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Challenges, opportunities for service providers ahead

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Yinson GreenTech and Eastern Pacific Shipping collaborate for an electrified future

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Mr Demetris Chrysostomou (centre), Managing Director Asia Region at Columbia Shipmanagement, speaking at a panel on Opportunities for Maritime Services. Next to him is Mr Roger Charles, Executive Director, Institutional Banking Group, Sustainability, DBS Bank.

Gearing up for the green transition

For members of the maritime sector – and service providers in areas such as legal, financing, broking and insurance – there are both opportunities and challenges to be reckoned with.



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The maritime services cluster has a key role to play in facilitating the green and digital transition, especially in supporting companies as they grapple with the challenges ahead, said Mr Teo Eng Dih, Chief Executive of the Maritime and Port Authority of Singapore (MPA).

Speaking at the start of the Maritime Services Leaders Forum on Day 4 of Singapore Maritime Week, Mr Teo said that as the industry transforms, the services cluster can also evolve.

“The services cluster has a key role to play in facilitating this transition. Financiers and insurers support investment and cyber risk management, while the legal sector establishes clear frameworks for collaboration,” he said.

“This includes examining the implications of emerging issues and new developments, such as the adoption of alternative fuels, on legal clauses and obligations in shipping forms and contracts.”

MPA has given the Singapore Chamber of Maritime Arbitration (SCMA) its “full support” to set up Working Groups to examine contractual implications that might arise from emerging trends, as well as develop new provisions to tackle any gaps, Mr Teo added.

In his speech, which touched on areas ranging from risk to the green and digital transformation, he also noted “considerable traction” in alternative fuel vessels on the international shipping front. Singapore is building up its infrastructure for electrification of harbour craft, and will roll out charging infrastructure for electric operations on the island, he noted.

“It is therefore opportune for financiers and insurers to step forward to support these new vessels or charging infrastructure,” he said, adding that since launching an expression of interest in 2023, the MPA had received nearly 20 financing and insurance proposals to support early movers of electrical harbour craft.

NAVIGATING COMPLEXITY

Maritime service providers also agreed with Mr Teo’s assessment, saying that the landscape is becoming more complex.

“We are heading into an environment that is becoming more complex, with more regulations and more reporting requirements,” said Mr Demetris Chrysostomou, Managing Director Asia Region at Columbia Shipmanagement at a panel at the same forum titled Opportunities for Maritime Services.

But there are also opportunities for services providers and parties looking to adopt green solutions.

“There’s a lot of sustainable financing, a lot of green financing, a lot of transition finance capital waiting to be mobilised,” said Mr Roger Charles, Executive Director, Institutional Banking Group, Sustainability, DBS Bank.

But he cautioned that smaller companies will need a leg-up to adopt green operations.

“It’s the smaller guys, the mid-caps, who need the financing. They don’t want to take too much of a risk right now, say (by going) into ammonia,” added. “Banks are having to look at this from a slightly different lens, because it is a risk for them.”

He described Singapore as a “unique” example, given the support from bodies such as the MPA and Enterprise Singapore. From April 2024, harbour craft owners and operators

“We are heading into an environment that is becoming more complex, with more regulations and more reporting requirements.”

Mr Demetris Chrysostomou
Managing Director Asia Region
Columbia Shipmanagement

in Singapore have been able to apply for loans with a risk-share of 70 per cent from participating financial institutions. Maritime companies can also tap a grant for energy-efficient equipment.

“This allows us to then go and finance (smaller companies)...But how about other countries, where you don’t have these grant systems, where you don’t have these risk-sharing (initiatives)?” he added.

As for the impact of the decarbonisation push on insurance, Dr Wu Chao, Special Advisor of the China P&I Club, said this was still early days.

“We have to wait and see how the situation develops, and how P&I (protection and indemnity) can respond (to the changes)... At this stage, we are watching the risks and trying to learn (more),” she said.

“In terms of protection of the environment, we have seen over the years the CFC (chlorofluorocarbons) convention, the bunkers convention, the forthcoming HNS (Hazardous and Noxious Substances) convention, but none of these conventions cover the risk arising potentially from the usage of new fuels.” ■



Handle with care: Alternative fuels are greener but come with risks

New fuels, new risks, new precautions.



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The maritime industry is looking to make alternative marine propulsion fuels mainstream, to meet new industry emissions standards. But facilitating this transition requires careful management of its risks, said Mr Diego Cosulich, Regional Director and Consulting Chemist at CMC Marine.

Sharing his insights at the Maritime Services Leaders Forum on Thursday, he noted that alternative fuels – biofuels, methanol, liquefied natural gas (LNG), and ammonia – are not more risky than traditional fuels. They simply need to be handled safely and effectively.

“The usage of these new bunkers is far from impossible, just more complicated,” said Mr Cosulich in his presentation titled Managing Risks of Future Marine Propulsion Fuels, emphasising the need for new safety considerations to ensure their viability.

In fact, attitudes towards traditional fuels, which have been considered relatively safe, have also changed in the past few years, he added. This

follows recent cases of chemical contamination in bunkers that have resulted in catastrophic costs due to engine blackouts, causing groundings and collisions.

With alternative fuels, the key is to develop a comprehensive understanding of their characteristics – and how to use and store them properly, he said.

1. BIOFUELS

With its adoption in the aviation and land transport industries, biofuels are also considered a viable alternative in maritime. This is in large part due to their drop-in nature, enabling them to be used without substantial retrofitting of existing vessel infrastructure.

But their production is labour-intensive and prolonged storage can lead to microbial growth, resulting in clogging or fouling. Regular tank inspections are required to ensure that these do not result in engine failures or exposure risks to the crew.

2. METHANOL

Easy to store and handle, with no need for costly cryogenic fuel tanks, methanol is gaining traction as a viable alternative fuel.

Its risks mostly have to do with its flammability at ambient temperatures – especially when it burns with an invisible flame. “It’s one thing to fight a fire you can see, and another to fight one you cannot see,” said Mr Cosulich.

Methanol also dissolves very quickly in water, resulting in rapid marine pollution once there are leaks.

3. LNG

LNG is often considered the preferred alternative fuel, as it is able to reduce up to 23 per cent of greenhouse gas emissions.

The main challenge lies with its storage. LNG takes up a lot of space, having to be stored in cryogenic conditions at -162 deg C to shrink its volume for transport. It also has low specific energy, storing less energy per unit of volume. Bunker tanks have to be almost double their current size in order to accommodate the same energy capacity as traditional fuels.

4. AMMONIA

While the other three fuels are low-carbon options, ammonia gas is the only product that is completely carbon-free. But its toxicity is a huge concern.

To avoid serious health hazards, ammonia cannot be directly released into the atmosphere and requires another layer of compartmentalisation in the engine room to minimise exposure and leakage risks.

Ultimately, bunkering will become a highly specialised operation for all alternative fuels, and this requires highly trained and proficient personnel to safely and successfully pull off.

“The bunker quantity survey should become the bunker quantity and safety survey (BQSS),” Mr Cosulich said. “The crew should be highly trained and licensed to handle each type of new fuel, and BQSS should be compulsory for the first few years until the industry is more confident with more available data.” ■

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New frictions emerge as shipping goes digital

Digitalisation is underway in the dry bulk industry, but kinks need to be ironed out.



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For the dry bulk industry, digitalisation is not quite the future but a day-to-day reality. And it comes with its share of struggles as industry players attempt to bring online an industry that has traditionally relied on paper.

A recent estimate put the number of paper trade documents in circulation at any one time at a whopping four billion. Combined with the millions of emails and text messages that are pinged around by shipowners, charterers, suppliers, and more, the risk of delays and errors is significant.

“There is a lot of noise in the business, unfortunately,” said panellist Mr Colin Ho, APAC Sales Manager of data company Shipfix, adding that the last decade has also seen a massive surge in data volume. He was speaking at the Maritime Services Leaders Forum on Thursday, in a panel discussion moderated by Ms Gan Sue Ann, Partner of Norton Rose Fulbright (Asia), that explored the topic of digitalisation in dry bulk.

The problem of managing and processing data is exacerbated by the nature of the dry bulk industry. Chartering a ship, said panellist Ms Elaine Yu, Chairperson of the Institute of Chartered Shipbrokers



(From left) Panellists Mr Philip Burchard Paulsen, Market Manager of Klaveness Dry Bulk, and Ms Elaine Yu, Chairperson of ICS (Singapore) and Senior Charterer at South32, share their insights on how the dry bulk sector can go further in its digitalisation journey.

(Singapore) and Senior Charterer at South32, is “not as simple as calling a taxi”. Freight rates, vessel compatibility, and more have to be taken into account.

The sheer volume of data and the lack of consolidation hamper companies’ efforts to digitalise. Smaller companies, as well as those that are unwilling to change, risk being left behind – a stumbling block for an interconnected industry that needs everyone to move together.

“We need everyone on board in the supply chain for sure,” said Mr Philip Burchard Paulsen, Market Manager of Klaveness Dry Bulk, adding that having one company at the forefront of change could help demonstrate the benefits of digitalisation to others.

FIND YOUR NICHE

A plethora of digital services are already

available for market participants, said Ms Celine Aw, Ocean Freight Charterer at Graincorp Operations Asia, citing her own company as an example.

During the vessel nomination process, Graincorp works with several digital platforms to review technical aspects of the vessel and determine whether it is well-maintained, and who manages it, she said. Such information is crucial to deciding whether a vessel is fit to carry the company’s cargo.

But multiple platforms may not necessarily be a good thing, especially if they duplicate each other. Instead, digital service providers can gain an advantage by figuring out what end users want – and using that information to carve out a niche for themselves.

“Before you provide bubble tea, ask your end users whether they want bubble tea,” she quipped. ■



Mr Matt Cannock, Managing Director of Latitude Brokers, spoke on how insurance companies need to adapt.

How insurers are responding to the brave new world of future fuels

Charlene Wang

Alternative fuels bring risks that demand a relook in underwriting.

The maritime world is moving towards a greener future with new fuels, but this comes with risks that the insurance sector is assessing so that stakeholders have greater clarity.

“The role of insurance is to take the unknown away from shipowners,” said Mr Matt Cannock, Managing Director of marine insurance broker Latitude Brokers, at the In Conversation With: Risk Management for New Asset Classes panel on Thursday.

While technical risks of new fuels can be addressed with training, dispute resolution process risks are harder to tackle, said fellow panellist Mr Diego Cosulich, Regional Director and

Chemist Consultant at maritime consultancy CMC Marine.

Currently, processes for disputes that arise from bunkering are quite clear, but this process is “about to change a lot, and it is not very clear how it will play out”, he added.

“The key thing to emphasise is that the insurance industry has always adapted,” said Mr Cannock. “Every risk that is insured today was once insured for the first time.”

Yet, it is a process that will take time, with new regulations still being discussed, said Mr Nick Shaw, Chief Executive Officer of the International Group of P&I Clubs, an association which provides marine liability cover for around 90 per cent of the world’s ocean-going tonnage.

Despite the obstacles, there was optimism that risks would not deter the industry’s drive to decarbonise. Shipowners are still motivated to integrate these new fuels into their systems despite high costs, concluded the panel, which was moderated by Ms Lesley Tan, Specialist Counsel at law firm Wikborg Rein Singapore. ■

EXPO@SMW: A 3-day fiesta of maritime solutions

EXPO@SMW brought innovative solutions to the forefront of Singapore Maritime Week.



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With both hands on two joysticks, Mr Arsenio Dominguez tried moving containers from the shore to a ship and back.

After several minutes, he stepped off the platform and gave a wry smile. “I think crane operators deserve every penny they earn,” the Secretary-General of the International Maritime Organization said with a laugh.

Unlike real crane operators who have to work in harsh conditions, Mr Dominguez was trying out crane operations in the comfort of the Suntec Singapore Convention and Exhibition Centre at the EXPO@SMW, which ran from Tuesday to Thursday this week.

The simulator, showcased by ST Engineering, allows companies to conduct in-house training. With the virtual setup, they do not have to worry about factors such as unpredictable weather conditions and safety.

“It is good not just for the fact that you can actually see what is going on. But it is very interactive,” Mr Dominguez said. “There is nothing better than experiencing the theory.”

The crane simulator was one of the latest technologies, innovations, and concepts in maritime solutions showcased by close to 50 exhibitors at the event.

Hundreds of visitors walked through the 827 sq m hall every day checking out the latest offerings and ideas, including physical ship models, three-dimensional infrastructure models, unmanned automated robots, and Artificial Intelligence (AI) systems.

“I expected to see mostly vessels (and those) kinds of things. But I’ve seen lots of things, everything related to maritime,” said Mr James Lim, Human Resources Executive at shipbuilding company Strategic Marine.

“We want to be where the cutting-edge technology is. We want to be where people are willing to innovate and solve the top challenges.”

Mr Harry Corkerry
Senior Director of Business Development
at Windward Maritime



Mr Arsenio Dominguez (centre), Secretary-General of the International Maritime Organization, spending his Thursday morning touring EXPO@SMW.

CREATING CONNECTIONS

This year’s EXPO@SMW also focused on building networking spaces, allowing plenty of face-to-face meetings between individuals from around the world such as France, America, Australia, and Dubai.

Dr Li Chin Law, Founder of EMICAST and Research Fellow at Cambridge Centre for Advanced Research and Education in Singapore, said: “We have met many future potential customers, but we need time to discuss further as they are asking for additional features to our current solution.”

When needed, attendees also took their conversations to the multiple meeting pods, meeting rooms, or networking lounges around the hall.

One key highlight at EXPO@SMW was the Tech Stage. Scientists, academics, and technologists took to the stage to present their ideas to those looking to expand their horizons. Start-up founders also took the opportunity to pitch their companies to venture capitalists at the Pitch Arena on Tuesday.

Mr Harry Corkerry, Senior Director of Business Development at AI company Windward Maritime, noted: “As a technology company, this is where we want to be. We want to be where the cutting-edge technology is. We want to be where people are willing to innovate and solve the top challenges.” ■



Building relationships, forming partnerships

For many delegates of the Singapore Maritime Week, it wasn't just the two Ds of digitalisation and decarbonisation they were preoccupied with the past few days.

They were also busy with the two Ms: meet and mingle.

Many collaborators, partners, and friends caught up over a drink, took countless selfies, and did what business people do best: network. It was a chance for many to start new relationships, and to renew old partnerships.



Yinson GreenTech to partner Eastern Pacific Shipping on **electric vessel trials**

Shipping will get a green boost with the partnership inked between Yinson GreenTech and Eastern Pacific Shipping.



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A leading green technology company and a global shipping company have agreed to work together to speed up the development of electric vessels.

Green technology solutions provider Yinson GreenTech (YGT) signed a Letter of Intent with global ship management company Eastern Pacific Shipping (EPS) to work on several electric vessel trials.

Led by YGT's marine electrification business, marinEV, the collaboration will look to pioneer

the first cargo delivery with an electric vessel in the Port of Singapore. Both companies will also collaborate on the first crew transfer conducted by an electric vessel in Singapore.

"This trial will provide valuable data on the feasibility, efficiency, and safety of electric vessels for crew transportation, paving the way for wider industry adoption," said a statement by both companies.

"At Yinson GreenTech, we believe that collaboration is key to unlocking a cleaner future for our oceans," said Mr Jan-Viggo Johansen, Managing Director of marinEV. "Our partnership with Eastern Pacific Shipping on these groundbreaking electric vessel deployments in Singapore signifies a major leap forward."

The partnership, noted Mr Cyril Ducau, Chief Executive Officer of EPS, "offers a greener transportation alternative, it also builds on the industry's collective commitment to accelerate the decarbonisation of shipping".

It will also pave "the way for a future where clean and efficient transportation solutions become the norm", said Mr Johansen.

"We don't do things because they are easy. We do them because they are difficult so that we leave no stones unturned in our efforts to decarbonise," said Mr Ducau. ■

Singapore, Los Angeles, and Long Beach green shipping corridor can **lower gas emissions**, create jobs: study

Study reveals the potential benefits of the Green and Digital Shipping Corridor between Singapore, Los Angeles, and Long Beach.



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The greenhouse gas (GHG) emissions of 320,000 cars.

That is how much the Green and Digital Shipping Corridor (GDSC) between the Maritime and Port Authority of Singapore, the Port of Los Angeles, and the Port of Long Beach could save a year, according to a new study that looked at the potential impact of establishing the corridor.

The study also found that vessels operating on the corridor represent 7 per cent of the world's container trade. The projected annual energy demand of vessels on the corridor is also estimated to be about 60,000 terajoules, which is equivalent to approximately two months of Singapore's national electricity generation.

These findings were part of a comprehensive baseline study commissioned by the GDSC's three port authorities and C40 Cities, a global

network of 96 cities committed to climate action. The study, conducted by the American Bureau of Shipping, analysed maritime trade flows between Singapore, Los Angeles, and Long Beach.

Apart from reducing emissions, the study also revealed that, when fully implemented, the GDSC could create more than 700 new green job opportunities in zero- and near-zero-emission fuel production.

Green shipping has emerged as a crucial aspect of the maritime industry's decarbonisation strategy and is seen as a way to speed up progress on the urgent issue.

The three port authorities involved intend to continue developing green and digital solutions, having convened for their first in-person stakeholder meeting during Singapore Maritime Week on Thursday.

Enabling the supply and adoption of zero- and near-zero-emission fuels at scale, developing and scaling up the adoption of energy efficiency solutions and digital technologies to monitor and report GHG emissions along the corridor remain top priorities going forward. ■



PARTICIPANT OF THE DAY

"I loved the (EXPO@SMW) and seeing a lot of the innovative technologies. It shows two things. First, that the technologies are not nascent. Second, it is encouraging to see how far zero-carbon fuels have come."

Mr Roger Charles,
Executive Director, Institutional Banking Group, Sustainability,
DBS Bank, when asked about what he liked about SMW 2024.