

# WAVES



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# Foreword

## Dear Members,

Following an exciting first quarter filled with festivities, I believe we are ready to embrace a successful year ahead. As we approach the second quarter of 2019, we are preparing for a series of maritime activities. Kicking off in April, we have an event-filled Singapore Maritime Week which boasts notable learning sessions such as the Singapore Maritime Technology Conference (SMTC) Research & Development Seminar, the SMTC Cyber Security Seminar, and the Maritime and Ports Authority (MPA) Innovation Lab Open House.

These topics tie in well with the technology theme of this issue of WAVES, which features Group CIO of BW Group, Tiong Kee Yong, sharing his insights on how shipping companies should approach and manage cyber risks. For the latest guidelines on *Cyber Security Onboard Ships*, check out page 16.

Recognising the value of virtual reality (VR) in the maritime industry, Waves speaks to Managing Director of KVH Videotel, Raal Harris, to understand how VR can help enhance the learning experience of seafarers as they move ahead in the maritime industry.

We also look at a world first for Singapore, a pilot programme which is using drones to carry out the often dangerous work undertaken by boarding agents.

Closer to home, the first quarter saw SSA rolling out two initiatives – the launch of the Singapore War Risks Insurance Conditions (SWRIC) and an MoU signing for Electronic Bills of Lading (EBL). Please see page 24 for details.

Lastly, take a look at the photos featuring SSA's Lunar New Year Lohei Cocktail Reception at Raffles City Convention Centre, and the YEG's Lunar New Year Networking Session at RedDot BrewHouse @ Dempsey!

We hope you enjoy this edition of Waves.

## Lisa Teo

SSA Vice President & Honorary Secretary,  
General Affairs Committee Chairman



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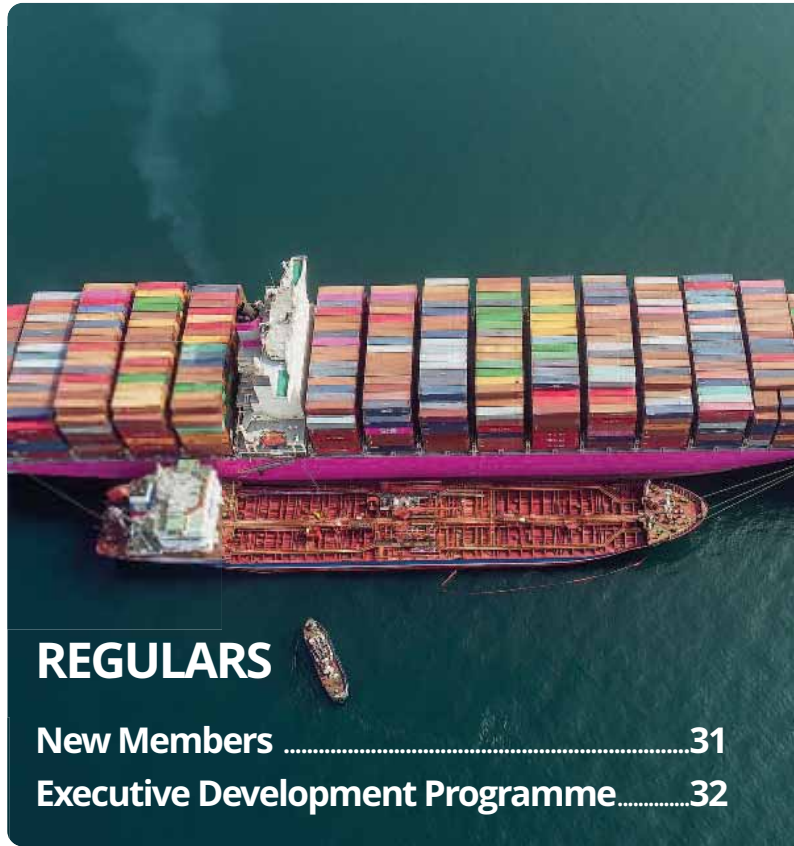
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### Notice to all SSA members – stay in contact

As you are aware, the SSA Secretariat often sends out email circulars to inform you, our members, of SSA's events and the latest developments in the industry. We have noticed that some of you may not be receiving the email circulars sent out by the SSA Secretariat – as your office email server may have classified our emails as spam.

To resolve such issues, kindly include SSA's domain name [ssa.org.sg](http://ssa.org.sg) into your email whitelist/safelist so that you remain in our communication channel. Thank you for your kind attention

## April

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### April 2019

- 02/04** 2020 Global Sulphur Cap Sub-committee Meeting
- 03/04** Young Executives Group (YEG) Committee Meeting
- 05/04** MFM Sub-committee Meeting
- 06/04** **Event:** Singapore Maritime Week
- 11/04** **Event:** Maritime Learning Journey\*
- 16/04** Tax Sub-committee Meeting
- 19/04** **Public Holiday:** Good Friday
- 22/04** Operations, Training & Manning Sub-committee Meeting
- 24/04** Maritime Safety Sub-committee Meeting

*\*subject to changes*

### May 2019

- 01/05** **Public Holiday:** Labour Day
- 03/05** Cruise Sub-committee Meeting
- 09/05** Marine Fuels Sub-committee Meeting
- 14/05** International Committee Meeting
- 16/05** Technical Committee Meeting
- 20/05** **Public Holiday:** Vesak Day (observed)
- 28/05** **Event:** 28th ASA Annual General Meeting
- 30/05** Council Meeting
- 31/05** Offshore Committee Meeting

### June 2019

- 04/06** Service Committee Meeting
- 05/06** **Public Holiday:** Hari Raya Puasa
- 07/06** SMEF Meeting
- 12/06** Legal & Insurance Committee Meeting
- 26/06** **Event:** SSA Annual General Meeting

### July 2019

- 03/07** Young Executives Group (YEG) Committee Meeting
- 09/07** 2020 Global Sulphur Cap Sub-committee Meeting
- 12/07** MFM Sub-committee Meeting
- 16/07** Tax Sub-committee Meeting
- 22/07** Operations, Training & Manning Sub-committee Meeting
- 25/07** Council Meeting
- 31/07** Maritime Safety Sub-committee Meeting

*This event calendar is subject to change*


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# Virtual Reality



## Transforming the Way We Learn

Interview with **Raal Harris**, Managing Director, KVH Videotel

What delivers better results?  
Passively listening to instructions  
in class or actually carrying out  
the task yourself?

One of the major challenges faced by trainers is helping trainees retain what they learn. "People remember better by performing the task themselves," says Raal Harris, Managing Director of maritime training specialist, KVH

Videotel. "That's because of the way our brain processes and retains information. We tend to remember places better if we have been there, rather than if we have only seen them in books or documentaries. If we can harness that and adopt activity-based learning, the results can be very powerful.

"This is where virtual reality (VR) can play a critical role in training," he adds. "We have witnessed how people retain information better through a VR experience in our training programmes."

**"Given the rapid advancement in technology, the maritime industry must embrace the use of VR in training seafarers."**

## Embracing VR

With ever changing regulation and legislation in the maritime world today, the need for an engaging training method has never been more crucial, says Harris. “The more experiential the learning environment, the better the retention.

“Given the rapid advancement in technology, the maritime industry must embrace the use of VR in training seafarers,” he says. KVH Videotel has been working with

VR technology for more than two years and recently entered an agreement with Ukraine-based maritime software development company OMS-VR, to produce and distribute VR maritime training equipment.

The two companies will jointly develop a series of VR training programmes over the next two years, producing a portfolio of more than 40 training courses. The training modules will include essential STCW-related critical safety materials, cargo & engineering tasks, and exercises on industry best practices.

## Learning by doing

VR offers trainers and educators a powerful set of tools which improve learner engagement and retention, reports Harris. “It’s proven that we learn better by doing. VR provides a safe sandbox in which we can learn exponentially, without the associated dangers that come with a real learning environment.”

Harris believes that VR technology will disrupt the learning process as more and more of these devices become increasingly portable and affordable.

Unlike static websites, VR offers a 360-degree experience. “The whole user experience is a lot more engaging and real,” he explains.

“A simulator is a piece of equipment that needs to be installed at a physical location. With VR technology, you do not require installation of this equipment. You can use VR anytime, anywhere. VR-enabled learning offers an immersive experience similar to the real world. It enhances the learning experience.”

## Safer training

In a high-risk environment, VR-assisted learning is particularly valuable. “It allows people to learn and practice in a safe environment, for example in lifeboat drills. Whilst VR is never a substitute, you can train in a VR-supported environment first before conducting a real drill. In short, you can learn from making mistakes without having to pay the price.”

Many people have the theoretical knowledge in handling an incident but lack the hands-on experience to apply the knowledge. “Learning in a VR environment can test their ability to react and handle the situation without endangering their lives.”



VR technology and capabilities continue to advance rapidly. Headsets are getting smaller with better latency and gloves are designed to create a better immersion experience for users.

### Recruitment

VR can also be a valuable tool in recruiting the right candidate, he says. “We have clients using it in the recruitment process to test a candidate’s ability to perform tasks which they claim they can do.”

VR technology and capabilities continue to advance rapidly. Headsets are getting smaller with better latency and gloves are designed to create a better immersion experience for users.

VR-assisted training can be challenging for some people. While Harris would not suggest that older age groups have difficulties adopting VR learning, it is notable that younger groups ease into that space fairly quickly. It seems those who grew up with Playstation have no issues embracing VR.

### VR is for now

“VR is not something meant for the future,” says Harris. “It is happening now. Today, VR is used extensively in many industries. It is a big part of what Videotel does. For those involved in training, they will need to harness the benefits of VR technology to enhance the learning experience.

“The sooner you adopt VR in your training, the more you will appreciate what the technology can do for you.”

VR-enabled learning offers an immersive experience similar to the real world. It enhances the learning experience.”



# Cyber Threats in the Maritime Industry

Interview with **Tiong Kee Yong**,  
Group CIO, BW Group



Cyber security, a major concern across all industries can no longer be taken lightly. WAVES speaks to Group CIO of BW Group, Tiong Kee Yong, to find out the major threats and vulnerabilities faced by the maritime industry, and how shipping companies should approach and manage cyber risks.

Like many industries, the shipping industry has not been spared cyber threats and things can only get worse, believes Tiong Kee Yong, Group CIO with BW Group. Heading the IT team in driving BW Group's digital transformation, Kee Yong shares his views on cyber risks and how we can avert some of these risks.

"Shipping is like any other industry, not immune to cyber threats. The maritime industry is known to be a laggard in adopting technology compared with other industries," says Kee Yong.

"As more and more shipping companies push ahead with connectivity on board their vessels, we are increasingly exposed to cyber threats.

"A cyber attack is serious," he says. "Besides disrupting operations and causing delays in the supply chain, cyber attacks can spin off into a series of detrimental consequences which include loss in productivity, vessels, cargoes and potentially lives. It hurts a company's image and affects future revenue."

Very often, ill prepared companies and individuals are

“Besides disrupting operations and causing delays in the supply chain, cyber attacks can spin off into a series of detrimental consequences which include loss in productivity, vessels, cargoes and potentially lives.

the targets of cyber attacks. Simple measures like raising awareness of cyber risks can help prevent the company from falling prey to these attacks. Many employees including shore staff and crew are lax about good cyber practices. Using default passwords, not changing passwords over a period of time and sharing of passwords are some bad practices which should be discouraged. Educating employees about potential hacking, phishing, malware and the seriousness of data leakage can help reduce a cyber attack.


Shipping companies can minimise their risk exposure through learning ‘best practices’ from other industries. “There is no need to re-invent the wheel,” says Tiong Kee

Yong, citing the NIST framework which is already being adopted as a best practice in addressing cyber security across other industries.

“It is good to see that the shipping industry is waking up to these threats, but we can do more. In Singapore, we have the government proactively pushing the cyber security agenda via the Cyber Security Agency of Singapore (CSA), and the Maritime and Port Authority (MPA) of Singapore encouraging communities to share and learn. SSA is doing an excellent job in helping to raise awareness on cyber security through seminars and talks.” says Kee Yong.

“In this ever-changing world of technology, threats are becoming harder to prevent. In the drive for digitalisation, we are exposing ourselves to cyber risks. For example, VSAT (Very Small Aperture Terminal) satellite communications systems are not spared from cyber attacks.” says Tiong Kee Yong. “Today, a number of Operational Technology (OT) systems such as AIS, ECDIS and Engine and Equipment Controls are increasingly connected via Internet of Things (IoT) through the same VSAT link.

“Before the advent of the IoT, the IT and OT worlds were not connected. With the need for real time data collection and analytics for decision making, this OT-IT integration and connectivity introduces a higher risk for



“In this ever-changing world of technology, threats are becoming harder to prevent. In the drive for digitalisation, we are exposing ourselves to cyber risks.”

cyber attacks.” says Kee Yong.

“The life cycle management of these IoT devices is still relatively immature. There is a lack of effective upgrade and patch management for millions of devices once they are installed. Imagine the unlucky staff who have to go around plugging and unplugging USB cables to update a security patch on each and every device.” he says.

“It is crucial that the business (commercial, fleet management operations and technical management) and IT teams work together to implement a suitable governance framework and draw up clear lines of responsibilities to identify what is critical to protect and how to respond to these incidents. Businesses and IT need to work together with industry IoT vendors to address the gaps in security management and improve on the designs of these devices,” says Kee Yong.

“The shipping industry should also learn from industry peers on leveraging artificial intelligence (AI) and automation tools to counter the advancements of cyber hackers. We are already seeing these tools used by the ‘dark side’ to carry out more targeted attacks.”



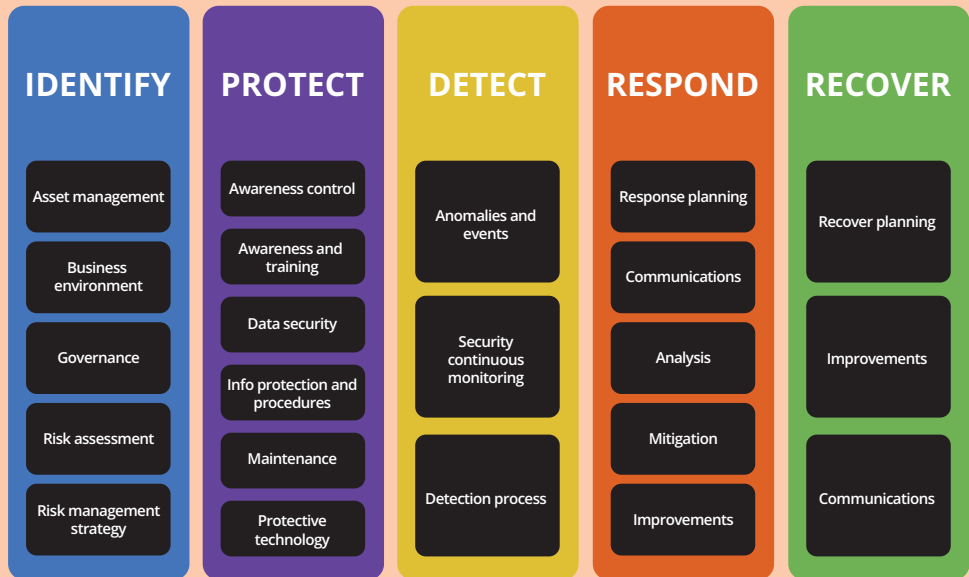
### The NIST Cybersecurity Framework

The BW Group uses the NIST\* Cybersecurity Framework to assess and improve its ability to prevent, detect and respond to cyber attacks.

The Framework not only helps organisations understand their cyber risks (threats, vulnerabilities and impacts), but also how to reduce these risks with

customised measures. The Framework also helps them respond to and recover from cyber incidents, prompting them to analyse root causes and consider how they can make improvements. Companies from around the world

have embraced the Framework, including JP Morgan Chase, Microsoft, Boeing, Intel, Bank of England, Nippon Telegraph and Telephone Corporation, and the Ontario Energy Board.



\* National Institute of Science and Technology, US Department of Commerce



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## Case studies

# A Tale of Two Companies

By **Gideon Lenkey**, Director of Technology EPSCO-Ra

Penetration testing - the practice of testing a computer system, network or web application to find security vulnerabilities that an attacker could exploit - is becoming common business practice today. But what happens after the test? We look at two companies that have taken different approaches - with very different outcomes.



### Company A

Following a secret penetration test carried out at the request of the Chief Technology Officer, a number of areas were identified in need of improvement. The company's cyber security policies were stored as hard copies which had not been updated since they were compiled. These policies had become outdated due to changing threats. Controls were based on the company's own adverse experiences and did not relate to any specific risk management goals.

In addition, it was found that there were multiple undocumented procedures known only to a few people in operations. The company would not be able to detect, react or recover from even the most basic attacks.

On the plus side, the situation had the potential for rapid improvement.

#### Follow up action

The company was advised to carry out a risk assessment and to review control design, in addition to updating policies and procedure documentation. This risk mitigation strategy would help avert

potential cyber attacks resulting in financial losses.

However, a top level decision was made to abort this idea and instead to purchase an off-the-shelf solution. No additional staff training was carried out and the outdated policy manuals remained in place.

#### Consequences

Shortly after, the company experienced two major cyber attacks in rapid succession. Whilst the first attack had little impact on day to day workflow, the second attack was financially devastating.

Databases and critical applications were encrypted and ransomed for USD100,000. Company A was unable to recover the servers, and more importantly, had not identified that one database server in particular was central to its Enterprise Resource Planning (ERP) system and critical business functions. It had been afforded no more protection than non-critical systems. Because the database could not be recovered, a decision was made to pay the ransom. This took some time to arrange and during this time, orders and payments had to be processed manually, resulting in delays.



Dealing with the threats of cyber attacks should be a company-wide effort requiring commitment and transparency from top management and employees.

## Company B

Again, EPSCO Ra's relationship with Company B began with a covert penetration test. Unlike Company A, Company B went into the process with full support from the management team. In addition to addressing technical deficiencies highlighted by the penetration test, Company B was prepared to work to identify specific risks to the company and prioritise areas which required more resources. The company understood that cyber risk management was a business process, like any other business function.

### Follow up action

Immediate actions were taken to address serious issues based on the information gathered from the penetration test. A cyber security risk assessment identified the potential impact to critical business operations. Subsequently, attention was focused on critical systems, design controls and processes to ensure that Company B was well prepared in a cyber attack.

### Consequences

Since then, a number of incidents have occurred and each time they were remediated efficiently and cost effectively.



## Key learnings

The steps each company chose to take after the penetration test resulted in two totally different outcomes.

By taking the time to identify risks at the business level and allocate budget according to risk tolerance, Company B was able to provide operations with a clear vision of what needed to be protected. This resulted in a carefully conceived suite of controls, policies and processes which were regularly tested, proven functional and well documented.

Dealing with the threats of cyber attacks should be a company-wide effort requiring commitment and transparency from top management and employees.

# Latest Guidelines on Cyber Security

The shipping industry has recently launched the third edition of its cyber risk management guidelines, *Guidelines on Cyber Security Onboard Ships*. These guidelines address the requirements to incorporate cyber risks in the ship's safety management system (SMS), implement risk assessments for operational technology (OT) and provide guidance for dealing with cyber risks.

The new guidelines – the 3rd edition since its launch barely three years ago in January 2016 – reflect the constantly evolving nature of maritime risks and challenges. They cover three key areas:

## The SMS (safety management system)

The industry will soon be under obligation to incorporate measures to deal with cyber risks in the ship's SMS. The updated guidelines provide additional information which should help shipping companies carry out proper risk assessments and include measures in their SMS to protect ships from cyber-incidents. A new dedicated annex provides measures that all companies should consider implementing to address cyber risk management in an approved SMS.

## Operational technology (OT)

Ships have increasing levels of operational technology (OT), such as navigational systems and engine controls, which are integrated with information technology (IT) and connected to the Internet.

The risks associated with OT are different from IT systems. Malfunctioning IT may cause significant delays to a ship's unloading or clearance, but malfunctioning or inoperative OT can pose a real harm to people, the ship or the marine environment. For example, if the ECDIS (Electronic Chart Display and Information System) is hit by malware or when software breaks down due to incompatibility after an update, it can be detrimental to the entire operation.

## Supply chain risks

A new area of focus is the risk of malware infecting the ship's systems via the multiple parties associated with the operation of a ship and its systems. More and more ships are closely connected to security systems in the offices of the companies, shippers and agents.

Prudent actions include evaluating the security of service providers, defining a minimum set of requirements to manage the supply chain or third-party risks and making sure that agreements on cyber risks are formally communicated in writing.

The guidelines also underline the need for ships to be able to disconnect quickly and effectively from shore-based networks, where required.

For a copy of Guidelines on Cyber Security Onboard Ships, and for a full list of organisations supporting the initiative, please visit <https://bit.ly/2ub5dgb>



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# Agency by Air

## Trialling shore-to-ship deliveries by drone

Wilhelmsen Ships Service and Airbus have teamed up to bring shore-to-ship drone deliveries in Singapore. WAVES spoke to Marius Johansen, Vice President Commercial Ships Agency, Wilhelmsen Ships Service AS, to find out more.



*Marius Johansen, Vice President  
Commercial Ships Agency, Wilhelmsen  
Ships Service AS*

From a landing platform and operational centre set up at Marina South Pier in Singapore, a very special flight took off in March – a drone, delivering 1.5kg of cargo to Swire Pacific Offshore's anchor handling tug supply (AHTS) vessel Pacific Centurion.

Partnering with Airbus, Wilhelmsen was launching the pilot trial of its shore-to-ship Singapore pilot project, marking the first deployment of drone technology in real-time port conditions. The Airbus Skyways drone navigated autonomously along pre-determined 'aerial corridors' in its 1.5 km flight to the Eastern

Working Anchorage, to deliver 3D printed consumables, before returning to its base. The entire delivery from take-off to landing and back again, took only ten minutes.

After this successful first delivery flight, Marius Johansen said: "The now proven, seamless operation of drone deliveries from shore-to-ship, in one of the world's busiest ports, proves the hard work, investment and faith we, and indeed our partners, placed in the Agency by Air drone delivery project over the past two years was not misplaced."

There has been a lot of interest from customers and the general public since the Agency by Air project and pilot trial were announced at Posidonia in June 2018 and Johansen told WAVES that there is a long list of customers wanting to participate.

"More than 20 companies have specifically expressed interest in the Singapore trial, where, because of draft restrictions at the specific anchorage, we're looking to complete drone deliveries to offshore support vessels and dry bulk carriers," he said.

**"We have gained many insights since we embarked on this journey and it definitely requires a great deal of effort to make a pilot trial like this happen."**

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### Starting small

It was back in 2017 that the team was first struck with the idea of using drones to perform the often dangerous work undertaken by boarding agents. "We conducted a small-scale parcel delivery demonstration of a pipe from shore to a rescue boat 500 metres from shore, in Oslo during Nor-Shipping at our headquarters in Lysaker," said Johansen. "The response from the invited customers and guests was very positive, so we started to evaluate and identify possible pilot trial locations, to deliver actual parcels to working vessels."





### A Singapore testbed

Singapore was chosen as one of the busiest ports in the world in terms of shipping tonnage, and one of Wilhelmsen's highest volume ports in terms of the husbandry services the company handles. This gave access to a huge customer base and large numbers of vessels, which is beneficial for any pilot trial.

"But besides that, Singapore is a good testbed for new technologies and initiatives, as it benefits from great support from the authorities," said Marius Johansen. "The Maritime Port Authority of Singapore (MPA) and the Civil Aviation Authority of Singapore (CAAS) have a passion for change and genuine willingness to test new ideas."

### Large scale trials

Agency by Air is truly a one-of-a-kind project. While drone delivery is not a novel idea in the maritime sector, it has never been trialled on such a scale. Trials from tugboat to ship have been explored, but shore-to-ship delivery of this range has never been explored before. "This trial is not only the first in Asia, but also the first in the world. In addition, the project required

us to work simultaneously with both the aviation and maritime regulators, which is unusual to say the least. Having a company like Airbus on board as a partner is hardly run of the mill, either!"

### A Singapore testbed

Wilhelmsen says successful implementation of delivery by drones will depend on a number of factors.

The first is technology – there are challenges such as limited battery life and difficulties operating in poor weather, but original equipment manufacturers and major shippers are keen to improve the technology further and extend the reach and scope of what can be done with drones, he says.

Second, regulations from both the aviation and maritime authorities can be a big obstacle when it comes to rolling out a drone delivery service globally, because the regulations are different in every country.

Third, organisations and authorities must manage change effectively. "Change is not always welcome, it makes you wary. A change of culture and mindset needs to be driven from top management," said Johansen.

He added: "We have gained a lot of insights since we

embarked on this journey and it definitely requires a lot of effort to make a pilot trial like this happen. Especially when it comes to implementing something new into the industry, as we have to get the buy-in from various stakeholders and convince them to make the change. But the biggest challenge has been aligning the various requirements from each stakeholder and getting to the point where all requirements are met. This is especially difficult in a small country like Singapore where the airspace and the sea space are extremely busy 24/7.”

**“We believe the deployment of drones will only grow with time. It is likely that the larger volume, more technologically focused ports and terminals will be the early adopters, integrating drones into their operations.”**

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### **Moving forward**

Drone use is allowed in Singapore but there are laws to be followed. A drone permit is required if the drone poses potential risks to the public or will be flown in a restricted area. All commercial drone activity requires a permit in place before any commencement of flights.

Airbus obviously has considerable expertise in vertical lift solutions, and all its systems comply with aviation standards STANAG 4702. “Together we have worked closely with the Aviation Regulator, CAAS, and MPA, because for a use case like ours that is new, there is no established framework, nor existing guidelines in place,” said Johansen.

There were security concerns raised by Singapore Home Affairs and Customs about verifying the contents of parcels. “Our Singapore office warehouse is ISPS certified, so there is no implication if we were to deliver parcels out from the warehouse directly. However,

further exploration and discussion on security and Customs clearance is needed for parcels sent from the ship back to shore,” he said.

### **Moving forward**

In the pilot trial, the first few flight tests will be made to offshore supply vessels, before deliveries are made further down the anchorage to bulk carriers.

Once initial testing is finalised, the aim is to do up to 100 flights. “Upon completion of the 100 flights, we will validate the feasibility and develop the required technologies such as ship localisation, precision landing, beyond visual line of sight communications, etc. If the results are positive, we will definitely have a potential commercial launch.”

Other port authorities are very keen to work with Wilhelmsen to bring this service to their port once the technology has been validated, said Johansen. “We operate our agency business globally, so there are a number of other high-volume ports which have the potential to deploy such services.”

Drone technology in the maritime industry may still be in its infancy – but if we were to ‘fast forward’ ten years, does he think drone deliveries will be standard in ports?

“In the maritime environment, drones can be used for security, environmental surveillance, to supply vessels with spare parts, for emergency missions, such as search and rescue, and for ship and cargo inspection. The technological potential with drones is immense, and we believe their use will only grow with time. It is likely the larger volume, more technologically focused ports and terminals will be the early adopters, integrating drones in some way, shape or form, into their operations.”

Maritime service delivery can be safer, more productive and more responsive by replacing manual delivery of parcels by agents via launch boat with autonomous drones, says Johansen.

However, he concludes: “As innovative, efficient and, indeed, exciting as drone delivery is, drones are nevertheless just another tool. Their application in a working port environment depends on our industry-leading agency expertise and intimate working knowledge of port operations.”

# Two Important Initiatives Announced



**Dr Lam Pin Min, Senior Minister of State for Transport and Health, announced two important initiatives for the maritime industry at the SSA Lunar New Year Cocktail Reception, on January 22, 2019 at the Raffles City Convention Centre. The initiatives, the new Singapore War Risks Insurance Conditions (SWRIC) and the development of an inter-operability framework for electronic trade documents for the maritime and trade industries, strengthen Singapore's standing as a leading global maritime hub.**

## Enhancing Singapore's maritime insurance offerings

The first Singapore-based national mutual war risks insurance, the Singapore War Risks Mutual (SWRM) was launched in 2015 by P&I underwriter, The Standard Club Asia. In a short span of four years, the cover exceeded expectations with close to 800 ships insured.

Available to members of the SSA irrespective of the flag of the ship and non-members whose ships are registered in Singapore, the cover includes P&I war risks, hull war risks, detention and diversion expenses, sue and labour and discretionary insurances.

Headed by the SSA and supported by the MPA, a Project Steering Committee was set up to look into a new set of Insurance Conditions with the aim of bridging coverage gaps and updating and simplifying existing war conditions available in the market.

The results of this endeavour are the first insurance conditions to be written from a shipowner's perspective, addressing important risks that are felt by the global shipping community. Local expertise will be developed to ensure that the conditions are updated and remain relevant to the industry.

Michael Phoon, Executive Director, SSA, explains: "The SSA's efforts to craft and develop the Singapore War Risks Insurance Conditions are our endeavours to always keep the shipping community updated on global trends and changes. Change is a constant. And we need to navigate the future for our members.

"The current established War Risks insurances offered by Japan, UK, Greece and Norway were crafted years ago. But with all good intentions, no one would have imagined the growing and pervasive adoption and installation of technology gadgets and the use of instruments such as ECDIS, email applications, smart sensors etc. We are now seeing technology applications being more ubiquitous and being installed into ships. This leads to cyber security issues on board vessels.

"How does insurance cover these emerging threats?" asks Mr Phoon. "The SWRIC bridges coverage gaps and will constantly reflect and include tomorrow's new technology for the shipping industry."

## Caroline Yang, CEO Hong Lam Marine Pte Ltd

"The conditions take important stances on new risks where the insurance industry is grappling with finding solutions. This will no doubt trigger important and useful discussions within the industry and provide progressive insurers with the opportunity of embracing risks and maintaining relevance on issues that are important to shipping today."





**Lisa Teo,**  
Executive Director, Pacific International  
Lines Ltd

"In war and war like situations owners are unlikely to have prior experience or any significant degree of control, yet consequences can be disastrous. It is important under such circumstances that insurance coverage is as relevant and comprehensive as possible. I am very pleased with the work Singapore has carried out to ensure this is the case."



Gina Lee-Wan, Chairperson of the SSA Legal and Insurance Committee, who has advised on the project, says that the words used have been designed to provide the most comprehensive coverage of any war risk conditions available and significantly reduce the chances of a claim falling into a gap between hull and war insurance. "The Singapore conditions are wider than the Nordic plan and offer better connectivity with the hull policies of London and other international insurance markets, avoiding gaps in cover," she explains. "Factors connecting the hull and war risks cover include the law and jurisdiction of the former applying to the latter, with conflict resolution further helped by legal expense cover if clarifying which policy responds to a loss proves necessary."

"The SSA's efforts to craft and develop the Singapore War Risks Insurance Conditions are our endeavours to always keep the shipping community updated on global trends and changes."

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## New partner bolsters digitalisation of electronic Bills of Lading

Back in January 2018, at the launch of the Sea Transport Industry Transformation Map, the Maritime and Port Authority of Singapore (MPA), SSA and Singapore Customs signed a MoU to look jointly into the digitalisation of trade and maritime documentation, such as Bills of Lading (BL), in the industry.

Since the signing of this MoU, the industry has seen progress with successful electronic Bills of Lading (e-BL) trials amongst consortiums led by two shipping lines – one by APL and the other by PIL and IBM. The trials simplify existing processes as well as leverage blockchain technology to bring various trading parties together to support information sharing and transparency.

To facilitate inter-operability of the solutions developed by the various consortiums, the members have welcomed a new MoU partner, the Info-communications Media Development Authority (IMDA), to develop a new inter-operability framework.

“The close partnership between the Government, the industry and SSA offers a unique competitive advantage for Singapore.”

The MoU signing ceremony took place at SSA's Lunar New Year Cocktail Reception and was witnessed by Dr Lam Pin Min, Senior Minister of State for Transport and Health. “Working together with IMDA, the industry can expect to see different digital ecosystems inter-operate seamlessly with efficient exchange of electronic trade documents,” he says. “The work will entail the development of a set of governance and legal frameworks, technical standards and inter-operable digital enablers.

“The close partnership between the Government, the industry and SSA offers a unique competitive advantage for Singapore. We must continue to strengthen this partnership. This will enable Maritime Singapore to stay relevant and competitive,” adds Dr Lam.



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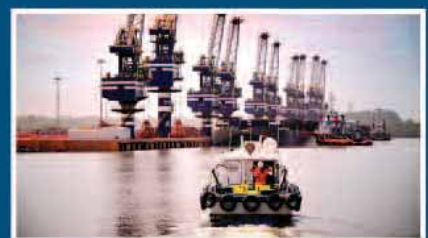
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## SSA Lunar New Year Cocktail Reception 2019

More than 600 maritime professionals gathered at the Raffles City Convention Centre to usher in a prosperous Year of the Pig on January 22, 2019.

The maritime community, along with Guest-of-Honour,

Minister Lam Pin Min, Senior Minister of State, Minister for Transport and Minister for Health, were wowed by the acrobatic performances from the Lion Dance troupe from Yiwei Athletic Association.



Mr. Esben Poulsson, SSA President kickstarted the evening's celebrations, thanking all guests and members who have continuously supported SSA events. He shared the strategic initiatives for the year 2019, which include the publication of the Singapore War Risk Insurance Conditions (SWRIC) and the adoption of a Memorandum of Understanding for Electronic Bills of Lading (or e-BL).

Guest of Honour Lam Pin Min thanked the industry for driving the Sea Transport Industry Transformation Map. He also formally launched the Singapore War Risks Insurance Conditions and witnessed the signing of a MoU amongst the Maritime and Port Authority of Singapore (MPA), Singapore Customs, the Info-communications Media Development Authority (IMDA) and SSA, to



develop an inter-operability framework for electronic trade documents. The development of Electronic Bills of Lading (e-BL) will enable the seamless exchange of electronic trade documents within and across different digital ecosystems.

During the evening Esben Poulsen welcomed four new members into the SSA community: Thenamaris Singapore Pte. Ltd., Trafigura, Candina Group and I.T.I. Corporation Pte Ltd.

As always, the cocktail reception was oversubscribed, with members enjoying the camaraderie that is unique in Singapore's shipping industry.



We would also like to thank the following sponsors for their generous contributions towards the cocktail reception:

- Braemar ACM Shipbroking
- Jurong Port Pte Ltd
- Maersk Singapore Pte Ltd
- Ocean Tankers Pte Ltd
- PSA Corporation Ltd
- The Shipowners' Mutual P&I Association (Luxembourg) Singapore Branch

Wishing all our members a happy, prosperous and smooth sailing year ahead!

祝贺大家, 新春愉快, 风起帆扬, 宏图大展, 融通四海, 万事如意!

## YEG Lunar New Year 2019

More than 100 participants ushered in a year of good fortune with a Lohei-by-the-garden at RedDot BrewHouse @ Dempsey on February 13, 2019. This was accompanied by 'Çai Shen Ye', the tossing of showers of 'gold' coins and blessings for a prosperous year!

The networking session saw many exchanging greetings and tucking into a sumptuous spread of pizza, pork knuckles and satay, washed down with hearty mugs of award-winning home brewed beer. SSA would like to wish all our YEG members a successful year ahead!



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Thenamaris Singapore Pte. Ltd. provides commercial management services to the Thenamaris (Ships Management) Inc. managed fleet trading in the Asia market. Thenamaris is a global ship manager of high specification modern ocean-going vessels. The total fleet under management currently comprises 63 oil tankers, 19 bulk carriers and three containerhips while Thenamaris LNG fleet comprises three LNG carriers and four LPG carriers.



Founded in 1993, Trafigura is one of the largest physical commodities trading groups in the world with a turnover of over USD180 billion in 2018. The company's ocean freight services provide reliable transport to small, medium and large internal and third-party customers using a combination of time and voyage charters.

Last year, Trafigura handled over 4,100 wet and dry fixtures globally. It is also building on its significant chartered wet and dry freight fleet by adding new-build crude oil and product tankers to extract the full value of the cargo infrastructure. From early this year, Trafigura's Wet Freight Shipping book will start to take delivery of 39 new tankers constructed in South Korea and China on a bareboat charter basis. These will supplement the company's current portfolio of leased tankers.

ASSOCIATE MEMBERS



Candina Group has a long shipping business history, dating back to the year 1929, when it was first established as a company owner and shipping agent. All the experience built up throughout these years has consolidated this traditional family company as one of the most prestigious companies in the management, training and screening of marine personnel.



I.T.I. Corporation Pte Ltd has been the holding company of I.T.I. Group of Subsidiary Companies since 1978.

It is also a venture capital firm having a strong Southeast Asia presence, being headquartered in Singapore.

Its subsidiary companies focus on servicing the shipbuilding, ship repair, shipping fleet supplies and oilfield industries.



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## Training Calendar | APRIL – JULY 2019

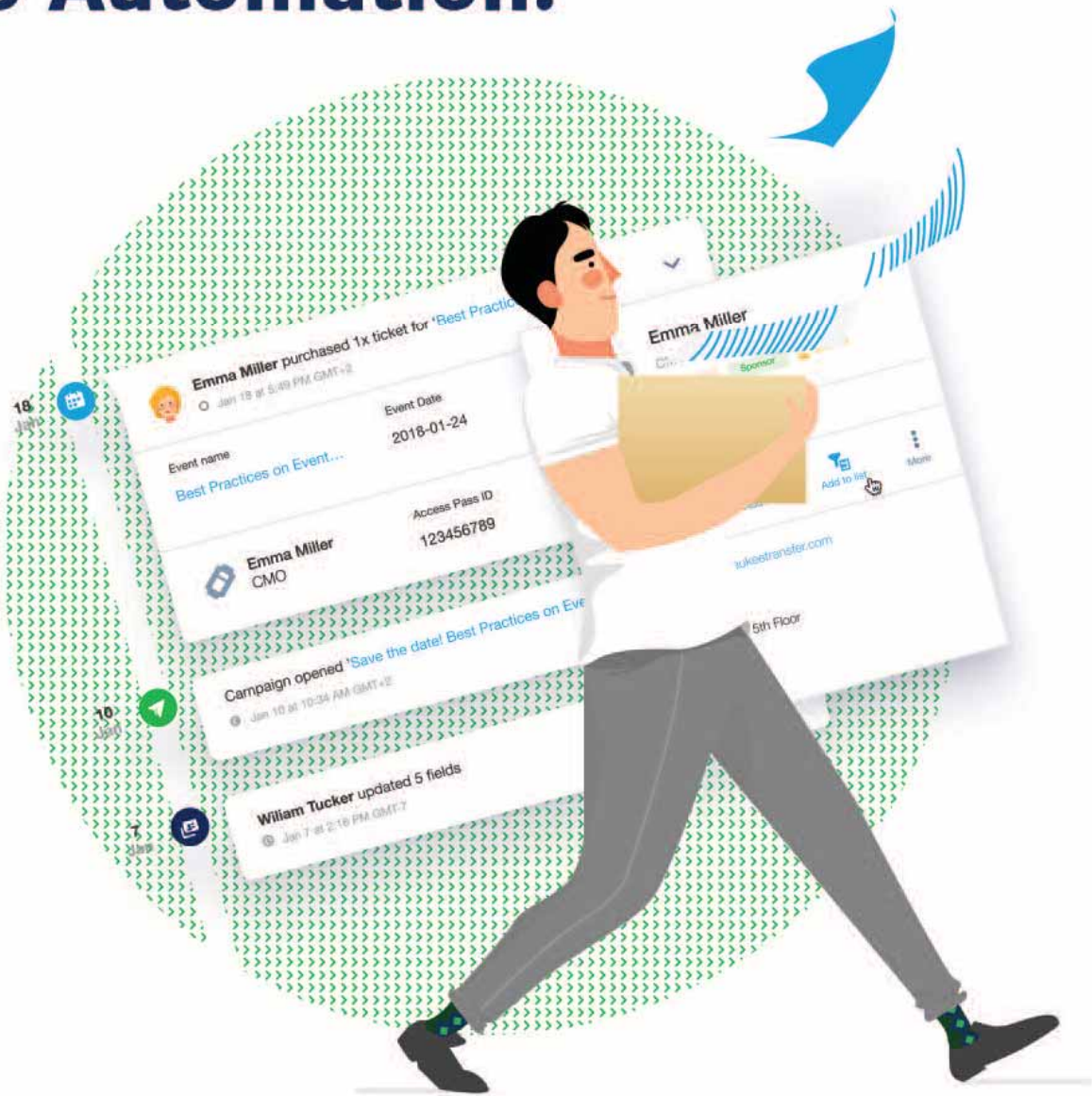
COURSES OPEN FOR REGISTRATION				FEES* (SGD)	
Course Title	Start Date	End Date	Duration	SSA Members	Non-SSA Members
Introduction to Shipping (Masterclass)	09/04/19	10/04/19	2 Days (9.00am – 6.00pm)	\$642.00	\$963.00
Introduction to Mass Flow Metering (TR48)	10/04/19	10/04/19	1 Day (9.00am – 6.00pm)	\$428.00	\$642.00
Maritime Labour Convention 2006 - The Concise Perspective	17/04/19	17/04/19	1 Day (9.00am – 6.00pm)	\$385.20	\$577.80
Basic Bunkering Practices (SS600 & TR48)	17/04/19	18/04/19	2 Days (9.00am – 6.00pm)	\$856.00	\$1,284.00
1.5-D Refresher Course for Bunker Surveyors and Bunker Cargo Officers - including MFM	17/04/19	18/04/19	1.5 Days 17: (9.00am – 6.00pm) 18: (9.00am – 1.00pm)	\$856.00	\$1,284.00
Principles of Shipping Operations & Practices	13 Evenings from 30/04/19 till 06/06/19 Kindly call to enquire			\$834.60	\$1,251.90

COURSES OPEN FOR REGISTRATION				FEES* (SGD)	
Course Title	Start Date	End Date	Duration	SSA Members	Non-SSA Members
Compliance of the IMDG Code for Transport of Dangerous Goods	15/05/19	17/05/19	3 Days (9.00am – 6.00pm)	\$963.00	\$1,444.50
Marine Insurance	29/05/19	30/05/19	2 Days (9.00am – 6.00pm)	\$481.50	\$722.25
Understanding Import/Export Techniques & Documentation	30/05/19	31/05/19	2 Days (9.00am – 6.00pm)	\$601.34	\$902.01
Container Management & Practices	13/06/19	14/06/19	2 Days (9.00am – 6.00pm)	\$481.50	\$722.25
Introduction to LNG Bunkering	19/06/19	19/06/19	1 Day (9.00am – 6.00pm)	\$428.00	\$642.00
Principles of Shipbroking & Chartering	19/06/19	21/06/19	2.5 Days 19: (9.00am – 1.00pm) 21: (9.00am – 6.00pm)	\$642.00	\$963.00
Introduction to Shipping (Masterclass)	03/04/19	04/04/19	2 Days (9.00am – 6.00pm)	\$642.00	\$963.00
Effective Written Communication in the Shipping Industry	08/07/19	10/07/19	3 Days (9.00am – 6.00pm)	\$722.25	\$1,082.84
Basic Bunkering Practices (SS600 & TR48)	10/07/19	11/07/19	2 Days (9.00am – 6.00pm)	\$856.00	\$1,284.00
Introduction to Mass Flow Metering (TR48)	24/07/19	24/07/19	1 Day (9.00am – 6.00pm)	\$428.00	\$642.00

\*Fees subject to prevailing GST. MCF Training Grant is available for eligible participants. MCF Training Grant is not available for the courses – “Understanding Import/Export Techniques and Documentation” and “Effective Written Communication in the Shipping Industry”. Please refer to [www.mpa.gov.sg/mcf](http://www.mpa.gov.sg/mcf) for more information. Dates may be subject to change. Download the course registration form at: <http://www.ssa.org.sg/images/ssa/pdf/Course%20Application%20Form-20Sept2016.pdf> and for further enquiries, please contact Kuna at 6305 2267 or email [kuna@ssa.org.sg](mailto:kuna@ssa.org.sg)



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