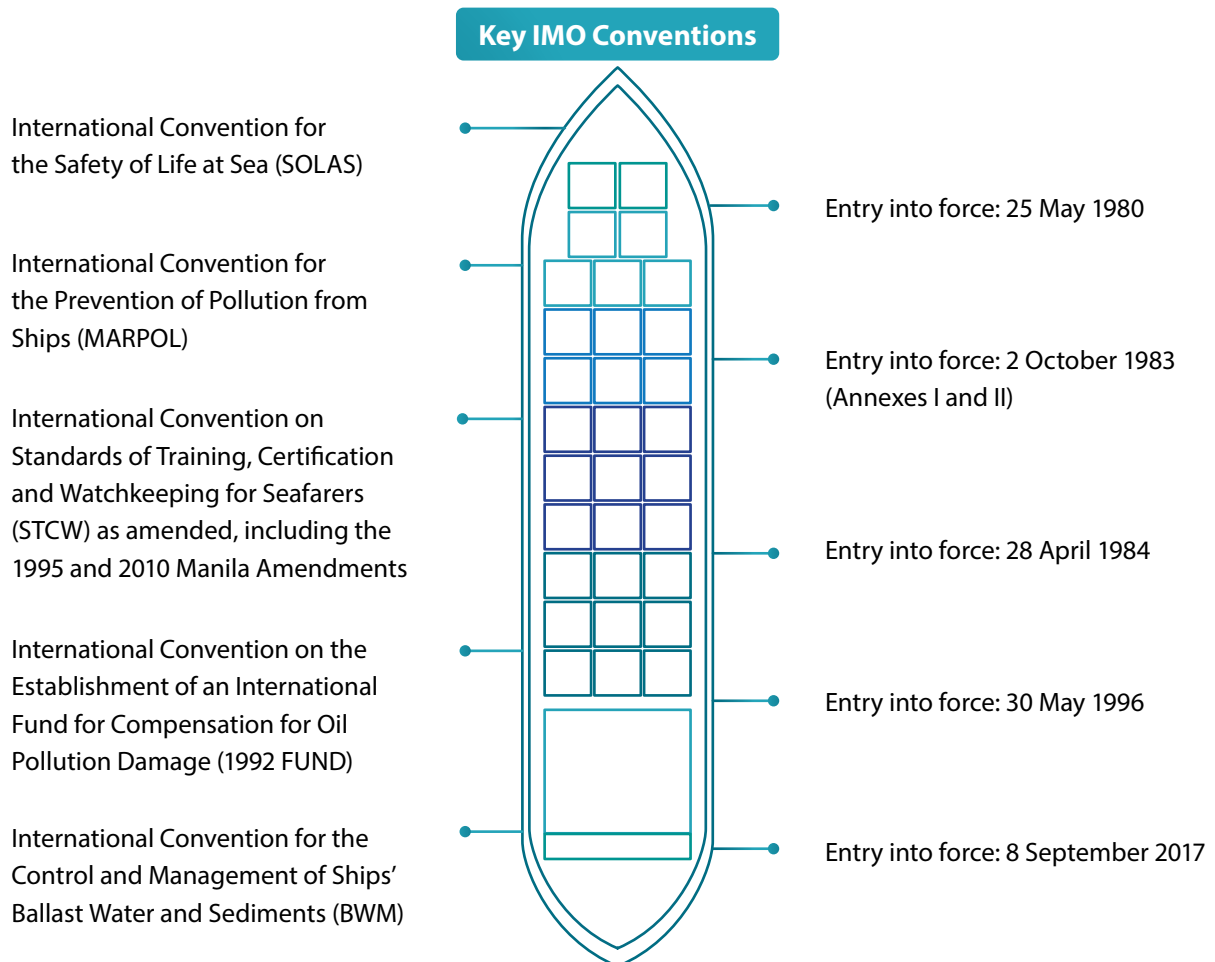
as ILO, ITU, WMO, UNESCO/IOC, UNEP, UNDP, World Bank and GEF have provided their contributions to the Maritime Governance. However, it was IMO that has provided international shipping with practical rules, regulations and standards for almost all aspects of operation of ships and the international shipping industry.

Global implementation of global standards established by IMO is the back bone of the present prosperity of international shipping. Nowadays, shipowners can register their ships at any open registry country as long as they meet the requirements of IMO Treaties, and they can recruit seafarers of any nationality trained in any country as they comply with the STCW competence requirements and hold international certificates. Flag States, port States and States providing seafarers are cooperating to ensure implementation of IMO Treaties. This global system of responsibility sharing was created through the intensive and continuous efforts of IMO in the past 60 plus years of activity.

As the United Nations Conference on Sustainable Development (Rio+20) clearly highlighted, sustainable development has three dimensions, namely, "social", "economic" and "environmental" dimensions. IMO has been the institutional mechanism for sustainable shipping, and, in the past 60 years of work, it has responded to many crises and challenges and established more than 50 international treaty instruments through the mechanism of international meetings evaluating the social, economic and environmental dimensions of proposed measures for international shipping.

In responding to oil pollution accidents such as those of Torrey Canyon, Amoco Cadiz, Exxon Valdez, Erika and Prestige, the International Oil Pollution Compensation Funds was established; the 1973 MARPOL Convention was created; and necessary measures to mitigate the risk of accidental oil pollution were adopted as a number of amendments to the MARPOL Convention. In the field of the

human element, the 1978 STCW Convention was adopted and the International Safety Management Code was created in response to maritime accidents including that of Herald of Free Enterprise. In the field of maritime security, ISPS Code was adopted and security measures were rigorously implemented onboard ships and at port facilities around the world. In response to the huge problems of invasive species in various ports of the world, the Ballast Water Management Convention was adopted and effective measures are now enforced; and in response to the Climate Change debate, technical and operational measures are now applied to ships under the provisions of the MARPOL Convention.

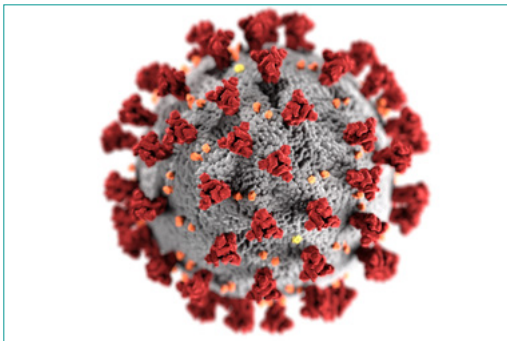


These are mere reflections of the past crises in the shipping world and challenges faced by the shipping industry and, in responding to these challenges, Member Governments of IMO and the shipping industry have successfully handled the above three dimensions of sustainable developments highlighted by the Rio+20 Conference.

We are currently facing two very serious global crises: coronavirus pandemic and climate change. In these crises, international shipping is faced with significant challenges and it seems to me that we cannot get through these challenging periods easily in coming years. They are global problems that



| Photo by Chris Gallagher on Unsplash



| Photo by CDC on Unsplash

would require global answers and, in my view, enhanced Maritime Governance established through the mechanism of IMO will play a crucial role in providing such global answers. The strength of IMO rests with its efficient meeting mechanisms of technical Committees and Sub-Committees and enhancement of Maritime Governance at IMO would require efficient running of these crucial international meetings.

The coronavirus pandemic unexpectedly highlighted the importance of international shipping in maintaining the global seaborne trade and the world economy and wellbeing of people in the globalized world. Despite the serious efforts of shipping industry organizations supported by the IMO Secretariat, the problem of crew changes due to travel restrictions in the pandemic has not been satisfactorily resolved and seafarers are still struggling onboard sacrificing their wellbeing. The IMO target to reduce GHG emissions from ships by 2050 was established but that target could not be met without

ensuring worldwide availability of new fuels such as hydrogen which would require a global mechanism of R&D to develop such new fuels. The global market-based measures such as any Emission Trading System for GHG emissions have not yet been established at IMO for the shipping industry and further discussions on this very important issue at IMO must take place, recognizing the detrimental impact of any unilateral action to impose national or regional measures to shipping.

These are immediate challenges and issues during the current crises, but these challenges may not be overcome without determination of the shipping industry to make rigorous investments into new fields of technology and operation exploring future of maritime transportation system. Challenges will create opportunities for future winners in the shipping world.

Furthermore, these challenges must be properly handled at a global forum which has a solid record of successful response to the past crises. Keeping the efficient international meetings in the period of coronavirus pandemic itself is a huge challenge for any international organization including IMO but I am optimistic in hoping that IMO's meeting mechanism would be well maintained and that the shipping industry would effectively and efficiently meet the current challenges enhancing their cooperation at IMO even in the period of coronavirus pandemic.

06

CONTRIBUTION

OVERCOMING CHALLENGES, SEIZING OPPORTUNITIES – THE PSA SINGAPORE JOURNEY

BY MR ONG KIM PONG, REGIONAL CEO OF SOUTHEAST ASIA, PSA INTERNATIONAL, AND MPAA SENIOR ADJUNCT FELLOW

In 1972, MV Nihon became the first ever container ship to call at the newly-constructed Tanjong Pagar Terminal with 300 containers. Since then, PSA's journey and success has played an integral role in establishing the Port of Singapore as a major transshipment hub.¹



MR ONG KIM PONG
Regional CEO of Southeast Asia, PSA International, and MPAA Senior Adjunct Fellow

Alongside the flourishing of Singapore's maritime ecosystem, PSA has grown from strength to strength, handling more than 36 million Twenty-foot Equivalent Units (TEUs) in 2020. With its developed port infrastructure, comprehensive maritime services and supportive government policies – Singapore has consistently been ranked by the Xinhua-Baltic International Shipping Centre Development (ISCD) Index as the world's top shipping hub.

However, recent events, as well as a confluence of demand and supply factors have led to an unprecedented and ongoing disruption of the global supply chain and container trade.

¹ PSA dropped the name of "Port of Singapore Authority" in 1997 when it became a corporatised entity. The company should be referred to as "PSA International Pte Ltd" or simply "PSA".



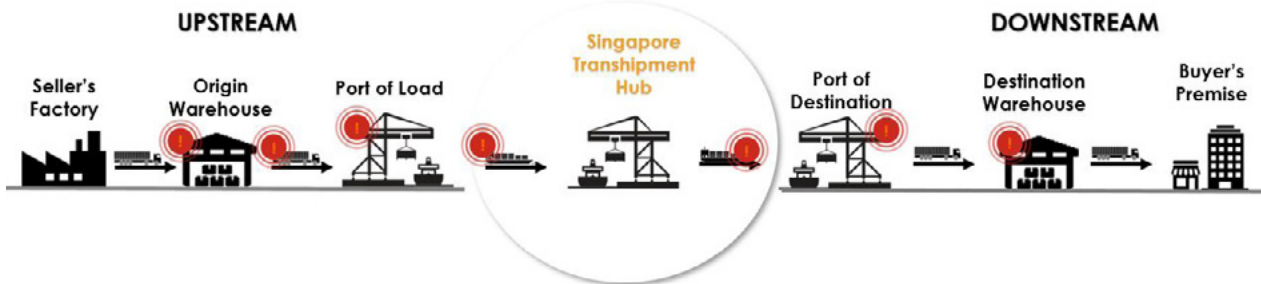
Maiden call of the MV Nihon in 1972

Navigating prevailing headwinds

Without a doubt, COVID-19 has almost single-handedly altered the world, changing the way we live and work. The global supply chain has not been spared its effects either; first with a contraction of volumes at the initial peak of the crisis as demand tapered, followed by a sudden recovery with pent-up demand for consumer goods. With manufacturing recovering, the increase in their output led to retailers and manufacturers rushing to restock inventories, leading to a spike in demand.

On the supply front, labour across the various nodes of the global supply chain were crippled due to pandemic-related measures. Amongst other implications, this resulted in shippers facing factory delays, a lack of rail, truck and vessel capacity as container ships waited for berths, cargo being stuck at ports or inland depots, and empty containers not being circulated back to manufacturers. Combined, these intertwined issues of labour and equipment shortages effectively removed large amounts of container capacity during a period of surged demand, leading to massive disruptions.

Subsequent events, notably the Suez Canal blockage and Yantian port congestion, exacerbated supply constraints and further clogged ports worldwide. As cargo flow time increases, equipment turnaround has consequently worsened, resulting in minimal to zero buffer capacity within the global supply chain to handle any form of operational disruption.



Common pain-points within the supply chain

With the importance of ports as transportation hubs facilitating container trade, the pressure is on port operators worldwide to improve service levels and reduce vessel waiting times. Amidst the challenging conditions which are expected to persist for the near future, how can PSA overcome these operational complexities, and differentiate itself from the competition?

Reinforcing Singapore as the world's port of call

PSA has always prided itself on being the world's Port of Call, and the port operator of choice in the world's gateway hubs. In recent months, with shipping lines facing a myriad of upstream and downstream disruptions, Singapore has served as the "Go-to Port" for customised and dedicated connections. During these unprecedented times, PSA has risen to the challenge, continuing to facilitate unparalleled connections.



MANILA MAERSK in May 2021

For instance, earlier this year, the mega vessel MANILA MAERSK designated Singapore as a port of call as part of a contingency plan to reconnect transshipment containers due to disruptions caused by the Suez Canal blockage. This involved the loading of numerous empty containers to meet surge demand in Thailand, increasing the total number of containers handled to 13,227, or 22,761 TEUs. Over a marathon port-stay of more than 58 hours, a new productivity record was set for PSA. With the team's immaculate planning and

hard work, the vessel managed to sail on time to catch the required daylight window for its journey to the next port of call at Laem Chabang.

This is just one of the many examples which underscores PSA's proven ability to provide solutions and deliver value to its customers. The continued validation of such capabilities will be necessary to place the Port of Singapore in good stead ahead of the annual product offerings and service route restructurings by shipping alliances and lines.

Always alongside

Throughout the pandemic, the Port of Singapore has remained open and operational 24/7, facilitating the flow of cargo for the nation and for global trade. This has been possible due to the many measures put in place to ensure the health and safety of port users and PSA staff. Some of these include the regular rostered swabbing tests for frontline staff, a halt to cross-deployments for flexibility, the segregation of staff, and zoning of work areas.

Although necessary, these measures have led to inconveniences for our people, who have bravely stepped up during this difficult period. Regular open communication with staff and unwavering support from the Unions have been essential in keeping PSA's workforce motivated amidst the peak situation. Government agencies, customers, industry associations and partners have also pulled together to ensure the continued functioning of essential port and maritime services.

Thus, while restrictions on manning levels have had an impact on overall service levels, PSA has resolutely remained alongside its stakeholders during this testing period – a testament to the unique and vital tripartite relationship in Singapore.



Handing out of welfare packs to ground staff

Enabling trade

Leveraging on its expertise as a leading port operator, PSA has started its journey to reshape its role as a trade enabler through Cargo Solutioning to focus on regulatory enablement, intermodal seamlessness, digital efficiency and sustainability. Beyond handling containers, this involves analysing cargo content and the underlying trade flows to understand and solve logistical pain points, enabling trade within the ecosystem of the end-to-end supply chain. This new adjacency focuses on 4 key verticals where PSA sees challenges or painpoints that requires solutions: Energy and Chemicals, Cold Chain, E-Commerce and Advanced Manufacturing. In recent years, PSA has steadily invested in expanding its physical and digital presence both upstream and downstream through the logistics supply chain, partnering key industries and beneficial cargo owners to achieve this.

One such collaboration is with an international pulp and fibre MNC based in Europe, but with a significant customer base in Asia. In addition to serving as its regional hub to tranship cargoes, PSA has expanded the partnership to provide bespoke supply chain solutions. This is augmented by PSA's digital platforms to provide enhanced visibility of the supply chain from end-to-end, real-time alerts for exception management and the use of predictive data for more accurate forecasting and decision-making.

On top of the physical cargo flow, PSA has also facilitated the regulatory flow through in-depth understanding of the requirements and working closely with the Agencies and Stakeholders. For instance, PSA has facilitated the export of chilled meat and fruits from Oceania to Europe and India respectively by working with the Agencies to streamline processes and certification requirements, thus enabling seamless transshipment and intermodal processes.

The above examples demonstrate PSA's ability to facilitate and enable trade, which is ever-critical considering the ongoing disruptions. By further augmenting such capabilities, this serves to influence cargo flow and reinforce Singapore's status as a hub port, strengthening PSA's overall value proposition.

Enhancing the core with Tuas as the next chapter!

To alleviate the current supply constraints, PSA has sought to stretch the capacity of its existing terminals. Through a combination of reinforcing frontline resources, rejuvenating existing infrastructure and the refinement of processes; PSA has managed to achieve very high utilisation rates of its assets.

Whilst tackling immediate capacity issues, PSA's focus remains on its preparations for Tuas Port, which is due to commence operations end 2021. Upon completion in the 2040's, it will consolidate Singapore's container port operations in one single location and is poised to be the world's largest automated container terminal with a total capacity of 65 million TEUs. Although COVID-19 has caused some unavoidable delays, the Tuas project remains very much on track and its imminent operationalisation will provide an immediate uplift to PSA's existing yard capacity. An example of this is PSA's shift of long-dwell reefer containers for Singapore's national food stockpile to Tuas; successfully testing the terminal's operational processes, while freeing up capacity at the existing terminals.

More importantly, PSA's vision for Tuas goes beyond just operating the world's largest automated container port – to becoming a key player in orchestrating the global supply chain. This entails a marked shift in perspectives, practices and existing processes. For this transformative journey to succeed, PSA's people and Unions must be at the heart of it – developing the agility and nimbleness to seize any opportunity that comes its way. With intensifying competition in the region, this will be imperative to PSA's ability to stay ahead of the competition.



Quay Cranes being delivered and installed at Tuas in the earlier part of 2021



Control centre for Tuas Terminal ready for operations

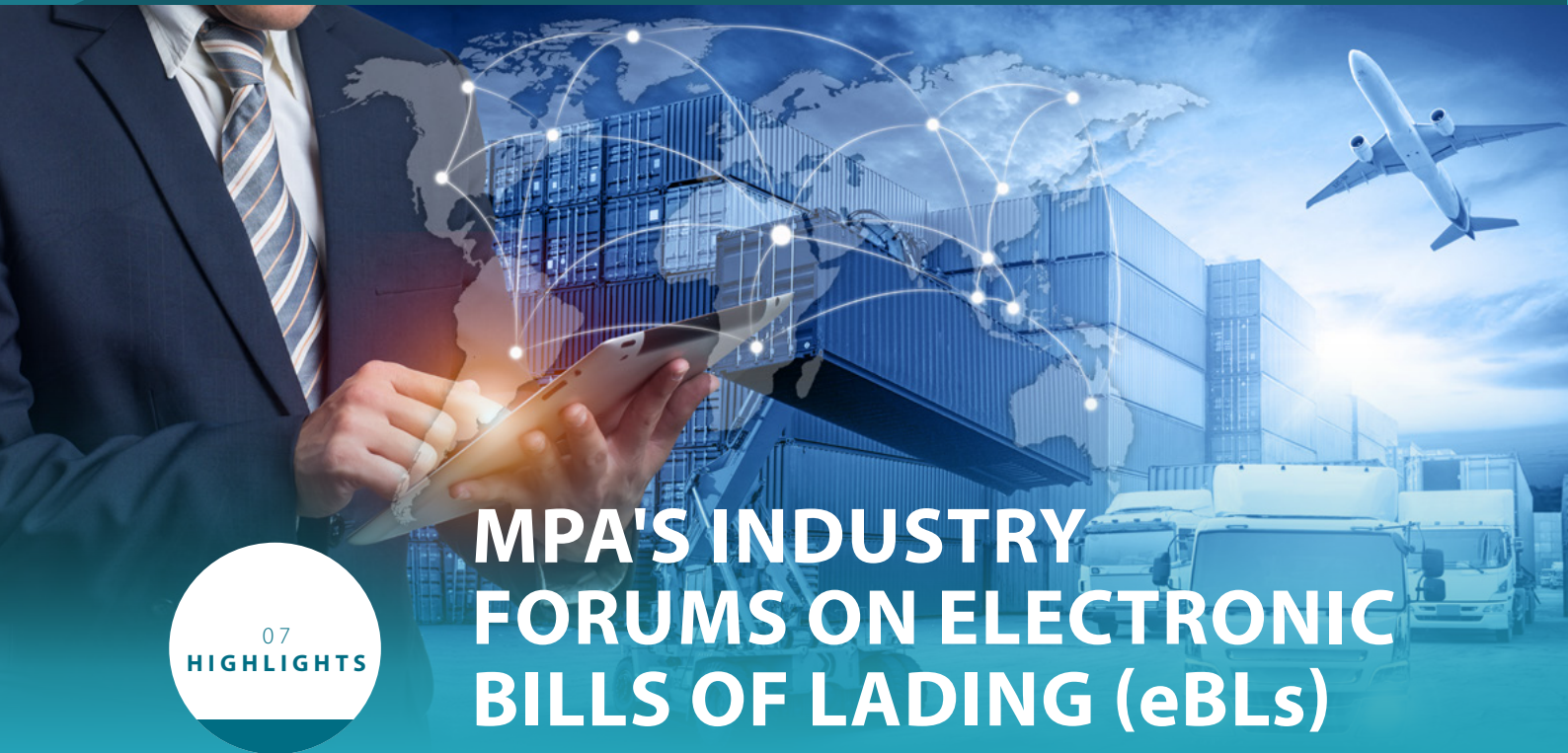
Charting the way forward

In 2007, Singapore's then Minister Mentor, Mr. Lee Kuan Yew, said "Singapore's raison d'être was its port; Singapore must strive to remain a major hub port"². Over a decade later, despite global change and uncertainty, his words still hold true.

While disruptions to the supply chain are certainly far from over, PSA's ability to respond serves as reassurance to the world on the importance and reliability of Singapore as a vital cog within the global supply chain.

As the world's container trade will likely face further storms in the years to come, PSA must set course with its portfolio, process and people at its core, differentiating itself from the competition. Collectively endeavouring with the Singapore maritime community to deliver the best-in-class service, reliability and connectivity, will enable the Port of Singapore to anchor its status as a major transshipment hub.

² Excerpt from Singapore Maritime Lecture, 2007



07
HIGHLIGHTS

MPA'S INDUSTRY FORUMS ON ELECTRONIC BILLS OF LADING (eBLs)

BY MARIA SETIANEGARA

As part of the efforts to promote thought leadership in the maritime industry, MPA's Innovation, Technology Development and Talent Division (ITTD) and the MPA Academy (MPAA) organised two industry forums on Electronic Bills of Lading (eBLs)¹, on 31 March and 30 June 2021. The webinars offered opportunities for different stakeholders with interests in eBLs to share learning points about starting and scaling-up eBL usage in cross-border trade. Together, the two webinars were attended by about 550 persons across various industries², academia, international organisations, as well as local and international trade associations.

Both events were hosted by MPA's Assistant Chief Executive (Industry), Mr Kenneth Lim, who highlighted the key challenges that different supply chain stakeholders face in using eBLs and the importance of collective action to understand the value and accelerate adoption of eBLs. Mr Lim highlighted that digitalising BLs and other shipping documents bring significant convenience and savings to supply chains. However, there remain several challenges to overcome, such as the lack of legal recognition for eBLs and the need for standards and interoperability in order to scale up adoption. This requires a concerted effort across the supply chain where key players, such as the shippers, carriers, banks and traders come together to do so. The Q&A sessions were moderated by MPA's Chief Technology Officer, Mr Thomas Ting.

¹ The Bill of Lading or BL is a key document used in maritime trade issued by a carrier to acknowledge receipt of cargo for shipment.

² Including shipping, commodity trading, banks, legal and technology solution companies.

Distinguished Panel of Speakers

The First Industry Forum on eBLs held on 31 March 2021



Mr Kenny Yap

ALLEN & GLEDHILL
PARTNER AND CO-HEAD OF
THE MARITIME AND AVIATION
PRACTICE AND SHIPPING
(CONTENTIOUS) TEAM



Mr Alexander Goulandris

essDOCS
CO-CEO AND CRO



Mr Luiz Almanca

**OCEAN NETWORK EXPRESS
(ONE)**
DIGITAL BUSINESS SENIOR
MANAGER



Mr Loh Sin Yong

**INFOCOMM MEDIA
DEVELOPMENT AUTHORITY
(IMDA)**
DIRECTOR (TRADE),
SECTORAL TRANSFORMATION
GROUP

The Second Industry Forum on eBLs held on 30 June 2021



Mr Gadi Ruschin

Wave BL
CO-FOUNDER AND CEO



Mr Andre Simha

**MSC
MEDITERRANEAN
SHIPPING COMPANY**
GLOBAL CHIEF DIGITAL AND
INFORMATION OFFICER



Mr Atul Patel

#DLTLEDGERS
CO-FOUNDER



Mr Himanshu Maggo

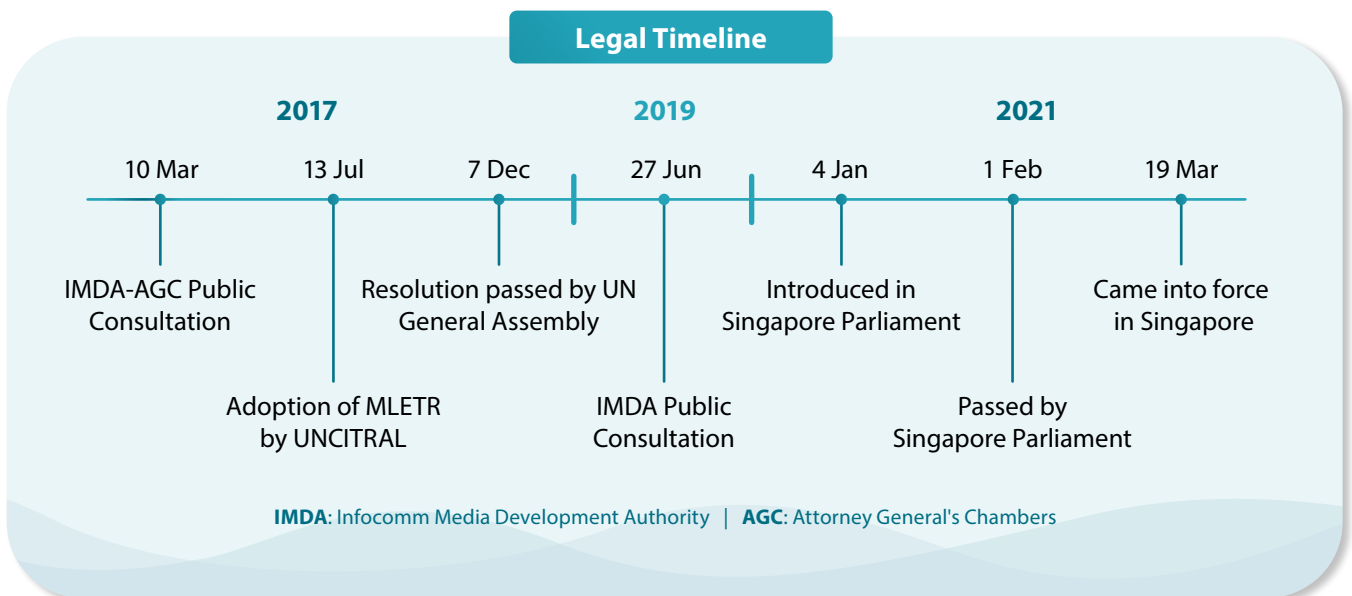
**STANDARD CHARTERED
BANK (SCB)**
EXECUTIVE DIRECTOR,
HEAD OF TRADE PRODUCTS
AND TRANSACTION BANKING,
SINGAPORE*

* As of 1 August 2021, Mr Maggo assumed the appointment of Executive Director, Head of Trade Innovation, ASEAN.

Key discussion points

| Legal considerations impacting eBLs

Mr Yap from Allen & Gledhill said that in early 2021, Singapore became the second country to adopt the Model Law on Electronic Transferable Records (MLETR) by the United Nations Commission on International Trade Law (UNCITRAL), bringing it within the remit of its Electronic Transactions Act (ETA).



| Source: Allen & Gledhill

This legislative move grants electronic trade documents, such as promissory notes, bills of exchange and bills of lading functional equivalence with their paper-based counterparts. Central to the pillar of functional equivalence is the concept of using a "reliable method" to ensure, among others, the authenticity, integrity and reliability of Electronic Transferable Records (ETRs).

Mr Yap highlighted the various legal implications of the MLETR, which include the recognition of cross-border electronic trade documents such as eBLs, and accreditation of providers of ETR management systems. The benefits of adopting ETRs include faster transmission, greater data accuracy, lower costs, reduced risk of fraud, easier storage and retrieval, as well as being more environmentally friendly.

With seven eBL solutions that are currently based on contract law and approved by the International Group of Protection and Indemnity Clubs, IMDA's Mr Loh estimates that the statutory law approach based on the MLETR will take at least five years or more before it gains widespread adoption. As such, it would likely be a mixture of eBL solutions based on contract law and statutory law during this transition phase. Key factors affecting businesses' choices would be who the overseas trading partner is, whether the corresponding country recognises eBL as equivalent without the use of contractual framework, and if the trading partner has already signed onto the same contractual framework.

| Promoting digital trade documentation

During the webinars, speakers discussed the benefits and various considerations when adopting eBL solutions for digital trade. As one of the first eBL solution providers (essDOCS), Mr Goulandris advised that when selecting which eBL solution to adopt, users might wish to select one that is user-friendly; has a wide network across carriers, banks and buyers; covers all their key shipping modes; and possesses a robust track record of successfully delivering global projects.

Singapore & eBLs

Where Can You Use CargoDocs eBLs in SG Ecosystem

16

Banks
using CargoDocs
in Singapore

40

**Metal / Mineral
Companies**
working in Singapore

6

Agri Companies
working in
Singapore

3

**Energy / PetChem
Companies**
working in Singapore

2

Container Lines
headquartered
in Singapore

2

Singapore Exports
currently shipping
under CargoDocs:
(i) Energy cargos in tankers;
(ii) Chemical cargos in containers

| Source: essDOCS Limited

As one of the latest eBL solution providers (Wave BL), Mr Rushin shared how Wave BL's eBL solution enables more secure and efficient trade document transactions and provided a digital alternative for supply chain stakeholders to receive and transmit trade documents without affecting their day-to-day business operations. The benefits include quicker trade transactions, facilitating all parties involved in a trade to digitally issue, transfer, endorse and manage different trade documents via a secure and decentralised network. Another advantage is that electronic originals can be digitally signed, encrypted with secured privacy by limiting data management, account control and account access to users only.

WAVE BL's Advantages

When users transfer documents via WAVE BL's platform, none of the data involved is ever stored or accessed by WAVE BL.



Adoption rate in the container carrier market

48.1% of the market



Account access

User access only



Account control

User control



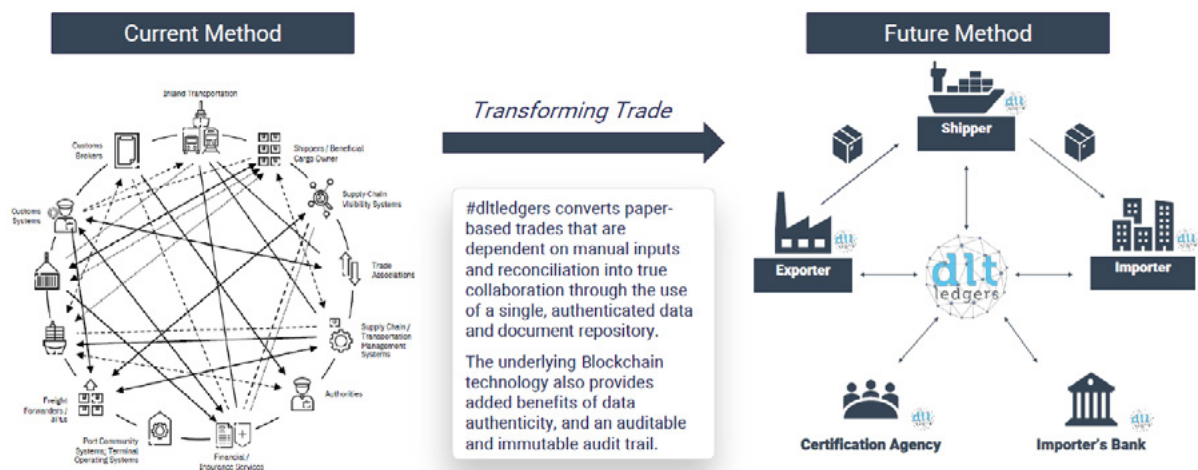
Data management

Users are sole owners of their data

| Source: Wave BL

#dltledgers is a Singapore-headquartered trade digitalisation company that was established in 2018 to provide eBL solutions based on statutory law. Mr Patel shared the benefits of #dltledgers' plug-and-play solution and how its blockchain-based platform enables businesses to collaborate more efficiently, securely and transparently to drive end-to-end trade digitalisation. This is done through automated process workflows using smart contracts to facilitate data authenticity through an immutable audit trail. #dltledgers offers a framework that allows large corporations, SMEs and banks to connect to their supply chain network and digitalise trade processes and financing documentation. Apart from enhancing the efficiency and visibility of digital trade, it reduces turnaround time, risk, and fraud for trade finance for supply chains.

Post Trade Digitization Platform - What It Does



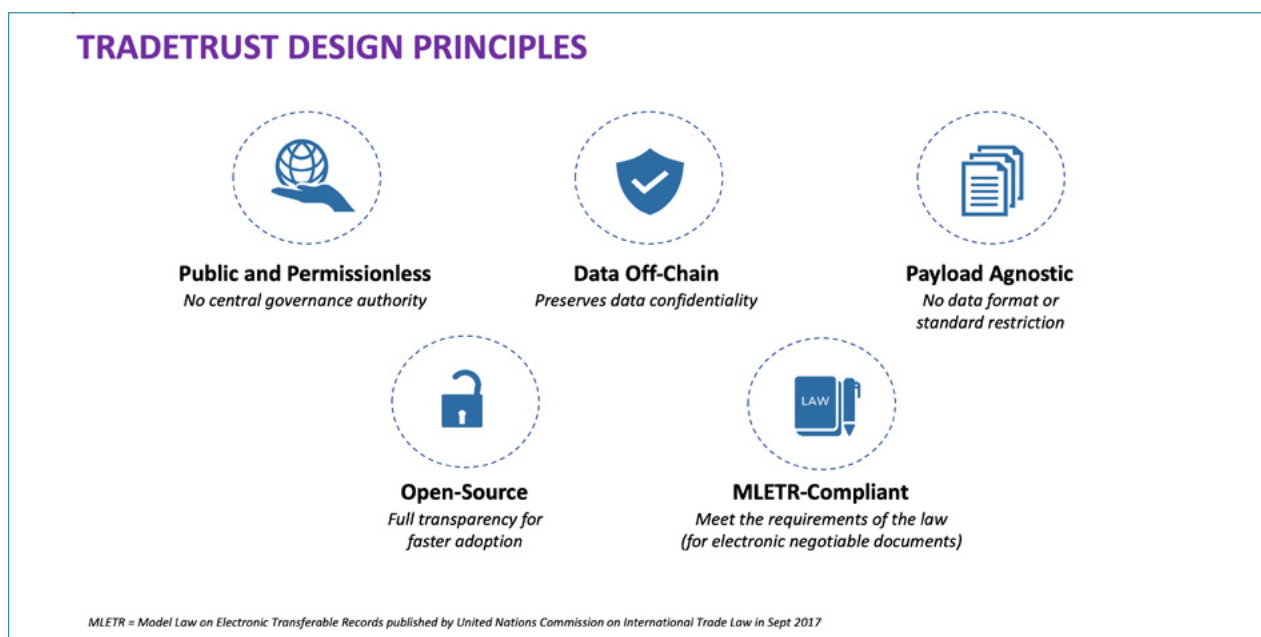
| Source: #dltledgers

IMDA's Mr Loh shared that the current system of trade which is built upon siloed systems where paper documentation is still vastly utilised today. TradeTrust is an initiative spearheaded by the Singapore Infocomm Media Development Authority (IMDA) to accelerate trade digitalisation and address the current gaps of siloed systems and manual processes in trade. TradeTrust comprises a set of globally accepted standards and frameworks that connects governments and businesses to a public blockchain to ensure that documents issued are verifiable and safeguards against tampering. It also offers trusted interoperability that enables the exchange of electronic trade documents across different digital platforms.

For all types of digital trade documents, TradeTrust is able to verify the document authenticity and validates the document source. In addition, for documents of title, such as bills of lading, the framework also provides legally valid performance obligation transfers. TradeTrust is built upon a set of foundational principles which are:

- ◆ using a **public and permissionless** blockchain
- ◆ storing **data off-chain** to preserve confidentiality
- ◆ **payload agnostic** so that parties are not restricted to any data format and structure
- ◆ it is **open-source** and is freely available for anyone to download and use; and
- ◆ the title transfer functionality is designed to be **MLETR-compliant**

TradeTrust is not itself a platform but facilitates platforms and systems to achieve interoperability.



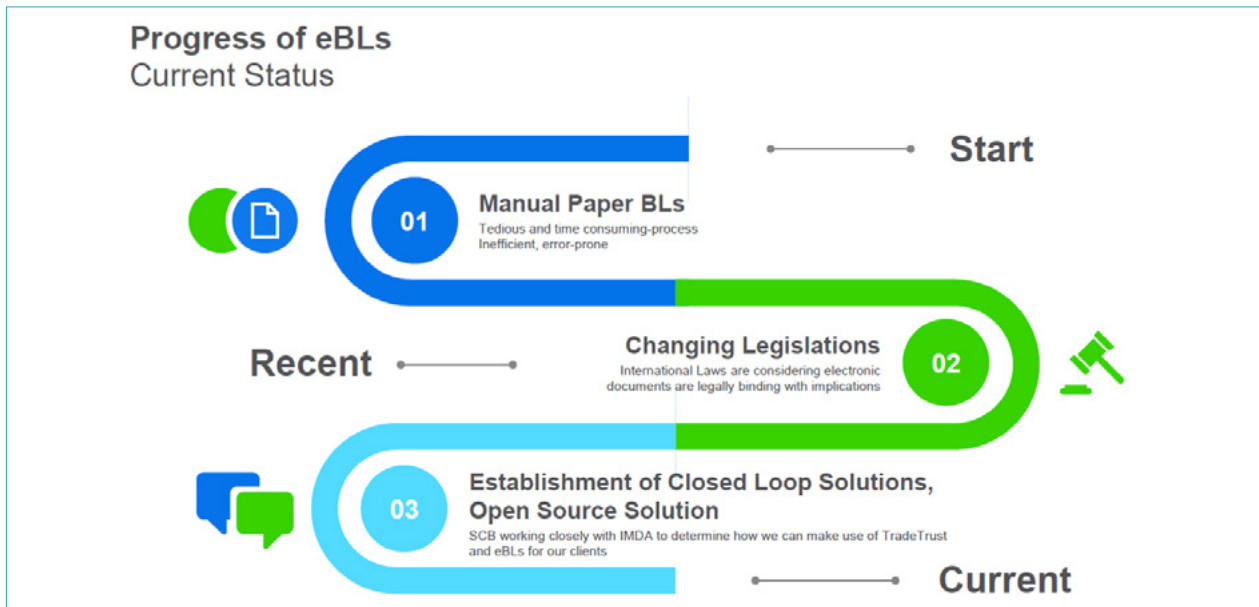
| Source: IMDA

| eBL customer journey

The webinars provided opportunities for key supply chain stakeholders that are eBL users to share their experiences on their journey from starting to scaling-up use of eBLs in their daily operations. From the carrier's perspective, Mr Almanca touched on ONE's experience along its digitalisation journey and the insights gained from adopting eBLs for their operations. ONE starts by establishing the foundations for a solid digital journey by integrating Information Technology and innovation into its business strategy to spur hands-on collaboration. This is followed by bringing the organisation up to speed in terms of infrastructure and technology through establishing teams to deliver integrated solutions. Lastly, ONE focusses on incorporating a "digital first" mindset in its collaborations and business thinking when identifying opportunities. Mr Almanca added that possible challenges to adoption include interconnectivity and interoperability gaps, regulatory barriers, identifying transaction volume critical mass, lack of awareness of eBL, and the need to digitalise other trade documents beyond BLs.

Meanwhile Mr Simha from MSC shared that the global pandemic has accelerated customers' need for the eBL due to issues with regular courier servicing of the physical document. eBL is merely a beginning and it is key to also work on digitisation of other documents that need to be transferred for successful transactions. He also stressed that it is essential to have all parties throughout the supply chain onboard, highlighting the importance of interoperability, collaboration on data standards and involvement of industry organisations such as the Digital Container Shipping Association (DCSA).

From the banking perspective, SCB's Mr Maggo shared some insights from previous implementation challenges to drive eBL adoption for trade financing. Such challenges include international laws and regulations not being aligned, use of closed system solutions that require all parties to be on the same platform, no standardised set of rules, and the lack of trust and interoperability between different eBL platforms. To mitigate such challenges, Mr Maggo emphasised the importance of developing solutions that are interoperable, open source, open chain and scalable, while catering for the uniqueness of eBLs.



| Source: SCB

Conclusion and next steps

Digitalisation of cross-border trade is the way forward, as echoed by the various leading supply chain players. eBL is one of the most important maritime trade documents that when accepted in its electronic form, would have a ripple effect on encouraging more players on board as well as spur digitalisation of other trade documents.

MPA, along with other Singapore public agencies and industry associations are committed to accelerate the adoption of eBLs by supply chains. In April 2021, MPA, supported by the IMDA and Digital Container Shipping Association, launched a call-for-proposal to develop, enhance and adopt eBLs. MPA looks forward to future opportunities to support and partner the maritime industry on future digitalisation collaborations.

TRAINING COURSES FROM

MAY 2021–OCTOBER 2021

• VESSEL TRAFFIC OFFICERS

- ◆ Bridge Resource Management – Leadership and Teamwork Skills
- ◆ IMO Model Course 3.12
- ◆ Remote On-Scene Commander (IMO Level 2 Equivalent)
- ◆ V103-2 VTS Supervisor Course

• MARINE OFFICERS, PORT CHEMISTS AND PORT INSPECTORS

- ◆ Basic Ionising Radiation Safety Course
- ◆ Basic Tanker Training
- ◆ Basic Occupational Safety and Security Training
- ◆ Remote Oil Spill Response Management (IMO Level 3 Equivalent)
- ◆ Remote On-Scene Commander (IMO Level 2 Equivalent)

• OPS PLANNING & PILOTAGE

- ◆ Remote Oil Spill Response Management (IMO Level 3 Equivalent)

• MARINE SURVEYORS

- ◆ IMO Model Course 3.12
- ◆ Internal Auditor ISM, ISPS, MLC Course
- ◆ PPE Training
- ◆ Surveys and Certificates
- ◆ Videotel Online Courses

• BUNKER SERVICES OFFICERS

- ◆ Advanced Bunkering Course
- ◆ LNG Fundamentals

HYDROGRAPHERS

- ◆ IMarEST Online Courses

ENGINEERS

- ◆ Geotechnical Course on Slope Stability
- ◆ Geotechnical Design Using Eurocode 7
- ◆ Sharing session on Price Quality Method Framework
- ◆ Workshop on Dispute Resolution

PORT SYSTEMS OFFICERS

- ◆ Manage Work-At-Heights Course
- ◆ Marine Risk Assessment, Incident Investigation, Root Cause Analysis & Implementation Course
- ◆ Supervise Manufacturing Work for WSH

INFORMATION TECHNOLOGY

- ◆ AZ-303 Microsoft Azure Architect Technologies
- ◆ ITIL® 4 Foundation
- ◆ Managing Cybersecurity Risk
- ◆ Secure Software Development Lifecycle for Agile

BUSINESS CAPABILITY DEVELOPMENT OFFICERS

- ◆ Certified Scrum Product Owner
- ◆ International Taxation: Cross-Border Tax Issues and Tax Treaties
- ◆ Executive Tax Programme level II (Income Tax – Corporate & Business)

STRATEGY & POLICY OFFICERS

- ◆ Enterprise Risk Management

ALL MPA OFFICERS

- ◆ Cybersecurity Awareness e-Learning
- ◆ Sharing Session on Video Analytics
- ◆ Media Training

TRAINING COURSES FROM

NOVEMBER 2021 – DECEMBER 2022

● VESSEL TRAFFIC OFFICERS/SUPERVISORS

- ◆ Vessel Traffic Service Operator Course
- ◆ Vessel Traffic Service Supervisor Course
- ◆ OJT Instructor Course
- ◆ Basic Occupational Safety and Security Training
- ◆ Bridge Resource Management
- ◆ International Maritime Dangerous Goods
- ◆ Basic Tanker Training

● MARINE OFFICERS

- ◆ Oil Spill Management (IMO Level 3)
- ◆ Incident Investigation and Root Cause Analysis
- ◆ LNG Bunkering Course
- ◆ Global Maritime Distress and Safety System
- ◆ US Coast Guard Search and Rescue Course
- ◆ Investigation Report Writing
- ◆ Drone Training

● PORT CHEMISTS

- ◆ Safe Handling & Risk Assessment of ISO Tank Containers
- ◆ Training Workshop on Globally Harmonised System
- ◆ International Maritime Dangerous Goods Course
- ◆ Shipyard Safety Assessor (Hot-Work Certification) Course
- ◆ Basic Tanker Course
- ◆ Basic Ionising Radiation Safety Course
- ◆ ChemMap Training Simulation Programme

PORT INSPECTORS

- ◆ Basic Occupational Safety and Security Training Course
- ◆ Oil Spill Clearance (IMO Level 2)
- ◆ Oil Spill Management (IMO Level 3)
- ◆ LNG Incident Response & Mitigation
- ◆ Bunker Surveying Course
- ◆ LNG Bunkering Course
- ◆ Evidence Gathering
- ◆ Drone Training

BUNKERING SERVICES

- ◆ Enhanced Bunkering Course
- ◆ LNG Bunkering Course (Management and Operational Level)
- ◆ Anatomy of LNG Shipping & Operations

MARINE FUELS

- ◆ LNG Markets, Pricing, Trading and Risks Management

MARINE SURVEYORS

- ◆ Ballast Water Management Refresher
- ◆ Internal Auditor International Safety Management, International Ship and Port Facility Security and Maritime Labour Convention Course
- ◆ Decarbonization in Shipping
- ◆ Cyber Security in the Maritime Industry – General Awareness Training
- ◆ Incident Investigation Course IMO Model Course 3.11 (Marine Accident & Incident Investigation Related Training)
- ◆ A General Overview of Electronic Chart Display and Information System
- ◆ Drydocking & Repairs
- ◆ Hull Inspection
- ◆ Global Maritime Distress and Safety System
- ◆ International Code of Safety for Ship Using Gases or Other Low-Flashpoint Fuels (IGF Code) (Basic and Adv)
- ◆ Navigational Audits

HYDROGRAPHERS/CARTOGRAPHERS

- ◆ Basic Cartography & Hydrography Course
- ◆ UKHO Online Training: Understanding ENCs
- ◆ Basic Cartography Course for Cartographers
- ◆ Quantum Geographic Information System Primer
- ◆ Quantum Geographic Information System Cognizance
- ◆ UKHO Online Training: Compiling for Navigational Safety
- ◆ UKHO Online Training: Introduction to S-57
- ◆ IALA Level 1.1 AtoN Manager Course
- ◆ IALA Level 2 Technician Course
- ◆ IALA Master AtoN Management Course
- ◆ Basic Occupational Safety & Security Training
- ◆ S-101 Software – Web Based Instructor Led Training
- ◆ S-102 Software – Web Based Instructor Led Training
- ◆ Advanced Python Programming Professional – Online
- ◆ Advanced Data Science Professional with Python – Online
- ◆ IMarEST Online Courses

ENGINEERS

- ◆ Soil Investigation
- ◆ Contract Management Courses
- ◆ Construction Safety Course for Project Managers
- ◆ Project Management Professional Course
- ◆ GMAP-Certification Course for Green Mark Accredited Professional
- ◆ Search and Rescue Model and Response System (SARMAP)/
Oil Spill Model and Response System (OILMAP)
- ◆ Berth Capacity Simulation
- ◆ Port Planning Training by International Experts
- ◆ Climate Change Related Training
- ◆ Port Operations, Management and Technology
- ◆ Environmental Impact Assessment Framework in Singapore
- ◆ Urban Infrastructure Planning
- ◆ Introduction to Smart Building Management for FM Practitioners
- ◆ Strategies for Smart Facilities Management (FM) and Maintainability
- ◆ Energy Efficiency for Electrical Systems
- ◆ Planning and Design of Sewerage Works
- ◆ Interpretation of Soil Parameters for Design of Geotechnical Works
- ◆ Dispute Resolution for Public Sector Standard Conditions of Contract Contracts
- ◆ IM3 (Focusing on Tender Specifications and Evaluation)

OPERATIONS PLANNING

- ◆ Certified Business Community Professional Course
- ◆ ISPS Auditor Course
- ◆ Oil Spill Response Course
- ◆ Port Facility Security Officer Course

PORT SYSTEMS

- ◆ Emergency Preparedness and Crisis Management
- ◆ Maritime Risk Assessment
- ◆ Machine Reasoning
- ◆ Vision Systems
- ◆ Humanising Smart Systems
- ◆ Certified Scrum Master
- ◆ Leading Safe 5.1 Certification
- ◆ Project Management Professional
- ◆ Systems Reliability-Availability-Maintenance Course
- ◆ Cisco Certified Network Associate Networking Course
- ◆ VMware vSphere: Install, Configure, Manage
- ◆ VMware vSphere: Optimise and Scale
- ◆ Data Courses

INFORMATION TECHNOLOGY

- ◆ SEC504: Hacker Tools, Techniques, Exploits, and Incident Handling
- ◆ Product Management - Enhanced Project Development Methodology
- ◆ MS Azure Administrator
- ◆ AZ-304 Microsoft Azure Architect Design
- ◆ Managing Digital Products
- ◆ Digital User Experience Design
- ◆ Certified Scrum Master
- ◆ Agile Funding & Procurement Workshop
- ◆ IM8 Fundamentals
- ◆ AZ-303 Microsoft Azure Architect Technologies
- ◆ Cloud Native Solution Design
- ◆ Oracle WebLogic Administration Training
- ◆ AutoSys Administration
- ◆ Nutanix Administration
- ◆ Sybase Administration

INTERNATIONAL MARITIME CENTRE

- ◆ Carbon Trading Models/Carbon Credits
- ◆ Forward Freight Agreements
- ◆ Understanding Financial Statements and Taxation for Maritime Companies
- ◆ Digital Marketing
- ◆ Learning about Avoiding Copyright Infringement

BUSINESS CAPABILITY DEVELOPMENT

- ◆ Professional Certificate in Python
- ◆ Business Intelligence with Web Scraping and Text Mining
- ◆ Process Improvement 101
- ◆ Executive Tax Programme Level II (International Tax)
- ◆ Executive Tax Programme Level III (Income Tax): Advanced Tax Programme
- ◆ Budget 2022 Seminars Conducted by Big 4 Accounting Firms

STRATEGY AND POLICY

- ◆ Breakthrough Project Management – from Stakeholders Perspective
- ◆ Futurecraft 101: Introduction to Foresight
- ◆ Futurecraft 102: SP+ Tools and Facilitation
- ◆ Introduction to Red Teaming

INNOVATION, TECHNOLOGY AND TALENT DEVELOPMENT

- ◆ Venture Capital Financing for Start ups
- ◆ Applied Predictive Analytics in HR
- ◆ MySQL (MyStructured Query Language)
- ◆ National Infocomm Competency Framework (NICF) – Text Analytics
- ◆ National Infocomm Competency Framework (NICF) – Predictive Analytics
- ◆ Intellectual Property Rights Management
- ◆ Value Chain Analysis
- ◆ Ecosystem of Across Border Trade – Bill of Lading

● ALL MPA OFFICERS

- ◆ Decarbonisation (including carbon accounting, carbon trading models, terminologies)
- ◆ Cyber Security Awareness
- ◆ Video Analytics
- ◆ Data Analytics
- ◆ Tableau – Intermediate/Advanced
- ◆ Managing Innovation
- ◆ Effective Social Media and Digital Communication Skills
- ◆ Effective Engagement on Virtual Platforms
- ◆ Crisis Management
- ◆ AI, Machine Learning, Deep Learning & Java Coding/Programming
- ◆ Design Thinking

UPCOMING EVENTS (BY INVITATION)

NOVEMBER 2021–DECEMBER 2022

11th Maritime Public Leaders Programme (Virtual) – Nov 2021

Participants: Senior maritime officials

14th Maritime Safety Management Course conducted by MPA and Japan Coast Guard – Mar 2022

Participants: Maritime officials

World Maritime University Study Visits for MSc Students Specialising in Shipping Management and Logistics, as well as Port Management – Q3 2022

Participants: WMU MSc students specialising
in Shipping Management and Logistics,
and Port Management

8th Port Management Programme – Q3/4 2022

Participants: Port masters, harbour masters,
middle management personnel

HORIZON

MPA ACADEMY NEWSLETTER / NOV 2021 / ISSUE 10

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 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 mTower and was officially launched in October 2015.

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DESIGN

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