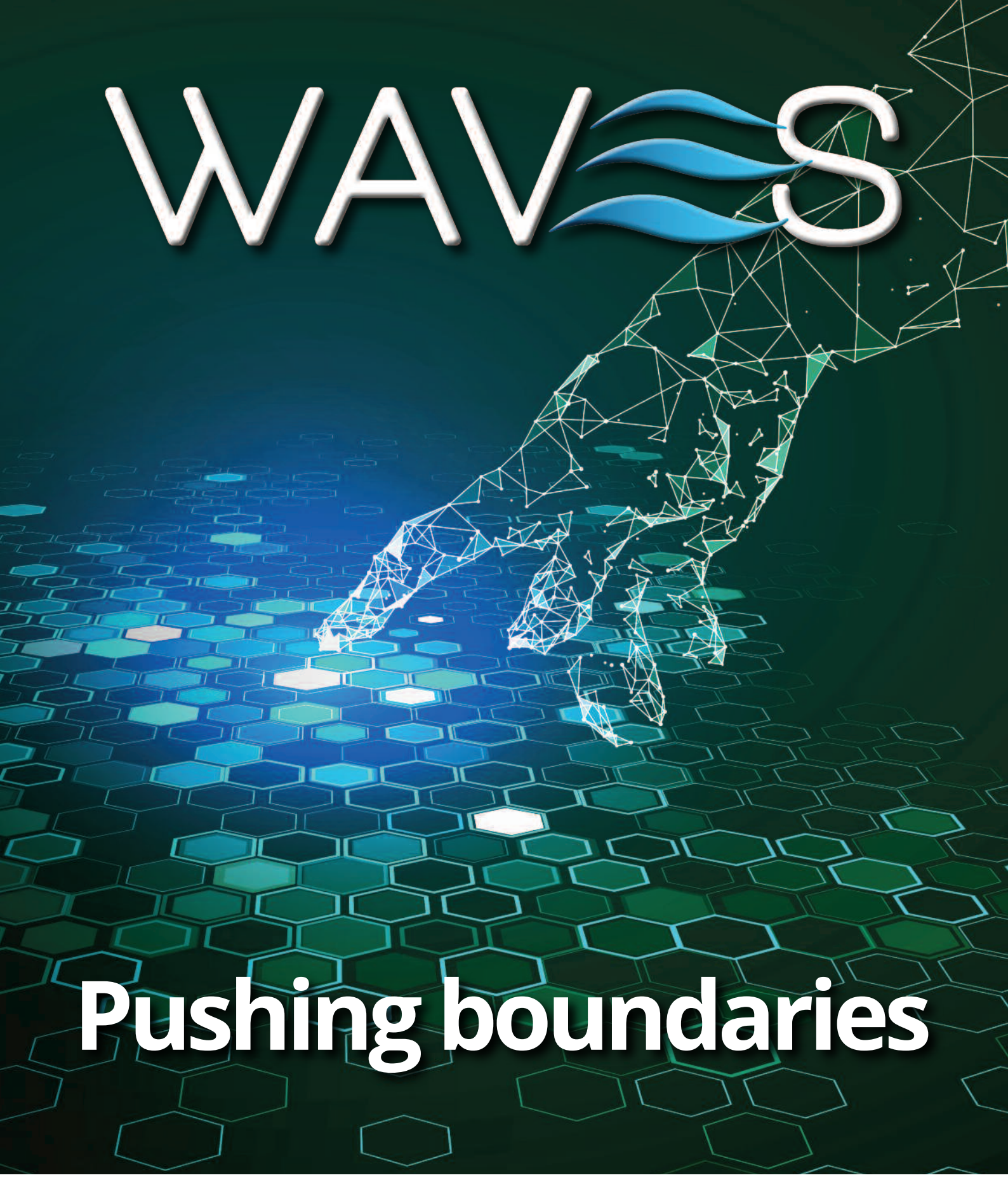

Pushing boundaries

SSA SINGAPORE SHIPPING ASSOCIATION

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MariApps Marine Solutions is determined to provide digital solutions that steer you towards a more transparent and sustainable operational efficiency.

Electronic Record Book (eRBooks) is a module in MariApps' smartPAL digital solution suite, designed to replace the traditional paper-based record books.

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- **Oil Record Book I & II**
- **Garbage Record Book I & II**
- **Ballast Water Record Book**
- **Cargo Record Book**
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eRBooks facilitates accurate digital entries while complying with RESOLUTION MEPC.312(74), MARPOL regulations, and Flag State requirements. The application is equipped with local browser-based application for onboard users, which is also communicated to the shore office. Each electronic record book is developed as an independent sub module in the eRBooks offerings, interfaced within existing PAL modules. eRBooks application can also run without PAL support as a standalone.

eRBooks is type approved by Bureau Veritas. MariApps has received flag approval from Marshal Island Flag and application is in progress with the Liberian, Panamanian, and Finland Flag.

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To know more about eRBooks or other digital solutions from MariApps, please visit www.mariapps.com or contact Khalil Rehman Aziz: khalilrehman.aziz@mariapps.com

Foreword

Dear members,

As the second quarter of the year draws to a close, the rollout of vaccines is giving hope about moving in the direction of some sort of normality. However, many in different parts of the world continue to struggle with the COVID-19 pandemic. We in Singapore are proud to have been among the first to give priority to frontline maritime workers in the move to vaccinate the population.

We hope many other countries will follow Singapore's lead and recognise seafarers as key cross-border workers that need to be prioritized in national vaccination programs. Furthermore, we must also find solutions for vaccinating seafarers from countries without a sustainable vaccination program.

The pandemic has accelerated the adoption of digitilisation and hastened the transformation of the maritime industry into a technologically advanced sector and we take a look at some of those changes in this issue.

Desmond Ong, Vice President – Projects and Technology from Jurong Port (JP) shares the many digitalisation programmes that JP has been implementing and explains how they are leading the way forward as the Next Generation Multi-purpose Port.

In addition, Vulcan, a Pier 71 Smart Port Challenge 2020 finalist, is at the vanguard of wearable Artificial Intelligence (AI). They explain how AI will play an ever more important role in the future of shipping.

As many of you may know, the Singapore Maritime Week 2021 took place in a hybrid format between 19 – 23 April. In this issue we include a special feature highlighting some of the key events and thought-provoking ideas discussed during the week. We would like to thank the Maritime and Port Authority of Singapore for permitting us to reproduce these articles.

We hope you find these glimpses on pushing boundaries to navigate the future inspiring.

René Piil Pedersen
SSA Vice President & Honorary Secretary,
General Affairs Committee Chairman

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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 into your email whitelist/safelist so that you remain in our communication channel. Thank you for your kind attention.

Event Calendar

April 2021

02/04	**Public holiday: Good Friday**
15/04	SSA YEG International Women's Day Webinar Topic: #ChooseToChallenge – Getting Women into Leadership Positions
19-23/04	Singapore Maritime Week 2021 (MPA)
20-21/04	5th Singapore Maritime Technology Conference (MPA)
21-22/04	Sea Asia Virtual Preview (SMF)

May 2021

01/05	**Public holiday: Labour Day**
04/05	Launch of Maritime Page on MyCareersFuture Portal (SMF)
13/05	**Public holiday: Hari Raya Puasa**
21/05*	SSA Educational Talk Q2 – No. 1 Topic: TBC
26/05	**Public holiday: Vesak Day**
28/05*	SSA Educational Talk Q2 – No. 2 Topic: TBC

June 2021

14/06	MSC Maritime Careers Fair (SMF)
17/06*	Tech Talk Thursdays Topic: TBC
24/06	SSA 25th Annual General Meeting
25/06	Day of Seafarers
TBC	Smart Port Challenge 2021 (MPA)

*TBC

+ Information correct as at 12 May 2021 and subject to change.

Jurong Port – the journey towards Next Generation Multipurpose Port

Jurong Port has been undergoing a period of transformation, so we spoke to its Vice President, Projects & Technology, Desmond Ong to find out more about the company's views on the future of the port.

Q Thank you for talking to us. To begin with, could you give our readers a little background into Jurong Port?

Jurong Port (JP) has been operating since 1965, serving Singapore as the main gateway to the island state for general, bulk, and containerised cargoes. It is located at the heart of the Jurong industrial cluster and is close to Jurong Island. Established as an industrial port, JP has been providing storage and cargo handling terminal facilities to port users and carriers ever since. In 2015, the port embarked on a transformation journey on several fronts – all geared to achieving its vision of becoming a

Next Generation Multipurpose Port (NGMPP). By NGMPP, we mean a port that stays ahead of the curve, adapts to evolving customer needs and megatrends through port-centric ecosystem development, while fulfilling its main mission of being an efficient gateway and reinforcing Singapore as a maritime hub.

Q Can you explain some of the transformations that have taken place?

The first phase of our transformation required a change in our operating model. As somewhat of a landlord port formerly, the stevedoring industry was made up of some 20 or more stevedoring companies, each dealing directly with the port's end users. Each stevedore company employed their own workers and bought their own forklifts and equipment to service their customers. Over time, the individual stevedore companies had different standards and insufficient scale to invest in automation and digitalisation efforts. This was compounded by the ageing demographics of the workforce, foreign labour curbs, challenging and unsafe operating environment at the waterfront, and lack of new blood joining the industry.

In 2016, JP engaged both the port user community through SSA and the stevedore association through a series of consultations and garnered support to effect changes in the operating model whereby JP would contract directly with the port users for stevedoring and railing services while subcontracting the work back to the stevedoring companies. JP also hired some of the workers

"The Waterfront Transformation Group is responsible for the transformation of the operational state of the port and the waterfront cargo handling with a view to transforming JP into a smart and connected port by 2025."

from the stevedore companies to form a common pool called the Supplementary Work Force (SWF), numbering more than 300 of these workers (comprising riggers, forklift drivers, signalmen etc.) that could be redeployed back to the stevedore companies to perform their work.

This operating model put JP in a position to lead changes, such as realising economies of scale through the pooling of workers, standardisation of work practices, and professional training. More importantly, JP could invest in new automation that would reduce labour dependency, upskill the workforce and attract new stevedore workers into the industry. By Oct 2017, more than 90 percent of the cargo coming through the port was handled directly by JP, and this influence on waterfront operations would form the foundation for the deployment of digitalisation and mechanisation to bring about a safer and more efficient waterfront for cargo handling.

Through a concurrent safety transformation program, JP was also able to enforce higher levels of safety with the stevedoring industry. In fact, accident rates were halved with these new initiatives. To us, every life matters and we will endeavor to further reduce prevailing accident rates as we continue to implement our safety transformation program.

In 2019, important changes were made to JP's organisational structure which provided alignment with our four key strategic thrusts: developing port-centric ecosystems, digitalisation, environmental sustainability, and achieving organisational excellence. A new corporate roadmap was unveiled, and the key strategic initiatives were driven by 2 main groups – Waterfront Transformation Group (WTG) and Business Growth Group (BGG).

Q Can you explain the role of these two groups?

The WTG is responsible for the transformation of the operational state of the port and the waterfront cargo handling with a view to transforming JP into a smart and connected port by 2025. Some of the key focus areas include digitalisation and automation, technology

"We have mapped out an overarching digital transformation roadmap that will lead the port towards NGMPP in the next five years and beyond."

deployment for seamless, direct, and continuous transfer of cargo with higher productivity and lower labour dependency, and ecosystem development to shorten and value add to specific supply chains coming through the port.

The BGG has also been busy. With more direct interaction with the port users (shipping agents and carriers) and consignees, JP is now able to understand the needs of the customers and their supply chains better. By mapping essential supply chains, JP is able to unlock value through the development of port-centric ecosystems – by bringing elements of the supply chain closer to the port to make it shorter and leaner, providing common-user facilities to increase economies of scale and competitiveness.

The port-centric ecosystem approach has led to two major developments, the completion of the first phase of Jurong Port Tank Terminals (JPTT) in 2018, which supports Singapore's energy and chemicals hub, and the Ready-Mixed Concrete (RMC) ecosystem which connects the discharge of aggregates at its berth directly to aggregate storage and RMC batching plants via enclosed conveyancing. The RMC ecosystem has commenced construction since Sep 2020 and is expected to be operational by early 2022. Both of these ecosystems improve the efficiency of supply chains through the port and also reduce environmental impact through increased sustainability, such as reduction in truck trips and therefore leading to lower carbon emission levels.

In a further move, we are developing a small-scale Liquefied Natural Gas (LNG) breakbulk and distribution facility which will promote cost-effective LNG bunkering solutions to complement Singapore's drive to remain the world's top bunkering hub.

Q How has COVID-19 impacted JP?

The pandemic has brought many challenges, but also provided many companies with the opportunity to transform, reinvent and emerge stronger. For JP, it has

"Our first priorities have been to digitalise our waterfront operations, provide real-time visibility, create value-added digital solutions for our ecosystems, and implement key corporate IT initiatives for greater efficiency."

underscored the importance of being an operator. The maritime industry as a whole is undergoing a digital transformation to become more efficient, sustainable, and greener. The pandemic has highlighted the need for resilience in global supply chains and digitalisation is the means to achieve this, and JP can now actively play its part to do this.

Q What IT initiatives have JP implemented?

For us to effect digital transformation in the port, we first need to establish ourselves as an operator rather than a landlord port model. With an in-depth understanding of the port's cargo handling operation and supply chain through our involvement in developing port-centric ecosystems, we have mapped out an overarching digital transformation roadmap that will lead the port towards NGMPP in the next five years and beyond.

The implementation of digitalisation is a sequential process, and this is where we start with our vessel and wharf side activities. We have since developed and implemented various systems, namely the Vessel DNA, Cargo Planning Management System (Phase 1), Digital Tally System (DTS), and Vessel Activity Logging at our waterfront. The systems are integrated through a common data hub where the information serves as a single source of truth to be analysed.

These digitalisation efforts create opportunities for our workforce to be upskilled, to better plan and deploy our cargo handling operation resources at the waterfront optimally. The introduction of DTS is one of the key steps to professionalize our stevedoring work process which is highly labour-intensive. Previously using pen and paper to tally the cargoes handled from vessel to wharf and to yard, the digitisation of tally process minimizes human error, standardises work processes, allows real-time tracking, and further reduces the time of tallying by more than 30%. Once we developed our first phase of systems, opportunities for other new technologies such as video analytics, machine learning, and track-and-trace IOTs may be explored in the future. This will further reduce labour dependency, improve efficiency, and streamline operation workflows.

Developed in 2019, JP's revamped enterprise architecture is also key to our digital transformation. It creates scalability as we embark on our digitalisation journey with all the new systems development. It also allows flexibility in our future mobile application development to give users a great UX/UI experience. With cybersecurity as critical consideration, our architecture needs to be secure while enabling data exchange and integration with external systems from government agencies and port users. Our first priorities have been to digitalise our waterfront operations, provide real-time visibility, create value-added digital solutions for our ecosystems, and implement key corporate IT initiatives for greater efficiency.

Q Are you planning to digitise any other operations?

Yes. This is not a one-time effort. As mentioned, the digital transformation roadmap will take us through the next few years. Our focus is to build our core terminal operating systems to ensure we collect all the relevant data sources from when the vessel unloads till the trailer takes the cargo out of the gate. With the data collected, we can then display it on our JP Glass system which we are currently developing for the next year. This will provide us with real-time updates on various activities that are happening within the port, allowing for quick and informed decisions, hence delivering better service to our port users. One must also not forget that digitalisation is not just a JP effort, it also takes support from all external parties to make it a success. We have been proactively engaging and getting the stakeholders involved in our development process and are appreciative of all the support provided thus far.

Q How does technology feature in port-centric ecosystems?

Our Port-Centric Ecosystems (PCEs) are designed to unlock efficiency gains by bringing the supply chain closer to the waterfront. In the current supply chain, there are a

"Our Port-Centric Ecosystems are designed to unlock efficiency gains by bringing the supply chain closer to the waterfront."

lot of inefficiencies such as facilities that can be shared among industry players within a common facility instead of having their own and reducing the number of truck trips required for inland deliveries. Beyond just locating the facilities within the port vicinity, the deployment of state-of-the-art technology through digitalisation and mechanisation creates a higher value proposition to the PCEs for the industry players.

On our ready-mixed concrete ecosystem, we have leveraged the port's expertise by investing electric balance cranes and conveyor systems to discharge the aggregates right into the ready-mixed concrete production plants' stockpile areas. This minimises the workforce needed during cargo handling operations and eliminates trucking to deliver the cargo to the stockpile area. On top of that, we are establishing a terminal operating system within the ecosystem that collects data to give us real-time monitoring.

An example of our ongoing drive towards automation is the work we are doing to develop algorithms for our cement terminals to enable the automatic operation of the cement unloader, aided by sensors and cameras, which eliminates the need for an operator's physical presence on the vessel deck which is an important win in terms of health and safety.

As PCEs are meant to create long term sustainability for industry players, JP is able to invest in Research and Development (R&D) to introduce future technologies such as our magnetic overhead cranes in our future steel storage terminal and also customized wheel loader for our cement trimming at our cement terminal. All these will help improve our operation's productivity, safety, and sustainability of our future workforce.

Q Does JP use technology to strengthen its links with other stakeholders?

In recent years we have been accelerating the development of our Digital Collaborative Platforms (DCPs) and strengthening linkages across and within the maritime ecosystem to improve connectivity. DCPs will enable us to connect with key participants and organise the supply chain digitally. This will result in optimised turnaround times and the facilitation of just-in-time port calls with a view to sustaining high berth and yard productivity.

LT Connect (LTC) is a key example where JP has taken an industry lead in developing a centralised digital platform. LTC is a game-changer for the ship supplies sector which has previously relied on phone calls and physical bookings on arrival in port. This would frequently lead to

disorganised and inefficient operational planning. LTC improves productivity with real-time data, transparency, and accountability which in turn lead to faster turnaround times for lighter boats and trucks, improved operational efficiency in last-mile delivery and bring Application Programming Interface (API) readiness and connectivity for maritime partners and agencies.

With the Maritime and Port Authority of Singapore (MPA) coming up with the Just-In-Time (JIT) platform that integrates with external maritime systems, LTC will be one of the key systems that provide data exchange with JIT to create opportunities to optimize the anchorage water space.

Q How will automation impact JP's workforce?

Automation will significantly improve the safety and health of operators and will also reduce the amount of manpower required. The workforce can then be reskilled, upskilled, and redeployed if required. Automation will fundamentally improve the working environment for our port workforce and stevedores and will also ensure the longer-term sustainability of our operations.

We work closely in partnership with several Institutes of Higher Learning (IHLs) to attract young talent with relevant skills into the industry. It also enables us to retain and upskill, or reskill, our existing workforce. We are developing courseware and facilitating virtual learning combined with onsite training to understand, adopt, and leverage sophisticated technologies that are unique for multipurpose port operations and wider in complexity than container operations. These will all be beneficial to the JP workforce.

Q How do you envisage the future for JP?

I foresee that we will continue to strive for greater efficiency and productivity while ensuring that we are a green and sustainable port. We will continue to collaborate with other stakeholders to learn from the industry and deepen our knowledge, keeping ahead and abreast of technology trends.

It is imperative that we develop diverse and integrated supply chains, that we build a resilient workforce and harness new digital capabilities. JP is on an exciting transformation journey with the myriad of opportunities lying ahead.

"Automation will significantly improve the safety and health of operators and will also reduce the amount of manpower required."

As Singapore's leading multipurpose port, Jurong Port handles more than 15 million tonnes of general, bulk, and containerised cargo each year. As we accelerate our digital transformation, Jurong Port has developed a Digital Tally System (DTS) for cargo tallying which will improve efficiency in the handling of breakbulk cargo and lay the foundation for a digital-ready Next Generation Multipurpose Port. DTS will facilitate effective tracking of cargo operations and digitised tallying on a real-time basis, bringing about accuracy and transparency to all stakeholders for better resource optimisation and planning.

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Emerging technologies for maritime

Maritime transportation is the bloodline of the global economy, accounting for around 80% of global trade. When a 400-metre container ship got wedged in the Suez Canal for nearly a week in March this year, it caused a backlog of more than 400 ships, heavy losses and a disruption to supply chains which took weeks to return to normal. Situations such as this are not the only ones that can cause disruptions at sea. Crew health and safety are critical for a smooth voyage, particularly when you are working in confined spaces, thousands of miles away from shore with limited access to medical help.

With today's ships getting bigger and crews getting smaller, the pressure is on to ensure that every single crew member is alert and safe at all times. Let's take a look at how emerging technology trends such as Edge Computing, Artificial intelligence and Wearables can be used on-board ships to monitor for hazards and safety incidents, and use them to really put "Safety First".

Opportunities offered by Emerging Technologies

Artificial Intelligence

Artificial Intelligence (AI) has seen tremendous improvements in capability over the last decade especially in areas such as video and image processing, to the point where it can be even better than humans. While newer vessels are outfitted with various sensors as well as cameras, these are often used for post-accident investigations rather than prevention of incidents. AI can enable automated identification of hazardous areas, compliance to Personal Protective Equipment (PPE), smoke detection etc. Having timely insights into risks can go a long way in preventing accidents at sea.

Edge Computing

Traditionally, AI processing requires a large compute infrastructure which may not be possible on-board a ship due to space constraints. In addition, data connectivity is limited and could result in significant delays in generating alerts for time sensitive safety alerts. Satellite services tend to be expensive and may not provide sufficient bandwidth to stream the sensor and camera data back to shore.

Edge Computing offers a compelling alternative – instead of bringing the data to the servers (on-shore), we can now bring the compute to the ship (the edge). This is increasingly being made possible through recent innovation in both hardware and software. On the hardware front, there is increased availability of customised processors for running inference of neural networks (e.g. Intel Movidius) which are smaller in form factor with significantly lower power consumption needs.

In parallel, there are emerging capabilities in AI to reduce the size of the AI models and total hardware resources needed to process images (measured in FLOPS - floating point computations needed for the AI model). This helps democratise AI by enabling even low powered and ubiquitous micro-controllers to run AI on the edge, e.g. while a standard GPU (graphical processing unit), typically used to train and run full scale inference models, consumes 300W, micro-controllers would be in the order of milliwatts (thousand times lower) allowing for these devices to run even on battery power for weeks (e.g. in a wearable device).

Edge computing therefore provides cost effective ways of making the existing cameras and sensors smart through in-situ processing of the data and generating custom insights.

The result could be a Smart Ship that feeds its sensors and camera data to an on-board AI processor to generate alerts and notification in near-real time, so that timely action can be taken. Data pertaining to actual incidents can be logged and transmitted for further investigation, removing the need to transmit all the data that is being captured on-board, thus reducing the bandwidth requirement.

Edge Computing offers a compelling alternative – instead of bringing the data to the servers (on-shore), we can now bring the compute to the ship (the edge).

Wearable AI

Wearables are already quite common when it comes to managing our personal health. By capturing heart rates and physical activity based on accelerometer data, smart watches like Apple Watch and Fitbit translate motion data into statistics such as amount of calories burnt. Similarly, wearable artificial intelligence can be used to classify and quantify the intensity of work a seafarer does at sea, predict the fatigue level for each seafarer and generate targeted alerts for rest / breaks.

Vulcan WorkSafe

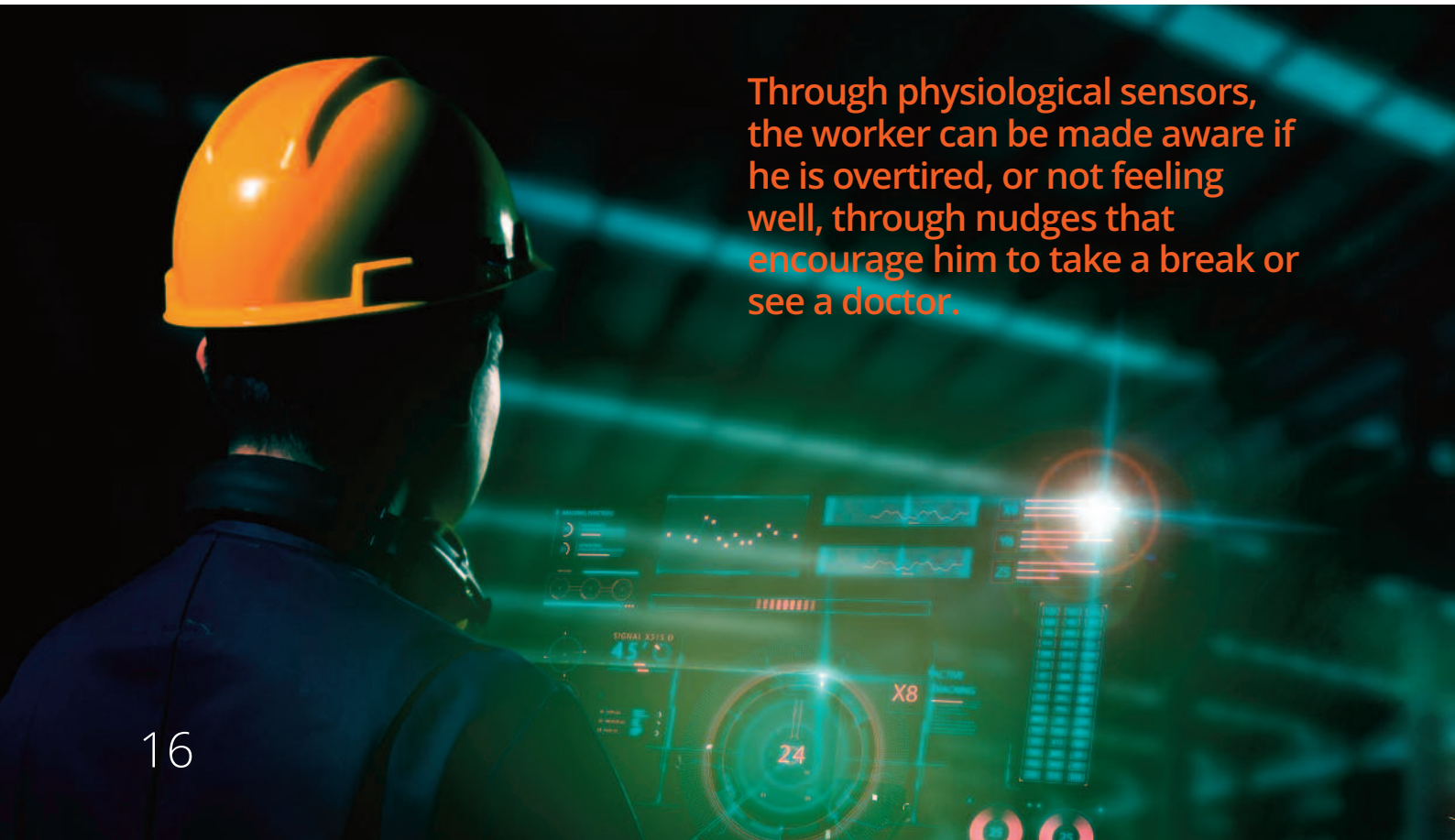
A company passionate about the use of AI to improve safety and productivity is Vulcan AI. Their Safety Solution, Vulcan Worksafe, uses a combination of Artificial Intelligence and Edge Computing technologies to improve safety on land, and at sea.

The wearable technology can be used for Near Misses and Fall Detection. By automatically alerting the ship crew in case of any accidents, timely help can be administered, often making a difference between life and death.

The same technology can be applied to port operations, for Slips, Trips and Falls (STF) detection, as well as automated compliance checks on lashing operations to ensure cargo safety at sea.

Future releases of the Vulcan WorkSafe Wearable will include health and wellbeing aspects. For instance, through physiological sensors, the worker can be made aware if he is overtired, or not feeling well, through nudges that encourage him to take a break or see a doctor. The supervisor can also be alerted for early intervention, especially if the worker is assigned to risky or demanding tasks.

Vulcan Worksafe's genesis was from IMDA's Open Innovation Programme by the Workplace Safety and Health Institute (WSHI). Vulcan AI was selected from 18 other start-ups to build an AI system that tapped on wearable data and CCTV feeds to detect STF, STF near misses and hazards, a mobile app to alert supervisors, as well as a web-based data analytics capability. After being successfully test-bedded at three sites in Singapore, Vulcan AI went on to win the challenge.



The solution also won Vulcan AI third place in PIER71's Smart Port Challenge 2020 and is now being trialled at shipyards and on-board vessels. They are working with one of the shipping lines to develop a Vision AI system to improve safety in the engine room to automatically detect Slip-Trip-Fall hazards, Personal Protective Equipment Compliance and Fire or Smoke.

The Road Ahead

With AI becoming smarter and wearable devices becoming smaller and more affordable, it is not hard to imagine a world where the clothes we wear or even PPE such as safety vests and hard hats, have sensors built in to continually scan the environment for risks and give us instant warning to move out of harm's way, creating a circle of safety around us.

Vulcan AI has already developed a SmartHelmet prototype with small sensors at the back, that can alert workers if and when they are about to be struck by moving objects such as a crane or fork lift, acting as the second pair of eyes behind them.

The power is in our hands to build a world where AI is working side by side with humans, to enrich our jobs, make us safer and more productive.

The combination of AI, Edge Computing and Wearables offer a great opportunity to improve the health, well-being and safety of seafarers and other maritime workers subject to harsh conditions. If you would like to learn more, please contact

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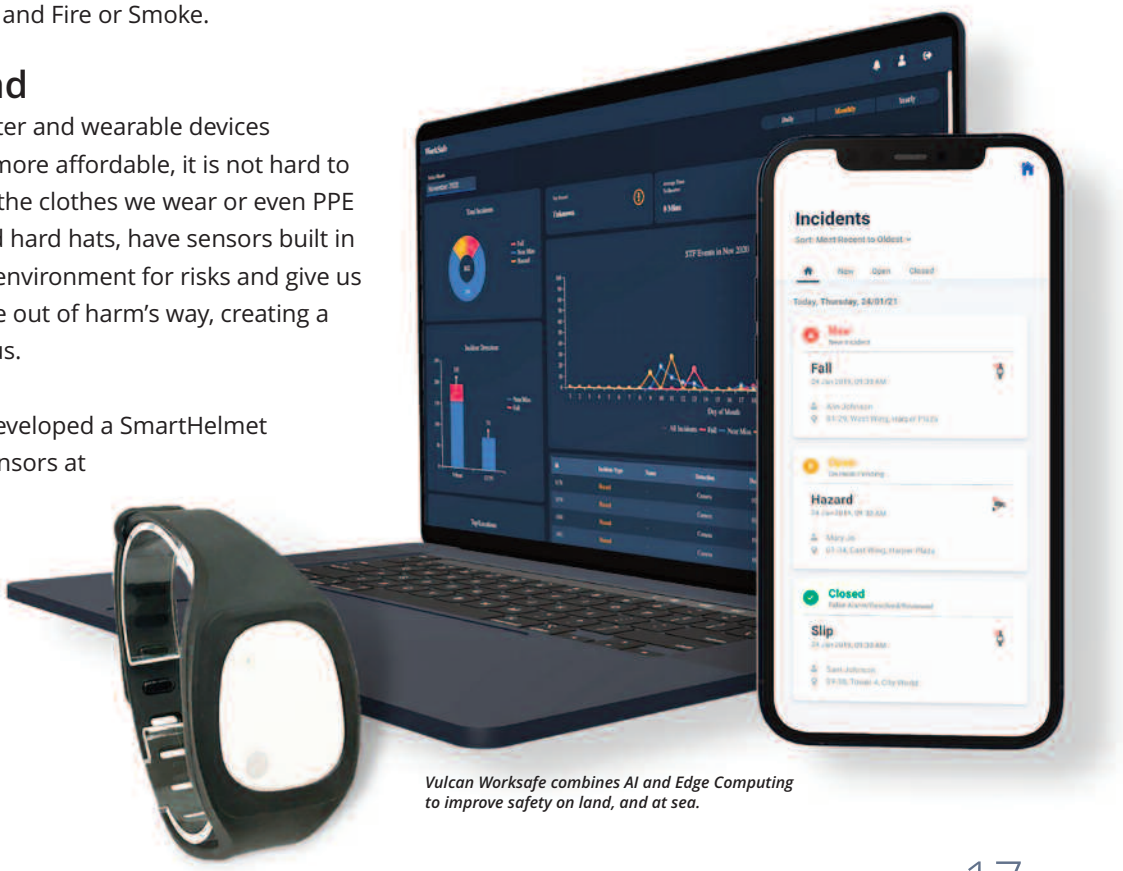
Dr Kamal Mannar kamal.mannar@vulcan-ai.com

The power is in our hands to build a world where AI is working side by side with humans, to enrich our jobs, make us safer and more productive.



Vulcan Worksafe combines AI and Edge Computing to improve safety on land, and at sea.

Ship Management business in a Red Ocean - Digital Innovation is the answer

Juan Jose Gil, CEO, Aventra Digital Pte. Ltd

For those who are not familiar with the term Red Ocean coined by **W. Chan Kim & Renée Mauborgne**, Red Oceans are clearly defined in market spaces where companies try to outperform their rivals creating a cutthroat competition that turns the ocean bloody red.

We need to face reality. Ship management at present is a commodity, and the more commoditized the service the redder the ocean turns. But, what to do? Or how to stop it? There is no magic answer, but we can rely on the only thriving instrument of success throughout the history of humankind - innovation. And, the real reason why leaders are hired today, to bring ship management companies out of a red ocean.

Innovation does not simply involve cool technology and its jargon; those phrases I hear repeated hundredfold in today's maritime events (although with little understanding or applicability), such as AI, Data, IoT, etc. Innovation is more related to the vision of the company's leaders than to technology. Technology is for sure the enabler of innovation in today's connected and digital world, but it's very clear that it is not the solution per se.

So, how to innovate in Ship Management?

Let's first clarify some misunderstandings about technology and digital transformation, which are more related to business management than to, once again, technology. I will introduce you to the concepts of Competitive Parity, Competitive Advantage, and Blue Ocean Strategy.

Not all investments in Information Technology will create innovation although they are necessary to survive. There are technology investments required for Competitive Parity and Competitive Advantage. Put it simply, Competitive Parity keeps you in business, whereas Competitive Advantage gives you an edge to dominate a segment. Clear examples of Competitive Parity which are standard in maritime ERP, include a Data Visualization Project (running for performance – a topic for a future article), a Cloud Migration Project, and an Application Consolidation Project. Without most of them, you will fail in your digital transformation.

As to Competitive Advantage, we can list many examples, but let's mention the two most obvious. Advanced Analytics, which is the use of Artificial Intelligence to

Competitive Parity keeps you in business, whereas Competitive Advantage gives you an edge to dominate a segment.

Red Ocean Strategy	VS	Blue Ocean Strategy
Compete in **existing** market space.		Create **uncontested** market space.
Beat the competition.		Make the competition **irrelevant.**
Exploit **existing** demand.		Create and capture **new** demand.
Make the value-cost trade-off.		**Break** the value-cost trade-off.
Align the whole system of a firm's activities with its **strategic choice of differentiation or low cost.**		Align the whole system of a firm's activities in **pursuit of differentiation and low cost.**

Source: https://www.blueoceanstrategy.com/what-is-blue-ocean-strategy/

uncover value in your data that you currently ignore, and bespoke solutions for business units where the company can go beyond the industry average and create significant value for the customer and profit for the company.

And, how to use Blue Ocean Strategy with technology in ship management?

Blue Oceans are created when the company develops/co-develops a new industry, a new service or product in the same industry, or basically disrupts the industry by making the competitors irrelevant. It sounds very sexy, but it entails a lot of hard work in creating new realities.

Am I saying that current maritime people don't work hard?

No, what I am saying is that currently companies work very hard on their day-to-day business but put much less effort into creating the future of the company. This separates those who are going to lead from those who will become irrelevant. The beauty is that it's a matter of choices; every company has the choice to work on creating a future or doing just like the ostrich, burying their heads in the sand, which is literally what many companies are doing by ignoring the digital revolution that is taking the industry by storm.

Now that you understand these three key concepts to embrace the Digital Transformation in Ship Management (competitive parity, competitive advantage, and blue ocean strategy), please take action.

I am leaving some questions below for you to ponder and reflect on; they will help you a great deal to understand what to do next.

Competitive Parity

Have we maximized the power of typical IT in the company? Are we using different Applications or Software to do a job that can be done with only one? Are our people wasting time in eternal App loads, slow connection to Apps, etc? Are we still relying on internal resources or on mediocre vendors to keep our Apps up and running? Are we using people for tasks that can be done by a system? Do we continue offshoring to low-cost labor countries instead of implementing efficiency gains globally? Are we trying to re-invent the wheel because we want to keep our processes intact without any change?

Competitive Advantage

Is technology a cost or a potential revenue stream? Do we understand what value we could bring with the existing data that is idle? Is there something that we do significantly better than our competitors that, with some digital tools, could bring even more value to our customers while increasing our margins? Is there a segment where we can dominate not only by size but by superior quality and bottom line?

Are we trying to re-invent the wheel because we want to keep our processes intact without any change?

Blue Ocean Strategy

Are we afraid of technology? Do we want to control technology rather than leading the company using it? Are my technology people ideal for the role? Do my technology people conform with the status quo and business as usual? Are we hiring people that we can control or people who may change the company? Can we combine our maritime expertise with the technological resources available to build something new? Are we seeing ship management as a business operation as usual or as an enabler for different advanced services?

Don't feel bad if many questions resonated within you, acknowledging what is needed represents the start of your digital journey; knowing where we are, and where we want to go.

SINGAPORE maritime week® 2021

From 19 – 23 April, the global shipping industry was invited to Singapore Maritime Week which took place in a hybrid format. The event, themed 'New Frontiers, Shifting Paradigms' brought together industry experts to discuss pertinent issues and discover solutions to advance the maritime industry through the post COVID-19 environment.

Singapore Shipping Association is pleased to reproduce here a number of articles which were written to highlight the different events held during the week and we would like to thank the Maritime and Port Authority of Singapore for permitting us to publish them in this edition of Waves.

Singapore Maritime Week 2021 by the numbers

>11,000
Participants

20
Events

> 100
Speakers

Towards a sustainable future with a global maritime decarbonisation centre

A global maritime decarbonisation centre in Singapore that will help tackle the big sustainability question is in the works.

This was unveiled by Minister for Transport Ong Ye Kung at the opening of the 15th Singapore Maritime Week (SMW) on 19th April as he addressed more than 23 industry and government delegates gathered physically at the Sands Expo & Convention Centre for the hybrid event.

The centre, he said, will be one where a cluster of like-minded stakeholders can coordinate, drive, and catalyse maritime decarbonisation solutions – "a worthwhile, strategically important initiative".

This announcement comes at a time when the industry is moving towards targets set by the International Maritime Organization that aim to halve shipping's greenhouse gas emissions by 2050, from 2008 levels.

"Singapore is already pressing ahead with change, which includes implementing digital solutions to boost efficiency and turnaround times for vessels."

The idea for the global maritime decarbonisation centre was recommended by the International Advisory Panel on Maritime Decarbonisation, set up by the Singapore Maritime Foundation last year with the support of the Maritime and Port Authority of Singapore (MPA).

Domestically, MPA will launch a public consultation exercise to develop the Maritime Singapore Decarbonisation Blueprint 2050 by the end of this year. The blueprint will outline Singapore's long-term strategies for a sustainable Maritime Singapore.

"To drive decarbonisation, we need collective action," said Mr Ong.

Decarbonisation was the key theme that dominated discussions on the first day of the week-long SMW. Mr Ong also spoke about navigating three other frontiers in a post-pandemic world: resilience, digitalisation, and talent.

Singapore is geographically endowed, he notes. It is located along the Straits of Malacca, which provides passage to one-third of global container trade and about a quarter of global oil trade.

"However, this geographical endowment does not promise us endless uncovering of resources to feed us for generations," he said.

"It is the proverbial fishing rod that enables us to earn a living with our hard work and our wits. Singapore's status as a global maritime hub is therefore by no means a given. Along the Straits, there is competition; outside of the Straits, there are alternatives that can potentially bypass us."

This means that navigating those frontiers would be key. Singapore is already pressing ahead with change, which includes implementing digital solutions to boost efficiency and turnaround times for vessels.
Mr Ong revealed that operational trials kicked off yesterday for the Just-In-Time platform under the second phase of the digital Portal for One-Stop Regulatory Transactions, or digitalPORT@SG™, a single platform for all vessel-related transactions. This will enable ships to turn around faster and marine service providers to manage resources better.

Said Mr Ong: "Digital technology is arguably a more significant technological breakthrough than the steamship, in terms of its impact on globalisation. And we are still at a nascent stage of fully leveraging the potential of digitalisation."

The portal has consolidated 16 forms for vessel, immigration and port health clearances, across separate platforms, into one seamless submission – saving the industry about 100,000 man-hours per year. Consistent data has also allowed it to clear vessels more quickly.

The critical factor in breaking frontiers, added Mr Ong, is less a paradigm shift than a collaborative spirit.

"We know the importance of international collaboration, so I don't quite think it is a paradigm shift," he said. "But we need to be committed to collaborating with one another, and be driven by our love for the sea and the idea that the oceans are our most important global commons."

"We need to be committed to collaborating with one another, and be driven by our love for the sea."

How to decarbonise: Take the first step

For an industry that has a big question to tackle with no clear answers, shipping veteran Yee Yang Chien believes it is better to take the first step and try - even if it may fail - rather than do nothing at all.

"Decarbonisation is without doubt one of the greatest risks our industry has ever faced in its history," said Mr Yee, President and Group Chief Executive Officer of MISC Group, who delivered the signature Singapore Maritime Lecture yesterday.

"How does one even begin to deal with a risk that has no immediate or ready-made solution?"

"How does one even begin to deal with a risk that has no immediate or ready-made solution? How does one cope with a risk where the financial cost of our course of action is difficult to quantify as part and parcel of our day-to-day responsibilities of running our respective organisations?"

He was referring to how companies are straddling the pressures of cutting emissions in line with the International Maritime Organization's 2050 decarbonisation goals, while trying to ensure they remain financially viable, especially in these uncertain times.

The industry has yet to come to a clear-cut route to a zero-carbon future, or what the fuel of the future will be. But it is in trying, Mr Yee said, that we find the answers. This was the approach MISC Group took when it made

the "high-risk bet" to invest in its first Liquefied Natural Gas (LNG) dual-fuel Aframax tankers via its subsidiary AET Tanker Holdings in 2017.

Today, as LNG is increasingly being accepted as a fuel source for vessels in the transition towards clean energy, MISC Group is setting its sights on replacing half of its fleet with LNG dual-fuel vessels over the next decade.

"What (matters) to me is we take the first step. I am not in any way brushing aside the enormity of the challenges and problems to be solved along the way, but I believe not trying to do something is a greater sin than trying and failing," he said.

One way to solve the big challenge of decarbonisation is to break it down into smaller parts, he added, and to work with like-minded partners.

The Castor Initiative - started over a cup of coffee between two partners who wished to do something for the industry - is testament to this. It is a Joint Development Project to develop an ammonia-fuelled tanker design involving six partners: MISC Group, Lloyd's Register, MAN Energy Solutions, Samsung Heavy Industries, Yara International, and Maritime and Port Authority of Singapore.

Ammonia is a zero-carbon fuel with the potential to contribute significantly to shipping's decarbonised future.

Speakers at a high-level panel discussion that followed Mr Yee's speech voiced strong consensus towards taking action on decarbonisation.

Ms Vandita Pant, Chief Commercial Officer of BHP, one of the largest dry bulk charterers in the world, believes there is "no silver bullet". What will be needed is a portfolio of solutions and a focus on outcome-based results. "We will try everything," she said.

"The opportunity that COVID-19 has given us is this sense of urgency - many companies are now willing to take a chance on innovation."

BHP has been taking the lead in driving change. It awarded the world's first LNG-fuelled Newcastlemax bulk carrier tender in 2020 with the aim of reducing greenhouse gas emissions by over 30 per cent per voyage.

Just earlier this month, it also completed the first marine biofuel trial on an ocean-going bulk vessel bunkered in Singapore, with Oldendorff Carriers and Good Fuels, and the support of MPA.

For all the disruption COVID-19 has wrought on the industry, it has also offered opportunities, noted DHL Consulting's Pang Mei Yee, who is Head of Asia Pacific and Global Practice Lead for Supply Chain and Analytics Practice.

"The opportunity that COVID-19 has given us is this sense of urgency - many companies are now willing to take a chance on innovation, perhaps even make a mistake, as they embark on the (decarbonisation) journey," she said.

As Sembcorp Marine's Vice President and Head of Research and Development Simon Kuik observed, 2021 is shaping up to be a year of taking action.

"For the maritime industry to tackle decarbonisation and reach the IMO 2050 targets, we must take action now," said the President of the Association of Singapore Marine Industries. "We must accelerate our efforts."

More funding for startups as Singapore aims to be Silicon Valley for maritime tech

Singapore is committed to building a maritime ecosystem that encourages experimentation and creative solutions: Senior Minister of State for Transport and Foreign Affairs Chee Hong Tat.

Singapore will pump millions of dollars into startups and scale-ups in a bid to position the country as the Silicon Valley of the maritime technology world.

Senior Minister of State for Transport and Foreign Affairs Chee Hong Tat pledged to build a maritime ecosystem here, one that encourages experimentation and creative solutions.

To reach the goal, Maritime and Port Authority of Singapore (MPA) will set aside $10 million from its

"Technology's pivotal role in helping the maritime sector stay resilient during the pandemic will continue to come through as we build the post-COVID world."

“It is about providing a safe space to fail, so that companies and individuals have a conducive environment to try new ideas.”

Maritime Innovation and Technology (MINT) Fund to grow the number of maritime technology startups from the current 30 to 100 by 2025, said Mr Chee.

MPA will also launch a new grant called MINT-STARTUP, he announced yesterday at the Singapore Maritime Technology Conference.

It will disburse up to $50,000 for startups, and up to $100,000 for scale-ups working on solutions to tackle challenges faced by the industry.

"Technology's pivotal role in helping the maritime sector stay resilient during the pandemic will continue to come through as we build the post-COVID world,” he said, noting that COVID-19 has accelerated digitalising efforts in the shipping and maritime sector.

MPA will provide sandboxes where startups can test out their new technology. "It is about providing a safe space to fail, so that companies and individuals have a conducive environment to try new ideas, and are prepared for many of these experiments to fail before a successful idea emerges,” he said.

MPA's Maritime Drone Estate in Marina South, which officially launched yesterday, is an example. In the last two years, the space has allowed maritime industry players to test out their drone solutions.

On the global front, Singapore will push for common data standards to better integrate networks and systems in the industry, and boost the adoption of digital solutions across supply chains.

Citing the example of container shipping, Mr Chee said although containerisation began in the 1940s,"it was only when the sizes of containers were standardised in the 1960s that container shipping took off in a bigger way".

One area that MPA has been working on with its partners is the bill of lading - a document that proves one's ownership of cargo during transit. Supply chain players have traditionally held on to the hardcopy of the document, but the processing of physical documents is inefficient and often creates delays.

Singapore is looking to gather industry players to propose solutions to encourage the industry to do away with physical processes and adopt electronic bills of lading, after successfully completing a trial with Rotterdam. The trial saw processing time cut from the usual six to 10 days when dealing with hardcopies, to less than 24 hours with the electronic versions.

MPA is also working on enhancing ship-to-port connectivity by ensuring that ports and ships can share information effectively under its digital OCEANS initiative, an interoperable information hub that aims to facilitate cross-border data exchange.

He urged industry players to participate actively to create solutions with MPA, and to look beyond the maritime sector, such as advanced manufacturing and ecommerce, to discover better ways of working.

"To succeed as an innovation hub, we must remain open to ideas and talents from around the world,” he said.

“MPA is working on enhancing ship-to-port connectivity by ensuring that ports and ships can share information effectively under its digital OCEANS initiative.”

Private sector can play a bigger role to help maritime sector transform, say panellists

The maritime landscape here in Singapore is largely made up of small and medium-sized enterprises (SMEs) and micro-SMEs, and size works against them when it comes to innovation and transformation.

But support from the private sector could help ease their digital transformation journey, panellists at the Singapore Maritime Technology Conference said yesterday.

"These (SMEs and micro-SMEs) are very small companies and they are technologically disadvantaged," said Mr Chua Chye Poh, founder of tech startup ShipsFocus, at a

"The maritime sector is only as strong as its weakest link. While companies often wish for more government support, private companies can take the lead to help one another in the industry."

“While government efforts - such as the Maritime Digitalisation Playbook which guides companies to develop their digitalisation strategies - offer some help, bigger corporates should and can play a more active role too.”

panel discussion on how the maritime sector can accelerate its digitalisation efforts. The startup won the Outstanding Maritime R&D and Technology Award in the International Maritime Awards 2021.

These small firms often lack the know-how to translate technological tools to practical applications that they can use, he noted, adding that they are often labelled as being slow to shift to new ways of working.

While government efforts - such as the Maritime Digitalisation Playbook which guides companies to develop their digitalisation strategies - offer some help, bigger corporates should and can play a more active role too. Mr Tong Hsien-Hui, Executive Director of Venture Investing at SGInnovate, said the maritime ecosystem is lacking in "active participation by corporates to mentor these companies".

There is scope for the maritime sector to take a leaf out of the fintech playbook, said Mr James Tan, Managing Partner at venture capital firm Quest Ventures.

"If we use that playbook, we will be going out to the likes of Kuehne+Nagel to ask for their problem statements, releasing them to SMEs, micro-SMEs and startups, and encouraging them to tackle (the problem),” he said, adding that this is one way to foster vibrancy in the ecosystem.

Similar sentiments were echoed at a separate panel discussion on the maritime sector's digital vision, moderated by Ms Quah Ley Hoon, Chief Executive of Maritime and Port Authority of Singapore.

Mr Tan Chong Meng, Group Chief Executive Officer of PSA International, said the maritime sector is only as strong as its weakest link. While companies often wish for more government support, private companies can take the lead to help one another in the industry.

"Those who are seated here, you have your supplier and your customers. If you were to examine your immediate circle of business partners and there are weaker links that can affect your success, why don't (you) take the first step of helping them? If all of us can do that, it raises the bar," he said.

Such exchanges will benefit the sector as a whole too, he said.

While companies often wish for more government support, private companies can take the lead to help one another in the industry.

"A haulage company may teach its staff everything to do with haulage, with little understanding of what role that data plays in the whole supply chain. While companies themselves may digitalise, we are slow to transform the whole industry because logistics is a team sport,” said Mr Tan.

$120m fund to support Singapore's vision of a green maritime future

Mr Wong Weng Sun, President and CEO of Sembcorp Marine and Mr Andreas Sohmen-Pao, Chairman of BW Group and the Singapore Maritime Foundation are Co-Chairs of the International Advisory Panel on Maritime Decarbonisation (IAP), which unveiled its strategy for the industry to achieve its decarbonisation goals yesterday.

Singapore is pushing ahead with its goal to position the maritime industry for a decarbonised future with a $120 million war chest that will support key projects, promote collaboration, and develop new technologies.

The Maritime and Port Authority of Singapore (MPA) signed a Memorandum of Cooperation with BW Group, Sembcorp Marine, Eastern Pacific Shipping, Ocean Network Express, Foundation Det Norske Veritas and BHP on the 21st April - marking a milestone in the industry's collective push towards decarbonisation.

Under the agreement, each private sector partner will put in $10 million to support the building of the decarbonisation centre, fund maritime decarbonisation-related research and technology development projects, and collaborate with institutes of higher learning and research institutes.

MPA, for its part, will contribute $60 million in research and development funding, bringing the fund to a total of $120 million.

The maritime decarbonisation centre stems from a recommendation made by the International Advisory Panel on Maritime Decarbonisation (IAP), which comprises 30 global leaders, including from Singapore, representing industry, academia and government.

The signing was one of two agreements inked on the

21st April, witnessed by Mr Chee Hong Tat, Senior Minister of State for Foreign Affairs and Transport.

The other was a Memorandum of Understanding with Singapore-headquartered investment company Temasek to collaborate on the decarbonisation of port operations and the development and use of low-carbon and/or alternative marine energy sources. Both parties will also look into the decarbonisation of the other parts of the global and regional maritime supply chain.

"Maritime decarbonisation is a global challenge requiring a collective responsibility from all stakeholders involved," said MPA Chief Executive Quah Ley Hoon. "The agreements signed today are two initial steps, which we hope will catalyse a larger, much needed momentum to make international shipping more sustainable."

At the event, the IAP also submitted its recommendations to the Singapore government. It was set up in July 2020 by the Singapore Maritime Foundation (SMF) to develop a strategy for the industry to achieve its decarbonisation goals.

"The IAP's vision is for Maritime Singapore to support the decarbonisation of the industry to meet or exceed the IMO goals for 2030 and 2050, and to do so by shaping carbon measures, setting standards, piloting innovations, building infrastructure, deploying incentives, and connecting stakeholders," said IAP Co-Chair Andreas Sohmen-Pao. He is also Chairman of the SMF and global shipping group BW Group.

The International Maritime Organization (IMO) has set targets to reduce carbon emissions per transport work by at least 40 per cent in 2030, compared with 2008 levels, and is pursuing efforts towards 70 per cent by 2050. It also aims to halve total annual greenhouse gas emissions from international shipping by 2050.
To achieve its vision, the IAP has recommended focusing on four strategic objectives: harmonise standards; implement new solutions; finance projects; and collaborate with partners.

"Maritime decarbonisation is a global challenge requiring a collective responsibility from all stakeholders involved."

It has identified nine pathways to maritime decarbonisation, including policy options to accelerate the transition and ways in which Maritime Singapore can support the industry's decarbonisation. They include shaping, common metrics for carbon accounting, building flexible ship capabilities and relevant infrastructure, and developing green financing mechanisms, among others.

Drilling down further on the importance of collaborations and taking action, it also identified a range of joint projects to embark on. These projects include conducting fuel and electrification trials for vessels, exploring carbon capture technology on vessels, and experimenting with fuel cell technology.

Chairman of the Board and Governing Council of the Singapore Maritime Institute Wong Weng Sun, the other Co-Chair of IAP, said it would be important to keep up the momentum in the journey towards maritime decarbonisation. Mr Wong, who is also Sembcorp Marine President and Chief Executive Officer, added that the joint projects IAP has identified will bring about concrete action.

Mr Chee, noted that the IAP's recommendations will be taken into account when developing the Maritime Singapore Decarbonisation Blueprint 2050, which will outline long-term strategies for a sustainable Maritime Singapore.

"The fight against climate change is a global ambition and a collective responsibility. Singapore is committed to do our part to support the IMO and the international maritime community in climate action," he said.

Arbitration in an age of digitalisation and the new normal

Emerging trends such as digitalisation, accelerated by the COVID-19 pandemic, will shift the frontiers of maritime arbitration.

This was the key message at yesterday's webinar organised by the Singapore Chamber of Maritime Arbitration (SCMA), which also featured a panel discussion that touched on the changing nature of disputes and practical challenges caused by the pandemic.

Arbitration is the essential "PIN" when it comes to sewing the pieces together, said Ms Quah Ley Hoon, Chief Executive of Maritime and Port Authority of Singapore.

She explained that "P" stands for pragmatism - arbitration should be the primary option to settle disputes to preserve trust and relationship; "I" represents industry - SCMA needs to stay close to the industry to cater to its needs; and "N" stands for new offerings - arbitration institutions must tap on new trends such as digitalisation and decarbonisation to offer greater value.

"We are now seeing technological tools being incorporated into various aspects of the arbitration process such as virtual hearings," she said at the webinar titled Arbitration's Role in Dispute Resolution and The New Normal: Enhancing SCMA's Relevance.

"SCMA must position itself to meet the industry's emerging needs," Ms Quah added.

One of the ways SCMA has done so is by publishing the Specimen Directions for Virtual Hearings in October last year to provide guidance on the new practice.

This has helped arbitration veterans such as Mr Prem Gurbani, who has been in practice for more than 40 years, to adapt to the virtual hearings. The panel arbitrator of SCMA shared during the panel discussion about how judges used to discuss the physical hearings across the panel as they went on. Now, these private discussions are held on WhatsApp instead.

During virtual hearings, Mr Gurbani has four computer screens before him, and said with a smile that digitalisation can be challenging for those who are "long in the tooth". He added: "We are getting there but it is a learning process."

The pandemic also brought about obstacles of an entirely different nature. Mr Alvin Looi, Director (FD&D) Singapore of global marine insurer The North of England P&I Association, mentioned how gathering evidence and information from ships - when claims are filed, for instance - remains an "ongoing challenge" when experts and surveyors are unable to board ships due to pandemic restrictions.

Judges used to discuss the physical hearings across the panel as they went on. Now, these private discussions are held on WhatsApp instead.

Besides posing practical challenges, the pandemic has also significantly changed the nature of disputes in the past year by opening up a "pandora's box", said panel moderator Mr Punit Oza, Executive Director, SCMA.

This was especially the case when the pandemic ground economies to a halt and severely impeded global supply chains, resulting in delays and diversions. An audience survey during the webinar showed that 58 per cent of participants saw their organisations facing legal disputes related to delays and breach of contract, and 46 per cent saw force majeure cases.

"Some owners have to divert their ships in circumstances where there are a lot of restrictions in changing the crew. Is the deviation a breach or was there a right to deviate? Who's taking up the bill?

Mr Chong lk Wei, Partner and Managing Director, Asia, for law firm Clyde & Co, said that the period between January and May last year was a peak in terms of clients asking for force majeure advice, which pertains to an inability to fulfil a contract due to unexpected circumstances.

He said: "Clients were asking, 'Could we get out of contractual performance? There was quite a lot of uncertainty back then before the World Health Organization declared what was happening as a pandemic on March 11."

Complications still exist, especially when it comes to crew changes and vessel diversions. Mr Julius Posselt, Senior Claims Manager, Operations, at dry bulk shipping company 0ldendorff Carriers, said that having a positive COVID-19 case onboard a ship would have a "massive impact" as the ship would have to change the whole crew.

"Some owners have to divert their ships in circumstances where there are a lot of restrictions in changing the crew. Is the deviation a breach or was there a right to deviate? Who's taking up the bill? That will remain (the key question) until regulations change in various countries to offer the industry more opportunities to do crew changes at the chartered ports of call."

11 Honoured at Singapore International Maritime Awards 2021

Green was the theme at this year's Singapore International Maritime Awards (IMA), with two new accolades that recognised maritime companies' efforts to decarbonise and bolster sustainable practices across the industry.

The first was the Sustainability Award, which acknowledged the company that has contributed significantly to the industry's environmental sustainability efforts. The SRS Green Ship Owner Award - given to the ship owner with the largest proportion of ships participating in the Maritime and Port Authority of Singapore's (MPA) Green Ship Programme (GSP) - was the other new prize on offer.

In all, Senior Minister of State for Transport Chee Hong Tat presented 11 awards at the hybrid event yesterday, which took place both on-site at Marina Bay Sands and online. It was held in conjunction with the 15th Singapore Maritime Week.

Global marine and offshore company Sembcorp Marine was the winner of the inaugural Sustainability Award. One of its green initiatives includes the building of liquefied natural gas (LNG) hybrid-powered tugs that will also use electricity. When deployed, these vessels will help cut carbon emissions at the Port of Singapore.

The SRS Green Ship Owner Award went to shipping company BW Group, which has been a key participant of the GSP. The programme aims to encourage ship owners to adopt energy-efficient ship designs.

Its Chairman, Mr Andreas Sohmen-Pao, also clinched the International Maritime Centre (Individual) Award, which recognises an outstanding individual who has contributed towards Singapore's development as a premier maritime hub.

Besides heading BW Group, he also holds a number of roles in various organisations and committees, such as co-chairing the International Advisory Panel on Maritime Decarbonisation - a group that recommends policies and actions to help the industry meet its global decarbonisation goals.

International Maritime Centre Award (Corporate)
Eastern Pacific Shipping

International Maritime Centre Award (Individual)
Mr Andreas Sohmen-Pao

Excellence in Manpower Training and Development Award
PSA International

Outstanding Maritime R&D and Technology Award
Shipsfocus Services

Sustainability Award
Sembcorp Marine

Bunker Award
V-Bunkers Tankers

Maritime Service Provider Award
Synergy Marine

SRS Ship Owner of the Year Award
AET Tankers

SRS Green Ship of the Year Award
Saga Dawn, Saga LNG Shipping

Special Mention
Takaroa Sun, NYK Bulkship (Asia)

SRS Green Ship Owner Award
BW Group

Maritime's new leaders may be digital natives and not seafarers

As the maritime world gears up for the new a normal, its new leaders may be young digital natives who do not have seafaring experience.

But this could be hard for the veterans to accept, said Mr Thomas Knudsen, Managing Director of logistics company Toll Group yesterday.

This is because the industry is largely built by people who had started out as seafarers, and who are used to a hierarchical leadership style.

"If you are a captain of a ship, you have done your yards and that has led you to this level of expertise," he said at a panel discussion titled Effective Workforce Transformation. "As we move forward, this will change, because we don't necessarily understand the technology and it may be a 25-year-old who does."

The industry needs to find a way to bridge this gap between the maritime old-timers and the digital newcomers. "How can we leverage technology and use the people who understand technology and integrate that (into the business) rather than seeing them as a threat?" he said.

This approach was welcomed by fellow panellist, Mr Nakul Malhotra, Vice President of Open Innovation at Wilhelmsen Ships Service. "Leaders themselves have to accept that they can't have the answers to everything," he observed. "This ability to open up, create safe spaces and encourage collaboration internally and externally will also encourage the new generation."

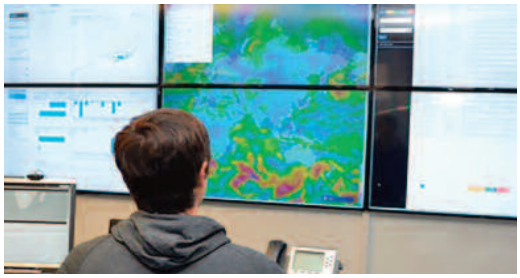
It is only when the industry embraces new ways of thinking and working that it can reinvent the business and rewrite the narrative of the sector, the panellists said.

Citing the example of food delivery app Deliveroo, Mr Knudsen said consumers who order food on the platform receive real-time updates on the status of their orders. Such transparency is something that the shipping world has not been able to provide for its customers.

If the industry can tweak its narrative and "tell a better story to our audience," said Ms Melissa Kee, Chief Human Resources Officer of Kuok Singapore who moderated the discussion, it would not be left behind.

Mr Knudsen added: "You can either be a provider of a space on a ship or you can look at Amazon, which is providing an end-to-end customer experience. "We have to think about how we want to create and retain value for customers so that we are not just providing a physical asset."

Better together: Fleet Performance Centers play to team strength



Author: StormGeo

The experts in StormGeo's Fleet Performance Centers are out to enhance the performance of customer vessels by helping to bring out the best in crews, captains and shore personnel.

"Our attention is on transparency, to get people talking and create a cooperative environment," says Tobias Gröger, Sales and Business Development for StormGeo. "This is about people working together to improve vessel performance, save fuel and reduce emissions."

On common ground

The Fleet Performance Centers are built around StormGeo's s-Suite, comprised of Voyage Planning, Onboard Route Optimization, Route Advisory Services and Fleet Performance Management. s-Suite is designed to connect columns of information by giving the entire team one platform, with access to the same data.

Performance Center services are structured into three groups. Daily alerts are company and ship-specific, containing alerts and proposed intervention. StormGeo sends emails to the ship and all stakeholders in a pre-determined matrix, with advisory services according to customer needs.

A report service is also available, comprising monthly and quarterly reviews. Ad hoc investigations make up the third element.

Hitting the sweet spot

Information is distributed to the vessel, land-based staff, and other contributors, with alerts sent in the same time zone as the staff for greatest convenience.

The fleet performance team supports customers in the setup phase, ensuring a seamless interface between all team members. "For example, a client did not want a certain boiler to run on sea passages, but allowed it in ECA zones," says Erik Heller, Head of Performance Center, Hamburg. "It was a complex threshold for us, but the user experienced only a simplified solution."

Performance centers work from a baseline description of a ship's fuel consumption, which must be met as closely as possible while still being profitable for the owner. This is the 'sweet spot' where owners are attractive on the market but still make money.

StormGeo provides information on vessel performance through a feedback loop, so owners/charterers avoid surprises and can be proactive in their vessel operation, a big help during negotiations.

Importantly, StormGeo Performance Centers are manned by experienced ship engineers and nautical staff with experience in the full spectrum of vessel types. They know how things work onboard and speak the same language as the crew.

Data quality as differentiator

Another focus in these Performance Centers is on data quality. Anomalies are identified, understood and clarified for the customer. Reliable data facilitates performance improvements, including vessel speed, fuel consumption, boiler operations, auxiliary engine operations, main engine cylinder oil, lubricants, trim, hull and prop performance, and is essential to compliance with emissions control.

Once a customer starts reporting data, performance begins to improve and continues to do so with the help from the performance centers experts. This is particularly useful for small and medium-sized companies, as alerts and performance services can help them manage more ships without adding staff.

Join StormGeo's VP of Fleet Performance Management, Dr. Thilo Dückert, for an on-demand webinar on 'Methods and best practices for scalable fleet performance'. He will:

- Discuss the case for digitalization as a dependency for fleet Performance Management
- Examine pros and cons of in-house, outsourced and hybrid structures
- Use case studies to show how to put theory to practice

To learn more, contact:
info@stormgeo.com

SSA T3 Tech Talk Thursdays

The theme of the latest episode of Tech Talk Thursday, which was held with Jon Loken, General Manager from ChordX, Akanksha Batura Pai, Head of Strategy and Growth from Sinoda, David Yeo, Founder and Group CEO of Innovez One, Peter Schellenberger, VP of Supply Chain from Thome, and Tim Polsen, Business Development Manager from Klaveness Digital, was on Disruption & Innovation in the Supply Chain.

They went over several topics, including the current issues that were holding back the digitalisation process in the maritime sector: What was important for companies to manage the change to adopt technology successfully? Whether the disruptive change was good for the maritime industry? How the pandemic has affected the growth of digitalisation in the maritime industry? What drives disruption and change in the supply chain and how it can be improved?

The speakers then individually shared their perspectives and opinions on the questions that were raised. Peter stated that the main reason he thinks there is a lack of digitalisation in the maritime industry is due to many companies being afraid of digitising due to the need for time, money, and patience for implementations to fully take place, as well as the fear that the initiatives brought to the table may not be successful. Digitalisation companies need to prove to maritime companies that the services and solutions they provide can help improve

companies' efficiency and costs, as well as increase profits. Peter also highlighted that no one system can accommodate all of the issues that companies are trying to solve, and it is important to choose and integrate systems that are open via APIs to cross integrate with solutions that make companies more efficient.

Akanksha brought up the importance of investing in change management and how company leaders need to engage all employees to prepare them for upcoming technology changes, especially employees who may experience difficulties adapting to the current technology. She also shared that the pandemic has accelerated digitisation as a whole but, in her personal experience, it has been a bit of a mixed bag, especially for companies lacking departments which specialise in the adoption of the newer technology and integrating it with their company's operations. If companies can intertwine change management with project management, it would be a great step towards implementing digitisation.

Tim shared what Klaveness Digital is doing to bring about change, and perhaps even disrupting change. Klaveness is looking to disrupt the "closed-up nature" of the maritime industry where maritime companies are unwilling to collaborate with digitalisation companies. It is working towards promoting modern methodologies, for example the utilisation of Outlook's calendar for organising their work rather than using traditional methods like writing it down onto whiteboards.

David, who has had more than 15 years' worth of experience, gave his perspective and observation on whether the disruptive change is good for the maritime industry. He stated that disruptive change is always a good thing, this is especially so for the maritime industry as innovation is very much needed. Despite the numerous attempts to innovate the maritime industry, David stated that a lot of ports that he had travelled to are lacking substantially in terms of technological advancement and adoption of technology has been very slow. He made a point about how the maritime industry as a whole can improve disruption in the supply chain by driving efficiency for many operators between various stakeholders such as agents and vessel operators, whilst complying with the current pandemic regulations.

In closing, the speakers were asked about what can encourage the uptake in digital solutions in the next year. They stated that there needs to be an openness to change and exploration of different opportunities.

Join in our future episodes of T3 Tech Talk Thursdays featuring new topics along with a panel of new guests and technologists.

https://www.ssa.org.sg/happenings/tech-talk-thursdays.html

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SINGAPORE SHIPPING ASSOCIATION

Executive Development Programme

Training Calendar | APRIL - JULY 2021

COURSES OPEN FOR REGISTRATION				FEES* (SGD)	*Second figure shown is after grant
Course Title	**Start Date**	**End Date**	**Duration**	**SSA Members**	**Non-SSA Members**
Intermediate Course on Shipping Documentation	04/05	05/05	2 Days	$601.34/$320.34	$902.01/$480.51
Marine Insurance	18/05	19/05	2 Days	$481.50/$256.50	$722.25/$384.75
Introduction to Shipping (Masterclass)	27/05	28/05	2 Days	$642/$342	$963/$513
Principles of SS648 & Its Impact on the Bunkering Industry	29/05	29/05	1 Day	$481.50/$76.50	$802.50/127.50
Maritime Labour Convention 2006 - A Concise Perspective	02/06	02/06	1 Day	$385.20/$205.20	$577.80/$307.80
Alternative Gas Fuel - Design & Safety Management for Vessels & Terminals	03/06	04/06	2 Days	$963/$513	$1605/$855
Container Management & Practices	09/06	10/06	2 Days	$481.50/$256.50	$722.25/$384.75
Principles of Shipbroking & Chartering	17/06	19/06	2.5 Days	$642/$342	$963/$513
Shipping Law & Disputes	22/06	23/06	2 Days	$481.50/$256.50	$722.25/$384.75
Principles of SS648 & Its Impact on the Bunkering Industry	30/06	30/06	1 Day	$481.50/$76.50	$802.50/127.50
Introduction to LNG as Fuel in Shipping	01/07	01/07	1 Day	$428/$228	$642/$342
SS600 & Basic SS648 in the Bunker Industry	08/07	09/07	2 Days	$856/$136	$1284/$204

**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 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*

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**Source: Euroconsult, Prospects for Maritime SATCOM, 2020, market share VSAT units