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12

The journey to lower sulphur fuel is fraught with logistical challenges

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REGULARS

- Comment:** Secretary general warns that growing economic instability could impact the maritime industry **3**
- News:** Expanding Port of Berbera; New logistics centre for Incheon; China to build deepsea port in Myanmar **4**
- Open forum:** Bimco's Lars Robert Pedersen calls on the maritime industry to use a holistic approach to improve services and hit environmental targets **9**
- In conversation with:** Yuan Yue and Patrick Verhoeven discuss about Belt and Road, Brexit, and sustainable operations **10**
- Maritime update:** IMO's Maritime Safety Committee's 100th session looks at autonomous ships; MEPC delves into the issue of ocean plastic **32**
- IAPH info:** IAPH World Ports Sustainability Program awards; GloMEEP workshop looks at port emission reductions; Information sharing explored **36**
- Last word:** Ki-Chan Nam explains how and why ports must benefit the local communities **40**

FEATURES

- Low-sulphur fuels:** Ports may use a variety of strategies to prevent unscrupulous vessels from bunkering non-compliant fuels come 2020 **12**
- ABS believes the biggest pollution issue facing the maritime industry is not IMO 2020, but reducing GHG **15**
- Questions remain over how much low-sulphur fuel will be available in 2020, and how ports will handle bunkering **17**
- Africa:** With throughput rapidly rising at Africa's ports, some authorities are wondering whether automation could deliver extra efficiency **18**
- Booming East African demand, especially from Ethiopia, will likely see a huge expansion in port capacity **20**
- Technical and economical restraints are reigning in the possibilities for onshore power **21**
- Automation:** Ports must overcome many issues to make automation profitable **22**
- Two automation projects in Finland are leading the way in fully and partly automated vessels **24**
- Winds of change:** The Port of Lowestoft is investing to make itself a hub for the installation and maintenance of wind power **26**
- Brexit:** With the rules of change between the UK and EU set to change radically, ports are struggling to react **28**
- Promoting equality:** The efforts of Panama's MIT terminal to increase female managers has improved productivity, and employee satisfaction **30**



18



20



24



30



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Choppy waters

Trade growth could be set to pull back with expected economic instability in 2019



Susumu Naruse

Secretary General – The International Association of Ports and Harbors



A happy new year from Tokyo! We have a warm and calm winter in Tokyo, following the extreme hot summer. Unlike the weather, the global economy does not seem very stable this year. The International Monetary Fund (IMF) has lowered the projected growth rate of the global economy to 3.7% for 2018–19, and warned that the expansion has become less balanced. In some major economies, it may even have peaked. China and a number of Asian countries too are expected to experience weaker growth in 2019. Some shipping consultants have announced their projections of global seaborne trade, indicating that the growth rate for 2019 will be lower than in 2018, at 4–5% for containers.

At the time of writing, the COP24 UN Climate Summit in Poland is discussing how to put into place the practical guidelines needed to implement the Paris Agreement to limit global warming to below 2°C in this century. The work programme must provide a way to track progress and ensure that climate action

is transparent. This will build trust and send a signal that governments are serious about addressing climate change. It also needs to establish a clear way forward on climate finance to ensure greater support for action in developing countries.

The hope is that countries can agree on implementation plans of the Paris Agreement and go forward to take concrete actions. At the same time, as a major transportation sector the port industry needs to formulate its ambition against climate change and consider a variety of actions.

Here at the IAPH, following an African regional meeting in Nigeria, a regional meeting of Asia, South/West, East, and Middle East was held in Kobe, Japan. It was organised under the strong leadership of Masaharu Shinohara, vice-president of the region, who invited speakers from Sri Lanka, South Korea, and IAPH. Colombo Port and Busan Port are mighty regional hubs, and they discussed their development strategies and some challenges in the future. I talked about the outline of logistics in Asian ports as well as our new programme, WPSP. I also stressed that the hub-and-spoke concept with ultra-large container ships has developed because the industry has pursued economies of scale. The future of the model will depend on the mindset of customers.

I hope everyone has a wonderful new year and I am looking forward to welcoming you in Guangzhou, China, in May 2019. PH

“The global economy does not seem very stable this year”

Port updates

► KIEL TO INSTALL SHORE POWER

Construction has begun on a dedicated EUR1.3 million (USD1.5 million) onshore power supply plant for commercial vessels at the port of Kiel. Built by Siemens, the Norwegenkal plant will generate up to 4.5 MW of energy once it is up and running in early 2019. It will be used to plug into berthing vessels and cover their hotel load while docked.



► MELBOURNE EXPANSION COMPLETED

Following the development and dredging of the Victoria International Container Terminals (VICT) in Melbourne, larger container vessels are now calling at the port.

Development of the terminal has enabled shipping lines to access Port of Melbourne without being obstructed by the West Gate Bridge or the Yarra River Channel, enabling a step-up in vessel capacity from 5,500 to 8,500 teu.

► BERDYANSK EXPANSION

Ukraine's infrastructure ministry has given the go-ahead for a USD22 million plan to develop Berdyansk Seaport.

The plan comprises construction of two new berths – 10 and 11 – along with two new grain terminals and reconstruction of four existing berths, which are berth 6, 7, 8, and 9.



DP World commits to the expansion at Port of Berbera, Somaliland

Expanding Port of Berbera

Some 13 years after its involvement in the Gulf of Aden-Red Sea market began in Aden, DP World is pushing ahead with an expansion at Port of Berbera, Somaliland, as it attempts to set up a workable transshipment facility for the east Africa region.

Despite winning a tribunal before the London Court of International Arbitration early 2018, after Djibouti nationalised its Doraleh Container Terminal in February 2018, DP World is effectively locked out of the management contract there following a spat with the government of Djibouti, proving that its cultivation of the new facility at Berbera was an astute move.

DP World was thrown out of Aden in 2013 after Yemen became frustrated at the promotion of the Djibouti facility at its expense, although group chairman and chief executive officer, Sultan Sulayem, recently stressed that the security situation in Yemen had left a lot to be desired.

The group is now pressing ahead with expansion in Berbera after entering Somaliland in 2016 in a bid to boost its global recognition. After sealing a deal

with the de facto government of the territory to develop the port, DP World could provide the biggest-ever boost to the Somaliland economy.

On 11 October, the group awarded a contract to United Arab Emirates (UAE) construction company Shafa Al Nahda Contracting to expand the Berbera facility. A DP World press release said the first phase of the expansion would involve “a 400 m quay and 250,000 m² yard extension, as well as the development of a free zone to create a new regional trading hub”.

Shafa Al Nahda has also been involved in the Port of Dakar expansion in Senegal, as well as the Port of Maputo expansion project in Mozambique.

Competition for container trades is heating up in the Red Sea region. As Saudi Arabia develops King Abdullah Port and Jeddah Islamic Port, Egypt is moving ahead at Port Said and Sokhna, while Qatar is planning to develop a new mega-facility at Sudan's Suakin. Regional analysts also expect Ethiopia, in the wake of a thaw in relations with Eritrea this year, to attempt

to assist with development of the ports of Assab and Massawa.

“We are aware of the stakes in the Horn of Africa,” Muse Bihi Abdi, Somaliland president said.

He added, “It is our responsibility to compete with other ports. We are ready for that.”

Adnan Al Abbar, DP World's senior vice-president of planning and project management, told *P&H* that about 10% of the proposed budget of USD442 million had been spent so far and he anticipated the full amount would be allocated over the next two years, when the expansion was expected to be completed.

Al Abbar said existing capacity at the port was 450,000 teu and that DP World was looking to local and international investment to develop the port's hinterland, boost local education and development, and train local talent. The new facilities will be led by Supachai Wattanaveerachai, who was formerly based at DP World Laem Chabang in Thailand.

A DP World official said the typical vessel size at Berbera was 1,600–1,800 teu, and that because the vessels were geared,



normal vessel clearance times were about 40 hours. He also added that the existing quay length is 650 m, although not all of it is devoted to the container business.

Al Abbar refused to answer questions on DP World's work elsewhere in east Africa, instead stressing the need to develop the local economy.

He also refused to comment on whether investment in Somaliland would pave the way for DP World projects in Somalia proper. As a self-declared independent state, Dubai's overtures to Somaliland over the past three years have incurred displeasure in the Somali capital, Mogadishu, mainly because Somalia has sided with Qatar in the current Gulf dispute with that country.

When Somaliland tried to attract World Bank funding for the 'Berbera Corridor', a 750 km road connecting Berbera to Ethiopia, the Somalis blocked the move. As a result, Dubai is said to have banned new visa approvals for Somalis wishing to visit the UAE.

Sulayem said that development of the Berbera Corridor would depend on interest from the "private sector".

Incheon port builds logistics centre

The South Korean government will spend KRW20.2 billion (USD18 million) to develop a logistics centre around the northern mouth of Incheon port, South Korea's third-largest port after Busan and Yeosu-Gwangyang, to expand traffic along the west coast of the country. Ground for the 170,000 m² site at Incheon's North Port will be broken by March 2020.

Incheon Port Authority will bear 76% of the costs, with the rest to be paid for by the Incheon Regional Office of Oceans and Fisheries.

The Regional Office of Oceans and Fisheries will oversee ground improvement over 80,000 m² and one set of electrical facilities, while the port authority will be in charge of ground improvement for 30,000 m², 1.3 km of road construction, and a water supply and sewerage system.

Space in the centre will be leased to logistics and manufacturing companies. So far, 30 companies have expressed interest in taking up space in the development, according to Incheon Port Authority.

Kim Jong-Gil, the authority's director of planning, said, "We will make efforts to entice relevant distributors and manufacturers into the hinterland of North Port, through co-operation with the Incheon Regional Office of Oceans and Fisheries. We expect an excellent outcome."

At present, North Port has 17 berths, handling mainly dry bulk cargoes such as timber and steel products, as well as two logistics spaces, in Aam and on the southern side of the port, with a maximum lease period of 30 years.

The Aam cluster has 16 tenants and the South complex of North Port has 14.

Incheon Regional Office of Oceans and Fisheries said, "The presence of additional port hinterland will resolve the problem of inadequate logistics centres in Incheon North Port, stabilise port operations and help to raise the quantity of goods transported through the port. We will assertively support the development of Incheon North Port and the creation of job opportunities for the local community."



Incheon Port Authority: 5093057

A logistic centre will be built around the northern mouth of Incheon port

Port updates

▶ VALENCIA AUTOMATION

Valencia Port Authority in Spain plans to add an automated container-handling terminal, including nearly 1.4 million m² of new quay area.

Currently, Valencia's 1.4 million m² Noatum Terminal, 337,000 m² MSC Valencia Terminal, and 450,000 m² APM Terminal have 7.5 million teu of annual handling capacity. However, with the capacity added by the new quay could see throughput increase to 12.5 million teu per year.



▶ ROTTERDAM BRAZIL DEAL

Port of Rotterdam Authority is investing USD85 million for a 30% share in Port of Pecém, which it considers a prospective logistics hub in northeast Brazil.

The port complex houses power stations, a steel mill, a container terminal, and wind turbine manufacturers. It has major potential for expansion, Port of Rotterdam believes, with much of the key port infrastructure already being in place.

▶ CHINA MYANMAR DEEPSEA

China will develop a deepsea port in Myanmar's Kyaukpyu town as part of its 'Belt and Road' initiative. The multibillion dollar contract will be executed by a Chinese consortium led by state-owned CITIC group, which signed the agreement with the Kyaukpyu Special Economic Zone Management.

Both sides will set up a joint venture to build and operate the port.

Port updates

► GOTHENBURG RO-RO RISES

Volumes of ro-ro traffic between Gothenburg and continental Europe have continued to rise, with 254,000 units shipped between the Swedish port and Ghent/Zeebrugge in 2017. A further rise of 10% is forecast for 2018, which will see volumes on the route double in under 10 years. The service from Belgium has recently expanded to include destinations in Spain, Greece, and Turkey.

► ICTS REVENUE JUMPS

Philippines-based International Containers Terminal Services (ICTS) saw port revenues jump 10% over the first nine months of 2018 to USD1 billion, helped by higher volumes and new contracts with shipping lines. While the volume grew at a moderate pace in the firm's existing locations, it also added terminals in Papua New Guinea and Melbourne.

► HAMBURG RAILBORNE

The Port of Hamburg pushed substantially more inland-bound freight onto rail over the first nine months of 2018. A total of 1.8 million teu was transported between the port and inland terminals, 4.3% higher than the same period of 2017. The move was driven by a decrease in bulk cargo and container handling, while conventional cargo volumes grew.



▲ 4.3%

Colombo cruise calls grow

The Port of Colombo in Sri Lanka has reported a significant growth in the number of cruise vessels calling. In the first 10 months of 2018, 45 cruise ships arrived and departed at the Port of Colombo, according to the Sri Lanka Ports Authority, representing a 28.8% increase against the same period of 2017.

The port also saw significant growth in transshipment container throughput for the first 10 months of the year. It handled 4,717,746 teu in January–October 2018, against 3,948,163 teu in the same period of 2017, a rise of 19.5%.

Sri Lanka has launched a 3-year plan to develop its port sector as



Port of Colombo: 5098442

The number of cruise ships calling at the Port of Colombo has boomed

the preferred maritime gateway to South Asia. The Sri Lanka Ports Authority (SLPA) was awarded the

Ports Authority of the Year 2018 Award by the Global Ports Forum (GPF) in February 2018.

China to build deepsea port in Myanmar

China will develop a deepsea port in Myanmar's Kyaukpyu town as part of the east Asian giant's continuing 'Belt and Road' initiative.

After years of negotiations, in November 2018, both countries signed an agreement for the port development to go ahead. The multibillion-dollar contract will be executed by a Chinese consortium led by the Chinese state-owned conglomerate CITIC group, which signed the agreement with the Kyaukpyu Special Economic Zone Management.

Located in Rakhine state in western Myanmar, Kyaukpyu, is on the northwestern corner of Yanbye Island in Combermere Bay, along the coast of the Bay of Bengal. The town has a natural harbour that connects the rice trade between Yangon and Kolkata, India.

The port project would be Chinese state interests' third in South Asia, after Gwadar in Pakistan and Hambantota in Sri Lanka. Chinese port investments have led to accusations that the East Asian giant is using its growing

economic clout to increase its global sphere of influence, and its port developments in South Asia have led to suggestions that China is using the String of Pearls theory of building a strategic port network to surround India.

Sino-Indian relations have been difficult and have been characterised by border disputes in recent decades.

The Kyaukpyu port project will be 70% funded by China and 30% by Myanmar government.

The Chinese consortium comprises CITIC, China Harbour Engineering, China Merchants Group, TEDA Investment Holding, Yunnan Construction Engineering Group, and Thailand's Charoen Pokphand Group. The consortium won a tender to build 10 berths in Kyaukpyu in 2015.

However, negotiations to finalise the port construction were protracted amid concern with Chinese control of the project. A breakthrough was only reached after the Chinese consortium agreed to reduce its stakeholding

from the originally planned 85% to 70% in a scaled-down project.

The project's first phase will include two berths with a total investment of USD1.3 billion. Container and bulk cargoes will be handled at the port.

Kyaukpyu already caters to very-large crude carriers, the result of having a pipeline that was also funded by China. The pipeline, which processes 440,000 barrels of crude a day, began operating in 2017.

In 2013, Chinese President Xi Jinping launched the 'Belt and Road' initiative to promote transport links among economies in Asia, the Middle East, Europe, and Africa.

While such links, especially pipelines, mean a lower reliance on the Strait of Malacca, and therefore, reduce China's shipping costs. In 2017, Sri Lanka ended up ceding control of the struggling Hambantota port to China Merchants Ports Holdings after falling behind on repayments to the Export-Import Bank of China.

Liners and port operators to collaborate

Nine ocean carriers and terminal operators have announced their intent to form a blockchain consortium in another industry initiative to exploit the technology.

CMA CGM, COSCO Shipping Lines, Evergreen, Orient Overseas Container Line (OOCL), Yang Ming, terminal operators DP World, Hutchison Ports, PSA International, and Shanghai International Port, as well as software solutions provider CargoSmart, have signed a declaration of intent to form Global Shipping Business Network (GSBN).

Senior executives from the companies signed the declaration at the China International Import Expo in Shanghai on 6 November.

The consortium aims to link carriers, terminal operators, customs agencies, shippers, and logistics service providers to enable collaborative innovation and digital transformation in the supply chain.

OOCL co-CEO Andy Tung said, "With the vision of a truly open blockchain platform for the industry, the GSBN will be key to the success of establishing a sustainable blockchain ecosystem for all stakeholders in the supply chain. OOCL is very excited to be a part of this highly collaborative environment that can facilitate the cross-pollination of ideas towards even more innovative business

models and solutions."

The container shipping industry is often characterised by disparate processes that take place across physical and digital domains. Companies are increasingly looking towards digital technologies such as blockchain to resolve siloed shipment management procedures and disruptive information gaps.

Shanghai International Port president Yan Jun said, "The GSBN blockchain consortium has the potential to enable faster, more accurate processing of cargo information, and more transparency of terminal operations to cargo owners."

Malaysian bunker supplier eyes Hong Kong market

Malaysian bunker supplier Straits Inter Logistics is moving into the marine fuel market in Hong Kong by acquiring a 38% stake in Banle Energy International.

The publicly listed Straits Inter Logistics explained that the MYR15 million (USD3.6 million) acquisition would enable it to grow profits, based on Banle's financial statements.

Formerly known as Raya International, Straits Inter Logistics was involved in water filtration until it was rebranded in 2017, after switching its focus to marine fuel trading.

The company commenced marine fuel trading through a subsidiary, Selatan Bunker, which has a collaboration agreement with Malaysian physical bunker supplier Tumpuan Megah Development. Selatan Bunker operates in Pasir Gudang and Tanjung Pelepas ports, using two bunker tankers.



Selatan Bunker operates in Tanjung Pelepas port using two bunker tankers

Hong Kong is among the world's five largest bunkering ports by sales volume, behind Singapore, Fujairah, and Rotterdam.

Justifying its investment, Straits Inter Logistics said in a Bursa Malaysia filing that Banle recorded revenue of USD84,842,939 in the 12 months ended 31 July 2017,

representing an increase of approximately 138%. Banle's net profit also grew by 51% over the same period to USD365,238.

Chia Teck Lim, one of Banle's directors, was a director with Hong Kong-listed bunkering group Brightoil Petroleum, before founding the company with Liu Xiaoling in 2015.

Port updates

► LE HAVRE DIGITALISATION

In October, France's Le Havre port saw the docking of the MSC *Mirjam* monitored in real time with the port's 3D S-WING technology, functioning in tandem with SOGET's S-JONE's Port Community System. Le Havre port said it allowed seamless digital connectivity between stakeholders, removing the need for paper procedures and resulting in better logistic chain predictability.

► ANTWERP ENABEL DEAL

The port of Antwerp and Belgian international development agency Enabel in October 2018 agreed to collaborate to develop sustainable ports in developing countries, especially Africa. They aim to provide advice and training to improve port facilities, boosting countries' supply chains, improving their competitiveness and boosting employment. Increased port efficiency is essential to enable future-orientated, sustainable development, Enabel said.



► ROTTERDAM THROUGHPUT

In the first three quarters of 2018, Rotterdam's throughput decreased by 0.4% on the same period of 2017 on weaker wet and dry bulk volumes, although it expects full-year volumes to equal those of 2017. Container volumes bucked the trend hitting an all-time high in August. Combined, 350 million tonnes of cargo were handled by the port in the period.

Entries open for IAPH Projects Award

IAPH has transformed its existing award scheme into six 'World Ports Sustainability Awards', featuring five Project Awards linked to WPSP themes that are open to all members, and one specific award for member ports in developing countries, which is the 'Akiyama Award'. The five Project Awards are focussed on the following areas:

- Digital optimisation of infrastructure
- Community support for port development
- Facilitation of energy transition in ports
- Leadership in good corporate governance
- Safety and security as integral part of business



Geraldine Knatz



Jan Hoffmann



Gerald Munjanganja



Cleopatra Doumbia Henry

IAPH launched the World Ports Sustainability Program (WPSP) in March 2018, which aims to demonstrate the global leadership of ports in contributing to sustainable development. It is based on the 17 Sustainable Development Goals of the United Nations and is structured along five themes: resilient infrastructure, climate and energy, safety and security, community outreach and port-city dialogue, and governance and ethics.

The WPSP features a project portfolio, which seeks to be the most coherent and up-to-date global database of port related projects on sustainable development. Through the portfolio, ports worldwide can raise awareness about their ongoing work on sustainability, share their experiences and provide inspiration.

IAPH's new award structure aims to encourage its members to use the portfolio and to reward best practices. An international jury will evaluate the entries for the six award categories, made up of the following:

Cleopatra Doumbia Henry,
President World Maritime University

Jan Hoffmann,
Chief trade logistics branch UNCTAD

Julie Lithgow,
CEO Instituted of Chartered Shipbrokers

Gerald Munjanganja,
Commercial analyst Seatrade

Wayne Visser,
Professor at Antwerp management school

Namrata Nadkarni,
Publications editor at IHS Markit

Geraldine Knatz,
Professor at University of Southern California and former IAPH president

Henri van der Weide,
Chair IAPH port environment committee

Shiara Stevens,
Chair IAPH communications committee
NN, International Maritime Organization

Nominated projects will also be presented for an online public vote. The winners will be

announced during the World Ports Conference Gala Dinner, held in Guangzhou, China, on 9 May 2019.

The deadline for entries is set at 15 February: entries for the Project Awards must be submitted through the online form on the WPSP:
www.sustainableworldports.org/submit-your-project/

Entries for the Akiyama Award must be sent by email to the IAPH secretariat:
info@iaphworldports.org

The full terms of reference are available from the IAPH website:
www.iaphworldports.org/awards

More information on the World Ports Sustainability Program can be found on
www.sustainableworldports.org

For any queries, please contact the IAPH secretariat via email:
info@iaphworldports.org



Lars Robert Pedersen advocates a holistic approach to sustainability, and other issues

Holistic empowerment

Lars Robert Pedersen, deputy secretary general at BIMCO, explains how ports can benefit from breaking the barriers that separate them from the shipping industry

The 2020 sulphur rules, which are only a year away from being reality, have created a number of new issues for the shipping industry. But to a greater extent, it has underscored issues that were already there or brought forth challenges from the past, which must be tackled again on a grand scale. An example of the latter is fuel quality.

When this issue came to the forefront of the 2020 sulphur debate in 2018, I brought a type-written manual from 1986 to the BIMCO office, which could still be used on ships today. It shows answers to the challenges around new-blended fuels: simply requiring today's engineers to learn skills that were common 30 years ago. In many ways, it is the sheer scale of the transition to different fuels that increases the statistical likelihood that unforeseen problems will appear – as, in this example, a very large number of engineers would need to learn these skills.

Ports could address an issue that pre-dates the 2020 regulation: supplies of bad bunkers

and transparency around the supply of bunkers in port. There is a lot of autonomy and power held by ports to ensure the quality and ethics of the service providers operating within their limits. Given that most refuelling takes place within port limits and this is where the customers of the bunker suppliers are, ports have a significant degree of potential influence over businesses who wish to operate using them as base.

While the International Maritime Organisation's MARPOL Annex VI, Regulation 18 – which governs fuel quality – is for states to implement, there is no reason why ports should not require bunker suppliers to live up to the rules. I would assume ports that are competing with other viable port alternatives would have an interest in making sure that quality services are available at their premises.

In other areas of business, it is perfectly normal for companies not only to require certain standards for any partners who operate on their premise, but also to go back to their

supply chains and require adherence to a set of criteria. Does anything prevent ports from doing the same?

Ports could, for example, require implementation of quality management for bunker suppliers. They could also place bunker suppliers that provide bad fuel under scrutiny to ensure the end clients – shipowners and operators – were less exposed to bad bunkers.

A more holistic approach is needed towards improving conditions and services for the shipping industry, and to sustainability in general. As big regional employers, ports are very locally focused and must follow local requirements and laws on a whole range of topics. This could explain why in many cases the initiatives, such as those to improve CO₂ emissions, focus solely on ways to decrease the port's own emissions (by installing electric straddle carriers or the like). However, that is not where we get big improvements.

Instead, ports should look at the full picture and collaborate with shipping to make sure vessels complete their journey in the most effective way. Perhaps a ship could share some of its clean aspects with the ports it visits?

If a port makes it possible for a ship to reduce emissions substantially en route between calls because of efficient operations, maybe the port could earn a share of those emission reductions?

A holistic approach would benefit everyone, and the shipping industry could use the help to reach our stated targets. **PH**



Road to growth

Guangzhou port's deputy director general Yuan Yue and IAPH's Patrick Verhoeven explore the nuances of Belt and Road, Brexit, and efforts to boost sustainability. **Jonathan Robins** reports

With the Chinese multibillion dollar Belt and Road initiative driving port construction across Asia, Australia, and Africa, it is fitting that the next IAPH Conference will be held in Guangzhou, China, in May – the first time the event has been held in the country since Shanghai in 2005.

In the 14 years since the last event, China's role in the global economy and the maritime industry has grown rapidly, and its ports are more important than ever. Guangzhou's appearance on the maritime world stage is hardly new. Yuan Yue, the port's deputy director general, said that Guangzhou is the only port in China to have been in operation for more than 2,000 years. "As the

birthplace of the ancient Maritime Silk Road, Guangzhou is the window of China's foreign trade," she told *P&H*. "Hosting the World Ports Conference will not only show the world the city and port of Guangzhou, but also further enhance communication and economic contact with international ports. It will also help IAPH boost its influence among Chinese port and shipping industries."

IAPH managing director for policy and strategy Patrick Verhoeven agrees, "China has been leading the 'champions league' of ports for several years now, with many ports ranking among the top performers in the world and it very significant for us to hold the World Ports Conference again in China."



Patrick Verhoeven and Yuan Yue do not see Brexit as a long-term threat to trade

Global links to Chinese ports are particularly important given the ongoing Belt and Road initiative. The ambitious project encompasses the creation of a land-based trade link across the old Silk Road to Europe (the 'Belt'), while the 'Road' incorporates a series of ports to enable seaborne trade across Asia, Africa, and Europe. "Up to now, Guangzhou has opened more than 200 container liner routes, among which over 80 are from/to the ports along the Belt and Road", Yue said, adding, "Guangzhou has maintained maritime trade relations with over 400 ports in more than 100 countries and regions in the world."

Many IAPH members are well aware of the benefits and challenges of Belt and Road. Verhoeven has taken a holistic view of the initiative, pointing out that it will create opportunities across several regions, through improvements to connectivity, infrastructure, and investment – provided there is agreement among all the stakeholders (of which there are many). "There are a lot of moving pieces that must be taken into consideration for this project to work, but it is always good to have ambition in an initiative as this encourages growth across the table. As they say, when the tide comes in, all the boats will rise together," he elaborates. Verhoeven envisions the creation of new regional hubs that will change the local landscape.

From the Port of Guangzhou's perspective, Belt and Road will further enable China to become connected to the world economy, making it a "win-win" for economic co-operation. "With the implementation of the reform and opening-up policy, China's fast-growing economy has made prominent contributions to the world economy. The Belt and Road initiative aims to achieve closer economic co-operation and create more economic and employment growth points", Yue said.

The Chinese port has been bolstered by the development of a free trade zone, making it a regional distribution centre and boosting imports and exports. Yue expects this to increase foreign investment levels, aid the adoption of advanced technology, and "promote the prosperity and development of the port."

But disruption to existing trade patterns, and therefore to ports, can come from many different sources. One major political issue that has the potential to disrupt trade, at least from a European perspective, is Brexit.

However, there is still controversy over whether it will be a positive or a negative. "Seen from an intra-EU perspective, Brexit is of course a key political issue," Verhoeven said, "But from a global perspective it is much less so [...] hard, soft, or no Brexit, I expect the country will continue to play a very significant role on the global trade scene, in partnership with China and other major trading nations. The same goes for London's position as a global shipping centre."

“Brexit will not present an obstacle to the development of Sino-UK relations”

Yuan Yue, *Guangzhou port's deputy director general*

The response from Yue was no less emphatic. "Brexit will not present an obstacle to the development of Sino-UK relations," she noted, pointing out that Britain has many globalised industries, and strong links with East Asia. "I think there are great potentials for Sino-UK co-operation in the future," she said.

It is a reminder that with the world awash with potential political impediments to trade, it is ports that are on the front line. "Ports are mostly on the receiving end of geo-political developments. They have very little influence on them. Together with the shipping industry, ports, however, thrive on free trade. That is why I believe that we should be much more vocal in championing free trade against all kinds of restrictive policies. The shipping industry has started doing so and ports should join them," said Verhoeven.

One issue that ports are also on the receiving end of – but increasingly are also seeking to influence – is action to control greenhouse gas emissions.

"Energy transition is no doubt the most important issue on the global maritime agenda today. It is the game-changer that will affect the entire maritime cluster," Verhoeven said.

The International Maritime Organization's (IMO's) greenhouse gas strategy will push the industry to seek carbon-free methods of propulsion, which will bring its own challenges, he explained. "For ports it is not easy to deal with this volatile situation: should they invest in bunkering facilities for alternative fuels, if so which? Is onshore power the answer? What kind of incentives should ports provide? As IAPH, we are facilitating ports in the process by providing concrete tools such as the recent audit scheme for LNG bunkering and the Environmental Ship Index, which is about to be upgraded," he said.

The effort to go green has not gone unnoticed in the port of Guangzhou either, with Yue exclaiming that it has made great efforts to reduce its emissions, including investing more than RMB1 billion in green and low-carbon projects since 2015. "At the same time, policies to support the application of clean energy in ports [have been] launched to strengthen the promotion and usage of clean energy," she said.

With emissions legislation such as IMO 2020, and further ahead the commitment to slash shipping's carbon emissions by 50% by 2050, it is an issue that Guangzhou, and the rest of the maritime industry, has far from heard the last of. **PH**

Sulphur cap: I fought the law

With 2020 fast approaching, confusion remains over what low-sulphur fuels will be available, at what price, and the effectiveness of attempts to catch out non-compliant vessels. **Charlie Bartlett** reports

If shipowners want to have a scrubber fitted to their vessels by the 2020 deadline, their window for action is closing rapidly. Marine engineering specialist Goltens estimates that at least 11 months – eight for procurement, and three for installation – are required. Various experts advised that to have a scrubber installed by 2020 would give owners a competitive advantage; but given the relative lack of installations this year, owners still do not appear to have taken the bait.

It is sensible to assume, then, that the market is adopting a familiar wait-and-see approach to the post-2020 landscape, however, this tactic may be costly. This year, the price of Brent oil hit a peak of more than USD85, before crashing back down to a little more than USD60 in the third week of December. But signs still point to a major cost differential between heavy-fuel oil (HFO) and low-sulphur fuel; OPEC forecasts in the third quarter highlight that the massive increase in demand

for 0.5% sulphur fuel would necessitate an increase in the supply of HFO these blends are derived from, likely leading to a surplus of HFO, and an accompanying drop in prices.

Furthermore, there are few other customers for the HFO that many ships currently use. It is too dirty and difficult to use for most applications, although some land-based power generating facilities can use it.

At the time of writing, the fines for non-compliance are not expected to be especially high, and actual enforcement of the cap is anticipated to be spotty at best. If a major rift in fuel costs does open in the months and years following 2020, this points to an uncomfortable possibility; that some unscrupulous shipowners will choose to pay these fines if caught, rather than cover the cost of complying in the first place. If companies can get away with it, this will give them a major competitive advantage. The conflict of



Dietmar Hasenpusch: 638824

interest, said International Chamber of Shipping (ICS) in a 2018 report, was unavoidable, "... in view of the huge sums of money involved".

For ports, the implications are far-reaching. Under many charter contracts, fuel procurement is not the responsibility of the shipowner because the charterer foots the bill. Operators are often provided with fuel, which is supposedly fit for purpose by their customers, but ports and terminals, in such instances, are out of the loop. All they can hope is that the ships inspected by port state control authorities comply with the appropriate regulations. If they do not, ship operators risk having vessels detained, with major cost and time implications for port and terminal managers.

At the 2018 Singapore International Bunkering Conference and Exhibition (SIBCON), the Port of Singapore (MPA) announced it would be preparing for the cap by corraling and publishing information, available online, covering all the licensed suppliers of low-sulphur bunker fuel in the region. "In light of the International Maritime Organization's [IMO's] global sulphur limit from 1 January 2020, Singapore is committed to ensure a sufficient and broad range of solutions available to shipowners," said Andrew Tan, head of MPA.

Many believe that the IMO has not taken into account the day-to-day contractual complexities of fuel compliance on sulphur. A spokesperson said, "If they're intending to break the law, as soon as they go to a port

with sampling of the fuel, somebody is going to find out they're cheating the system. It's like declaring you're not going to fix a taillight – you might get away with it the first time you drive, but the second time, you'll be pulled over. So why would you do that? If they do go out of their way to get away with it, they're not going to get away with it for long. And if a lot of owners do this, countries are just going to put the fines up.

"These rules are designed to protect the health of everyone on the planet, and prevent 500,000 premature deaths in the next five years. If any owner is happy to break that law, perhaps they're also happy to flout the rules on lifeboats and everything else."

Nevertheless, the matter is perhaps not as morally black-and-white as it might appear. There is a great deal of contention about the quality of the 0.5% fuel, which will be available, a matter acknowledged by refiners and bunker suppliers alike. According to fuel testing laboratory Veritas Petroleum Services (VPS), refiners are not getting distillates right even today. Whether in terms of flash point, thaw point, cat fines, viscosity, density, lubricity; almost 10% of blends are 'off-spec' in some respect.

But who supplies the suppliers?

Head of Tsakos Energy Navigation (TEN), Nikolas Tsakos, is far from the only owner to be concerned at the prospect of his fleet, and others', essentially becoming a proving ground for untested and unknown fuels. But on a recent conference call announcing

The sulphur content of marine fuel is being reduced to 0.5% from 3.5%





Southern cross maritime 46662

Vessels have suffered from fuel contamination, resulting in engine breakdowns

TEN's second quarter results, Tsakos called on IMO to stagger the introduction of the sulphur cap over a two-year transition period, during which time safe, reliable fuel blends could be developed. An unstable mix of fuel's constituent aromatics and paraffins can lead to catastrophic engine failures, which for the vessels and seafarers involved, can have deadly consequences. Any loss-of-propulsion (LOP) incident is dangerous, and thanks to the 0.1% sulphur cap in North America and northern Europe, examples abound.

Many vessels have suffered from fuel contamination, resulting in engine breakdowns, especially during switchovers, leaving them adrift for days on end awaiting tow, and sometimes off-hire for months at a time while repairs are made.

"With 2020 ahead of us, where the majority of the fuels appear to be blended fuels, and without having standards for this 2020 fuel, we feel that this thing is only going to get worse," Tsakos said.

"This is something that as bunker buyers we have seen happening every three or five years. So, we need to take corrective action to make sure that we don't take a necessary risk for which we pay.

"We think the bunker industry is responsible in making sure that they will provide the right fuel, which is fit for purpose and we will not have to deal with the difficulties in such a large scale as it was the case with the latest incident," Tsakos added, referring to the recent outbreak of engine failures, which came as a result of poor quality bunkers from various Texan ports.

Since, there are a few vessels that will be equipped with scrubbers come 2020 (about 2,000–3,000 according to recent estimates, rising to 5,000 by 2025) bunker suppliers will have to have stocks of HFO on

hand. But to reinforce its enforcement regime, the IMO has set a carriage ban, effective March 2020, to prevent the possibility of non-compliance at source. Although to some extent and depending on the charter contract, this moves responsibility for breaches of compliance off owners, to charterers and ultimately bunker suppliers.

However, bunker suppliers are unlikely to face legal recourse if they sell non-compliant fuel. In a recent interview, Cockett Marine Oil CEO Cem Saral said, "There is no compliance or enforcement regulation that limits sell side on what to put on the ship; the [fuel carriage] compliance burden is on the consumer."

For bunker suppliers, the choice of whether to provide HFO to ships that have requested it "will be a very personal decision", Saral added. "The commercial engagement will have to decide whether they will be comfortable trading, knowing that the vessel does not have a scrubber."

Commenting earlier this year, COO of Danish bunker supplier Monjasa, Svend Stenberg Morhølt indicated many bunker suppliers were not looking forward to becoming fuel police. "As a shipowner, you need to notify me that you have a scrubber installed, and then I can supply you with 3.5% sulphur HFO," he said. "If you don't have one, which is 99%, then you have to take the 0.5% sulphur fuel.

"When the financial incentive goes up, we have to be very concerned with governance. There are port state controls and sniffers. But we are one of the most closely regulated, government-controlled countries in the world, and there is not yet any connection between a sniffer and a fine in Denmark. The highest fine issued to date [for violation of the 0.1% sulphur cap, in place in Northern Europe since 2015] was USD60,000. That suggests a large incentive not to comply."

For the countries being affected by the sulphur fumes, although, the right course of action is less ambiguous. In absence of particularly punitive financial penalties, Denmark has identified a somewhat extrajudicial method for punishing those who do not comply with the sulphur cap – straightforwardly naming and shaming. The Danish government said that it will publish the names of companies that repeatedly violate the cap, in the hope that the bad press will harm their future business prospects.

Ports in Denmark are now facing the uncomfortable prospect of having to publicly inform on the shipowners that call at the country; if the strategy works, it could spread to other countries. Assuming charterers do not want to be associated with shipowners who break the law, it will cause much more financial damage than a five-figure fine. But in many contracts, it is the charterers instead of the owners, who pay for and provide the fuel. The owners, then, will have to be extremely vigilant in the coming years; if their vessels are found to be non-compliant. It is the owners, and not their clients, who will take the fall. **PH**

Meeting the challenges of 2030 and beyond

The maritime industry's biggest emissions challenge is not how to reduce sulphur, but carbon, **Kirsi Tikka** explains

Shipping's focus today is fixed firmly on 2020 and the looming International Maritime Organization (IMO) regulatory deadline on sulphur limits in marine fuel. Although challenging in the short term, this shake-up pales in comparison with the organisation's plans for reducing greenhouse gases (GHG) from shipping.

In other words, the targets for long-term carbon emission reductions between 2030 and 2050 are not challenges that we have solutions for at present. We will not be able to use today's technology alone to meet tomorrow's requirements. Instead, it will require new ways of thinking about innovation and collaboration.

The reduction targets by 2030 are challenging, but since they are measured against cargo transport work they allow for trade growth. However, the measures prior to 2030 must consider the 2050 total reduction target to account for the trade and transportation growth, while reducing absolute GHG emissions. This will push the industry towards new frontiers of technology.

Although 2050 may seem far away, the technology development, adoption, and implementation must start well before 2030 to enable the required shifts in technical and logistics solutions.

The decarbonisation challenges will be a shared responsibility of all stakeholders in the seaborne trade. The ports will need to provide shoreside facilities and logistics support that enable low-carbon shipping. This may involve just-in-time arrivals to optimise transit speed and eliminate unnecessary waiting time,

harbor tugs operating on low- or zero-carbon fuels, and shore power to provide low-carbon alternatives to ships on dock.

An uncomfortable reality is that the investment required to reduce carbon will be considerable, at a time when global economic conditions are uncertain and questions are emerging about the long-term sustainability of some shipping business models.

Maritime is an industry used to commercial risk and opportunity, but early engagement and compliance with new regulations should be encouraged and not punished by regulatory uncertainty. The industry needs regulation that provides a level-playing field for all and a means of compliance that is available, technically proven, and commercially attractive. Without these key criteria there is a huge regulatory investment risk attached to the period between 2030 and 2050.

Every stakeholder, whether a shipowner, charterer, or investor, must consider the life-cycle risk to asset values when making investment decisions in a low-carbon and ultimately no-carbon future. The risks include technical viability, charterer and end user sustainability requirements and cost competitiveness.

Mitigation of these risks will require the ability to reward – instead of penalise – early adopters of new technology and give some certainty to followers, incorporating technology options at the newbuilding stage, as well as for retrofitting and clearing the way for investment in the development of new technologies.

Reaching these targets will require a combination of measures, which could include radical improvements in ship design, the development of new fuels, energy sources, and propulsion alternatives; as well as the concept of slow steaming, market-based measures, and application of digital technology.

Despite the scale of the shift the industry must make, our clients are challenging us and other industry partners to engage now with the IMO targets rather than wait until the regulations mandate the course of action.

The future sustainability of the industry requires innovation across the board – including for technology and business models – and ABS is well-positioned to contribute to the innovative process. Understanding the available technology options and their maturity will be critical in making investment decisions. **PH**

“The reduction targets by 2030 are challenging”

Kirsi Tikka

Executive vice-president and senior maritime advisor, ABS



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Clean-up countdown

The looming 2020 cap on high-sulphur fuels has the shipping industry in a state of confusion, with serious questions about the supply and availability of 0.5% fuels, and the capacity of ports to handle them,

Steven Cousins reports

The biggest policy change in shipping for decades is just 12 months away, but shipowners, crews, and ports continue to grapple with uncertainty over the transition.

The 2020 sulphur cap, introduced under the International Maritime Organization's (IMO's) MARPOL treaty, will limit the sulphur content of marine fuels at 0.5% versus the current 3.5%, in a bid to reduce pollution that has been linked to premature deaths from lung cancer and heart disease, and environmental destruction such as acid rain.


The switch presents various hurdles to stakeholders, including a lack of clarity on the formulation of new low-sulphur fuels and potential stability and compatibility issues that could impact on vessel safety.

A key issue is uncertainty around the future supply and availability of low-sulphur fuels. At present, more than 95% of residual fuel consumed by the marine industry has a sulphur content greater than 0.5%, according to figures from the IMO, which indicates the huge transition required by fuel suppliers and refineries, and for ports that supply visiting ships, to bring cleaner alternatives into circulation.

Vessels have various options to achieve compliance with the 0.5% cap. Exhaust gas cleaning systems, also known as scrubbers, can be fitted, or ships can burn distillates such as marine gasoil, new low-sulphur fuels, fuel blends, or premium Emissions Control Area category fuels, while some shipowners are even looking at ordering vessels that run on liquefied natural gas.

Refineries may struggle to supply enough low-sulphur product to vessels





The current widespread availability of high-sulphur heavy fuel oils (HFOs) compared with other fuel types makes scrubbers an attractive and arguably simpler option, and many shipyards have full orderbooks for scrubber retrofits and adapted newbuildings across a wide range of vessel types.

However, ships with scrubbers are likely to make up a relatively small percentage of the 50,000–60,000 vessels that fall under the regulation. Uptake of the technology may also be held back by recent questions over environmental performance and a potential shortage of HFO products as fuel vendors change refinery streams to accommodate new low-sulphur compliant products.

The HFO supply could become a problem in smaller ports, said Olivier Lejeune, energy market analyst at the International Energy Agency (IEA), adding: “Broadly speaking, high-sulphur fuel oil is likely to remain available in the larger ports and those situated close to refineries, however, it may be less plentiful in ports with less capacity to store bunker fuel. Those locations will likely have to ‘choose’ between fuel oil and gasoil, and will often decide to switch to marine gasoil or a new 0.5% bunker blend due to higher demand for those grades.”

However, this is unlikely to become a major problem for ships equipped with scrubbers, said Lejeune, as they tend to follow fixed routes and/or travel between major ports. Shipowners fitting scrubbers may also look to guarantee HFO supply via long-term contracts in specific ports before 2020.

A lack of preparation for the IMO mandate has led many analysts to predict a dramatic boost in marine gasoil consumption immediately following implementation, mainly because shipowners have experience of using the fuel.

In its five-year outlook, the IEA said gasoil consumption will rise by almost one million bpd, to 1.7 million bpd, in 2020.

However, as shipping becomes more confident in new 0.5% fuel formulations, which today still require proper testing, they expect gasoil production to fall back to 773,000 bpd by 2023.

Oil majors, such as ExxonMobil and Total, have already invested in upgrading their refineries to produce new 0.5% fuels. In October 2018, ExxonMobil confirmed that its new low-sulphur fuels are residual grades that will be made available at ports in Antwerp; Rotterdam; Genoa and Marseilles in Europe; Singapore; Laem Chabang in Thailand; and Hong Kong, prior to 2020.

However, the global picture on refiners is mixed, said Martin Tallett, president of fuel consulting firm EnSys Energy, adding, “You have some that clearly made strategic decisions, two to three years ago, to make significant investments in low-sulphur fuels, at least partially in anticipation of the IMO 2020 rule, but other refiners appear to have not taken any

Ships are not required to alter their route to find a compliant fuel

Martin Tallett, EnSys Energy

actions, including those that simply plan to switch to processing more light sweet crude [petroleum with less than 0.42% sulphur].

“It’s a situation that worries us because if these producers are no longer processing medium or heavy sour crude where is that going to go? A scramble for sweet crude could push up prices and precipitate a crash in the market.”

The relative complexity of refining processes for low-sulphur fuels brings additional logistical challenges in terms of global production and distribution to ports in different regions.

High-sulphur HFOs are essentially low-quality fuels that are simple for refineries in most countries to produce, which has resulted in a relatively even distribution of production worldwide.

Compliant low-sulphur marine fuels are more complex and only certain regions are geared up to be able to produce them, which could result in a concentration of supply.

“This has implications in terms of the logistics of getting 0.5% sulphur fuel through to the 800+ coastal ports around the world,” said Tallett.

There are questions over the capacity of smaller ports to provide different fuel types to vessels in future. High- and low-sulphur fuels require separate, segregated facilities for storage and bunkering, and smaller ports may struggle to provide both.

These factors may trigger changes to the routes vessels take or the locations where they bunker fuel, said Tallett, adding, “Under MARPOL Annex VI rules ships are not required to alter their route to find a compliant fuel, but ships have the option to pick up fuel at different locations along their route so we may see changes to where ships bunker.”

Given the potential gap between the amount of low-sulphur fuel needed to achieve 100% compliance and the amount that can be realistically supplied, especially during the first part of 2020, it seems likely that some ships will switch ports of call or submit fuel oil non-availability requests (FONAR) to their port state and flag states to avoid breaking the law.

The 2020 deadline represents a major opportunity for shipping to clean up its impact on the environment and the planet, but with the clock ticking, more information, guidance, and planning is needed to ensure that the opportunity is not squandered. **PH**



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Africa's Automation Struggle

With operators prioritising volumes over efficiency, the adoption of automation technology remains limited on the continent. **Shem Oirere** reports

Africa's ports are often associated with low volumes and poor performance. Yet increasing ties with China and India, the resilience of the region's intra-Africa trade and a recovery in global commodity prices are expected to push the continent's imports and exports substantially higher.

Cairo-based financial institution African Export-Import Bank believes Africa's total merchandise trade has gathered momentum in recent years, growing by 10.6% in 2017, to USD907.63 billion, up from USD820.76 billion in 2016.

This certainly tallies with the continent's strong growth, expected to hit 3.4% in 2018, up from 2.8% last year. Analysts are projecting a further rise to 3.7% in 2019.

The expectation is that this extra activity will not only trigger increased trade, but could also enhance efficiency at the continent's seaports and container terminals, as they look to accommodate additional cargo volumes and larger ships, with the minimum.

Looking to achieve this, some operators have embraced the use of information technology to revamp operations. The continent's first fully automated port terminal is scheduled to open in early 2019 when APM Terminal's MedPort Tangier facility opens in Morocco.

Yet stakeholders in Africa's shipping industry are still trying to understand whether the automating of processes such as cranes and yard stacking will boost performance of the region's ports.

London-based professional services provider PwC believes that automation of Africa's ports is not the answer to their weak performance, with trends elsewhere contradicting the belief that automation improves efficiency and output, or attracts new business.

"Ten years ago there were only five countries globally with automated or semi-automated container terminals, but now that number has tripled," PwC said in a recent report. "However, less than 5% of container ports or terminals are either fully or semi-automated, [although] all of these are able to handle



Container vessels at the Tanger-Med container port and Renault terminal in Ksar Sghir, near the Moroccan port city of Tangiers

the largest ships and handle very large volumes [and] consequently, they can employ more ship-to-shore gantry cranes per vessel and thus ship turnaround times are further reduced," they added.

In spite of this observation, PwC points to previous studies that showed "20 ports in Asia and Europe have seen a decline in berth productivity since the introduction of automation or semi-automation, suggesting these technologies do not necessarily improve performance in medium and small ports".

"Despite the call for more automation, many of the container ports and terminals that have pursued it have had difficulty achieving the levels of productivity they had before [as] none of these container ports and terminals were able to fulfil expectations of lower operating costs or increased berth and yard efficiency".

"Investment in highly automated systems may therefore not be appropriate for Sub Saharan Africa (SSA) ports," PwC said.

The continent's ports should not target 100% automation, but just enough to achieve high levels of efficiency, according to Michael Luguje, secretary-general of the Port Association of West and Central Africa.

"We should have a balancing platform where we are automating, [and] at the same time building the human capacity to be able to accompany that automation so that we are able to get the desired outcome," said Luguje.

"Of course, we have had the situations of optimum equipment utilisation so you can reduce idle time and all that but also, how you can take care of the human resource to ensure that the human factor to ensure operators of port equipment".

Yet, for the Hague-based APM Terminals, operator of the set-to-open MedPort Tangier complex in Morocco, automation has a big role to play in boosting productivity. The firm is deploying 12 advanced remote-controlled ship-to-shore (STS) cranes which the company says are "equipped with both conventional and fully-automated operations and an automated gate system."

The post-Panamax cranes, manufactured by Shanghai-based ZPMC, have the capacity to accommodate 20,000 teu vessels, giving the facility an annual container throughput capacity of 5,000,000 teu.

"The STS cranes will be fully automated, including a remote crane operator safely located in an office building near the quay, and will feature a second trolley, and Optical Character Recognition (OCR) technology to provide maximum efficiency and productivity for APM Terminals' liner customers," the company said in early 2018 when the first three cranes were dispatched from China.

ZPMC has also designed new cranes for Bollore Ports' container terminal at Abidjan. The cranes can accommodate vessels of more than 8,000 teus and are fitted with "next-generation electronics and innovative control systems". They have a maximum payload of 65 tonnes, which corresponds to two full containers at the same time.

Their acquisition has allowed Bollore to speed up loading and unloading, and has seen Abidjan poised to become one of the top three hub ports in sub Saharan Africa alongside Mombasa and Durban. In total, Bollore has invested in 17 container terminals in Africa.

More ports and container terminal operators in Africa appear keen to embrace the use of information technology to streamline their countries' logistics chains. The use of microwave technology, barcode scanners, tagging technology, voice recognition technology, radio-frequency system, and other electronic devices such as cell phones are all set to arrive at African terminals. These technological options are enabling Africa's port and container terminals to optimise their operations, especially in monitoring and preparing for the arrival and departure of vessels and containers.

At Richards Bay Bulk Terminal in South Africa, for example, operator Transnet Port Terminals has installed TBA Group's Commtrac terminal software which makes it possible to "plan, track, and manage all bulk or non-containerised cargo, manned/automated assets and people right across your terminal or terminal network – in real time".

Transnet Port Terminal says the software, which has been running for more than 24 months, supports the company's "business processes by providing real time accurate reporting, inventory tonnage position, real-time overview of loading and discharge progress and real time overview of delays and variances among many other important functions and insights".

Another emerging trend among port and container terminal operators in Africa is the installation of modern terminal operating systems.

In November 2018, Navis, part of Cargotec Corporation, said it had successfully implemented the N4 terminal operating system at Djibouti's Société de Gestion du Terminal à Conteneurs de Doraleh (SGTD), currently the main gateway for the Eastern Africa region.

Navis attributed the decision by SGTD to go for the N4 to the terminal operator's determination to upgrade its infrastructure "focusing on increased automation and helping support customer demand as its operations expand. When we implemented N4 at our terminal, cargo volume and yard congestion were at an all-time peak and we needed a system that was reliable and would help us navigate the operational challenges we were facing to become a leading terminal through state-of-the-art technologies", said Abdourahman Guireh, SGTD's Information Technology director and project manager.

"The flexible and scalable nature of N4, along with the assistance of Navis' team and our talented staff all combined to deliver a seamless transition to N4 with no downtime or disruption to our customers," he added.

Despite these cases, most African operators are still opting not to compete on efficiency and revenue generation, but on cargo volumes. As a result, the uptake of automation is set to be relatively limited. **PH**

Burgeoning Ethiopian trade to drive port developments

The creation of new ports in the Red Sea-Gulf of Aden area is critical to ensure that Ethiopia's needs are met, Sultan Sulayem, group chair and chief executive officer of DP World, tells **Peter Shaw-Smith**



Peter Shaw-Smith, 5093978

Construction has started on DP World's Berbera port in Somaliland

With no let-up expected in the growth of East Africa's imports and exports, 12 new facilities will be required in the coming years to deal with the expected cargo growth, DP World believes, and it is Ethiopia that is at the forefront of its thinking.

"Ethiopia needs more ports. The development of many projects in Ethiopia means that they are having in excess of 15–20% growth [with a population of] 100 million people. How can they manage to export and import? They need more than one port," Sultan Sulayem, group chairman and chief executive officer of DP World, said on 11 October 2018.

The one port that he was referring to is Djibouti, where DP World lost its management contract and shareholding when the government nationalised the Doraleh Container Terminal in February 2018.

The tenor of Sulayem's remarks made it clear that DP World has accepted its de facto expulsion from

the Djibouti facility because of local dissatisfaction with its management. However, he made it clear that he expected Djibouti to continue to be a significant factor in the Horn of Africa ports equation. "Djibouti plays a major role for the cargo to Ethiopia and will continue to do so," he said.

"Trade via the Gulf of Aden from the Red Sea to the Arabian Sea is very important. [This is a] place where east and west trade has to pass by," he said. "We always expand the ports and have enough [capacity] for any increase in cargo. We are a company led by the industry. If the shipping lines want more capacity, [we will be ready]."

Sulayem highlighted the importance of additional workable transshipment hubs in the region. "Before we moved out of Djibouti, we started Berbera, because the Horn of Africa needs many ports. We commissioned a study [showing] that when you look



at the Horn of Africa, and you consider all the regions – Somaliland, Kenya, Djibouti, Eritrea, Ethiopia, Sudan, and South Sudan – you need 12 ports, properly developed, to manage the cargo,” he said.

He believes that DP World’s established relationships with the shipping lines will act as a catalyst for the new ports to take advantage of the opportunity to do global business on a local footing. For example, the Ethiopian government has taken a 19% stake in the newly developed Port of Berbera.

“When we came to Berbera, [the Ethiopians] were very encouraging. They were happy that we were here. There is huge demand for good ports that can handle cargo,” he said.

Sulayem did not clarify whether DP World would assist Ethiopia in the development of Eritrea’s ports. The United Arab Emirates (UAE) is using the Eritrean port of Assab as a military base for its prosecution of the war against Houthi opposed to the government in Yemen, and it is likely that this involvement could act as a springboard for further UAE involvement in Eritrea.

“Ethiopia’s economic growth will speed up further following the recent rapprochement and peace deal the nation has signed with Eritrea, potentially providing the nation with a closer international market and access to port facilities at the two Eritrean Ports of Massawa and Assab,” said the August newsletter of the Egyptian-Ethiopian Business Council.

Speculation about a role for the UAE or DP World in the development of Assab, the better-placed of the two facilities, has mounted in the wake of the rapprochement.

However, to date, no details have emerged from Addis Ababa, Abu Dhabi, or Asmara about any deal involving the UAE port operator in the commercial aspects of running Eritrea’s ports.

Ethiopia’s capital budget is understood to be stretched, so it is likely that Eritrea will need to find external funding to help develop Assab. Any capital raised could be directed to funding port equipment upgrades, as well as work on highways to connect Assab to Ethiopia.

While Ethiopia could be involved in securing finance in the short term, joint Arab or even World Bank involvement is possible in the long term since the World Bank has already sponsored major road and logistics projects in Ethiopia.

The African lion awakens

The vastness of Africa, and the perceived complications of doing business there, have made many businesses confused and even wary of doing business on the continent. But this attitude could well be a mistake. A recent report, ‘Africa’s overlooked business revolution’, by consultancy McKinsey states that global business leaders are in danger of missing the opportunity of a lifetime to expand into new and fruitful markets.

To highlight the issue, McKinsey conducted a straw poll asking respondents how many African companies have revenues of more than USD1 billion a year. Many participants said zero and few said more than 50. The actual number is more than 400, and typically they are growing faster, and are more profitable, than their global counterparts.

Six countries in Africa had a GDP of more than USD100 billion in 2017, namely Algeria, Egypt, Sudan, Nigeria, Angola, and South Africa. The political backdrop appears to be improving, with 15 countries seen as having an overall governance trend of ‘increasing improvement’, against six at the other end of the scale.

“In short, Africa is a 1.2 billion-person market on the cusp of transformative growth. It already has more big companies than you would imagine – but with room for many more. Entrepreneurial energy pulses throughout the continent,” McKinsey said.

“In Europe and North America in the 19th century or Asia in the 20th, rapid modernisation of the sort Africa is experiencing has given rise to increases in GDP per capita – by a factor of 10, for example, in China over the 30 years since the launch of economic reforms at the end of the 1970s.”

The implications of the budding transformation highlighted by McKinsey are clear. As the wealth of Africa expands, so too will Africans’ commercial contacts with the rest of the world.

Helped by a strength in commodity exports, the continent’s trade levels are forecast to boom. In a continent that has large gaps in its infrastructure provision, and a port system that is renowned for weak productivity, the potential opportunities are vast.

“With adequate finance, Assab port, and its road link to highland Ethiopia, could be rehabilitated relatively swiftly. However, despite the UAE claiming a prominent diplomatic role in Ethio-Eritrean rapprochement, to date there is no announcement of Emirati financing for Assab,” David Styan, a lecturer in politics at Birkbeck College, University of London, told *P&H*.

“The relationship between potential DP World investment in Assab and the UAE’s use of Assab for military operations in Yemen remains to be clarified,” he added.

With respect to the historical ‘corridor’ between Ethiopia and Eritrea’s Assab – which prior to 1998 served as Ethiopia’s main link to the sea – the Ethiopian stretch of the road is reportedly in reasonable condition, while the Eritrean section is relatively short, at about 70km, meaning that rehabilitation work would not be a lengthy exercise. The road is also said to be more direct and flatter than the alternative southern route via Djibouti. **PH**

“Djibouti plays a major role for the cargo to Ethiopia and will continue to do so”

Sultan Sulayem, group chair and chief executive officer of DP World



Getty Images: 5098441

Automation ambitions

Ports are coming up against a number of challenges as they prepare for increased automation and **Namrata Nadkarni** reports for *P&H*

Global industry by and large views automation as a silver bullet that will lower labour costs, and increase safety, transparency, and predictability to production lines. While certain sectors, such as mining, manufacturing, and warehousing are now reaping these rewards, there have been many teething issues, with not all industries finding that they are suitable for automation on the same scale. The same is true for the maritime sector, which has multiple niche sectors ranging from coastal and deepsea shipping to ports and offshore.

Automation has already been rising at ports, with research group MarketsandMarkets estimating that the automated container terminal market was worth USD8.84 billion in 2017 and would grow to USD10.89 billion by 2023 – with the APAC region

dominating the market. A separate report by McKinsey entitled 'The future of automated ports', found almost 40 partly or fully automated ports now do business across the world, and the best estimates suggest that at least USD10 billion has been invested in such projects. "The momentum will probably accelerate: an additional USD10 billion to USD15 billion is expected over the next five years," it stated.

Understandably, equipment manufacturers such as Wärtsilä, Liebherr, ABB, Kongsberg (soon to include Rolls-Royce marine), Cargotec, and ZPMC are flocking to provide a vast array of digital-friendly solutions. Reducing or eliminating the human workforce is expected not only improve safety, but also reduce disruptions, decrease operating costs, and increase predictability – aspects that greatly appeal to port authorities. Major ports such



Eliminating a human workforce could boost safety and productivity while reducing costs

as Rotterdam in the Netherlands, Los Angeles in the United States, and Shanghai and Qingdao Shandong in China have constructed completely automated terminals on their premises, and even smaller ports are pushing the technological envelope.

In mid-December, the UK ports of Berwick, Blyth, Sunderland, Teesport, and Tyne joined hands with digital specialists, industry experts, academics, regional authorities to form the Smart Port North East Testbed. The digitisation initiative, run by the Situational Awareness Information National Technology Service (SAINTS), will examine technologies such as artificial intelligence, data analytics, unmanned marine vessels, and airborne drones to enable ports to become more 'intelligent' and examine ways of speeding up trade, increasing efficiency and reliability, reducing costs, tracking cargo, improving security, and protecting the environment.

While all these initiatives sound good on paper, and many in the industry feel that ports are an ideal sector to embrace automation and gather data given the structured and predictable environment, it is not all smooth sailing, warned the McKinsey report's authors Fox Chu, Sven Gailus, Lisa Liu, and Liumin Ni. They pointed out that automating a port requires a rather large capital investment and that at present, returns on invested capital are currently lower than the industry norm. According to the information gathered, the return on invested capital of assets at some automated ports is falling short by up to one percentage point from the industry norm of about 8%.

Furthermore, the researchers added that productivity at automated ports often declines in the short term, which could prove a fly in the ointment for smaller or new port authorities with limited budgets to fund the systems. "An executive of a global port operator told us, for example, that at fully automated terminals, the average number of gross moves per hour for quay cranes – a key indicator of productivity – is in the low 20s. At many conventional terminals, it is in the high 30s. With numbers like these, automation can't overcome the burden of the up-front capital expenditures," they write, adding that newer ports face a rather difficult financial landscape. "To justify these investments, the operating expenses of an automated greenfield terminal would have to be 25% lower than those of a conventional one or productivity would have to rise by 30% while operating expenses fell by 10%."

They also flagged teething problems with data collection and analysis as this has historically been difficult to do correctly. *P&H* has spoken with a number of vessel operators and port authorities, all of whom have differing agendas when it comes to data collection.

"If the standards, formats, and structures of the data may be misaligned or even wholly absent, so ports can't collect and exchange data efficiently," the McKinsey report warned.

Furthermore, port operating processes must be simplified before they can be automated effectively –

and that dealing with unusual circumstances that call for an exception to the normal processes can completely disrupt programmed operations, and are better suited to being handled by humans.

That said, for those that can stay the course and have deep pockets, the researchers said that with careful planning and management, "Operating expenses could fall by 25–55% and productivity could rise by 10–3%. And in the long run, these investments will lead the way toward a new paradigm – call it Port 4.0 – the shift from asset operator to service orchestrator, part of a larger transition to Industry 4.0, or digitally enabled efficiency gains throughout the world economy. Port 4.0 will generate more value for port operators, suppliers, and customers alike, but that value isn't proportionally distributed across ports and their ecosystems. Innovative business models and forms of collaboration will be required to realise this vision."

Perhaps the biggest stumbling block for ports and the wider maritime industry alike will be shortages of skilled staff that have not just an understanding of the current manner of operating, but also the digital training and vision to apply it in a bespoke manner. Salaries for experienced individuals are already on the rise, with one port authority saying to *P&H* on the condition of anonymity, "It is extremely hard for us to find people with the right experience at the right price – automating is actually really expensive to do correctly and we think it will take us a few years before we really break even on our investment."

Ports will have a large role to play when it comes to shore-side support of remotely operated and increasingly automated ships, with some in the industry predicting that most ports will soon boast a shore-based control centre consisting of a number of consoles that will be manned by a revolving array of captains that would cater to multiple vessels.

Not everyone is convinced that this vision will be realised in the next few years, and ClassNK President and CEO Koichi Fujiwara reminded *P&H* readers that the average vessel has about 25–30 years lifespan and investments must be made with long-term objectives. "The lifetime of ships is very long, so it will be a slow transition to this automated generation of ships," he said. "Unlike the consumers who new technology, shipowners are likely to choose their vessels on economic feasibility and so older vessels may remain competitive."

That said, he did acknowledge a future in which vessels are largely automated – in the same manner as that of aircraft – with seafarers onboard for emergency human intervention. "We are preparing for all futures and are very focused on safety," he added.

While smaller players in the industry would do well to adopt a similarly cautious outlook to new technology, it is worth remembering that an unexpected event could change the playing field overnight. As such, early adopters may benefit from touch of automation ambition. **PH**



Ferrying the future

Two Finnish ferry projects have set the stage for advancing adoption of remote control and fully automated vessel operations, speeding up the pace towards unmanned operations. **Namrata Nadkarni** reports

December 2018 was a momentous month for the evolution of automated shipping, with two separate ferry projects reaching fruition mere days apart. The projects, both of which were carried out in Finland – albeit in separate cities, have proved without a doubt that, although legislation on the matter is still being crafted, the technology itself is in place to make the leap to unmanned shipping.

Equipment manufacturers ABB and Rolls-Royce formed partnerships with Helsinki City Transport and Finferries respectively, with the former group testing remote control operation on board Ice-class passenger ferry *Suomenlinna II* and the latter testing remote-control and completely autonomous operations on board car-passenger ferry *Falco*. Both projects saw support from the Finnish flag state, which is striving to encourage technological development in its industrial sectors.

Suomenlinna II was retrofitted with ABB's new dynamic positioning system, ABB Ability Marine Pilot Control, and steered from a control centre in Helsinki. For the remote-piloting trial, the ferry departed from Helsinki's market

square, Kauppatori, and was wirelessly operated through a pre-selected area of Helsinki harbor. The trial took place during the vessel's off hours, away from shore with no passengers aboard, in an area free of other vessels.

By contrast, the Rolls-Royce trial not only had 80 VIP passengers on board – including the *P&H* publications editor – but also tested a number of collision scenarios as part of its SaferVessel with Autonomous Navigation (SVAN) project. The 1993-built car ferry *Falco* was retrofitted with Rolls-Royce Ship Intelligence technologies and navigated autonomously between Parainen and Nauvo, with remote-controlled operation for its return leg. The latter was done by a captain in a specially constructed shore-based control pod located in Finferries' remote operating centre, about 50 km away in Turku city centre. The captain also oversaw the autonomous operation and had the ability to take remote control of the vessel if necessary – which was not needed on this occasion.

Falco was fitted with a range of advanced sensors, which allowed it to build a detailed picture of its surroundings by fusing the collected data, in real time



Falco was fitted with advanced sensors, which allows it to build a detailed pictures of its surroundings

and with an extremely high level of accuracy. The vessel used sensor fusion and artificial intelligence, and conducted collision avoidance while transiting the test route. The ferry encountered three separate obstacles: a static vessel, a vessel crossing the *Falco*'s path, and a vessel on a direct collision course.

"These vessels served as examples of potential collisions that an autonomous vessel would be expected to encounter when transiting such a busy archipelago," Rolls-Royce vice-president for innovation Oskar Levander told *P&H* magazine on board the *Falco* during the automated transit. He added that to prepare for the final transit, the equipment manufacturer (which will become part of the Kongsberg family in January 2019) and Finferries clocked up close to 400 hours of sea trials.

The ferry also auto-docked at Nauvo, a feature that was particularly praised Finferries Captain Tuomas Mikkola, who managed the remote control operations. "I think auto-docking is a very important technology that will help everyone on board feel very safe. In foggy weather, this would come in handy and I'm looking forward to having this technology on board all vessels as it will bring peace of mind," he told *P&H*.

It is of note that the auto-docking took considerably longer than a conventional captain-guided docking, a point Rolls-Royce rebutted by pointing out that it was early days as yet and that the learning algorithm would be tweaked until the docking was significantly quicker. Another defence came from Pasi Roos, Finferries safety and traffic director, who pointed out that 80% of docking issues came down to human error – a factor that the auto-docking system eliminates. "The ability to dock safely even in high winds with just the press of a button is a great feature."

The technology on board the *Suomenlinna II* was similarly praised by Captain Lasse Heinonen, who remotely operated the vessel. He said, "The progress we have made with the remote trial has been remarkable. I believe we are on the right track to exploring further possibilities of this technology as we move forward."

That said, it is worth noting that neither ABB nor Rolls-Royce has confirmed additional orders for their

technology, with customers waiting to hear the financial case for adopting the technology. In fact, ABB stated that in the case of the *Suomenlinna II*, the use of the remote control mode was for the trial only and the ship is to continue to operate via a set of conventional onboard controls. However, research and development are slated to continue for the ferry and its crew.

Finferries has also shied away from making a commitment so far to retrofitting its other vessels with the Rolls-Royce technology, and *P&H* understands that *Falco* will be stripped of the plug-and-play automated technology now that the trial has been completed. It remains to be seen if the state-owned ferry operator will order equipment for any other vessels in its 300-ship strong fleet.

Given that the test scenarios were only able to demonstrate results for a rather specific set of circumstances – sheltered operations off the Finnish coast, a lot more research would be needed before these results can be widely extrapolated to other vessels, particularly those operating in the deep sea. That said, both projects were deemed a success and the red carpet has been rolled out for remote control of vessel operations, which follow in the more established footsteps of shore-based support bases such as the one set up in mid-December by Columbia Shipmanagement (see sidebar).

In the short term, there is likely to be stronger demand for remotely operated vessels rather than completely unmanned ships as there are strong industry concerns about passenger and cargo safety. The biggest driver of remote control of vessels is the means to reduce human error, leading some equipment manufacturers to present their products as supporting seafarers. "Autonomous does not mean unmanned. As vessels become more electric, digital and connected than ever before, ABB is able to equip seafarers with existing solutions that augment their skillsets. This way, we are enhancing the overall safety of marine operations," Juha Koskela, managing director at ABB's Marine & Ports unit said.

However, Levander is confident that autonomous vessels will outperform traditionally operated vessels in the foreseeable future, making a strong business case to adopt automation and unmanned operations. Accordingly, he believes that most ports in the coming decade will need to make arrangements for remote-control centres from which individual captains can control entire fleets of coastal ships – perhaps for multiple owners.

This would mean that early adopters of remote operation centres – particularly in Europe – would stand to benefit the most if they establish themselves as reliable control bases, with their reputation protecting them from intense competition if (and likely when) remote control centres are shifted to countries or inland areas where low-cost labour can be easily sourced. **PH**

Shore support

Columbia Shipmanagement's new high-tech performance optimisation control room located in Cyprus will be manned 24/7 by qualified personnel who will optimise vessel safety, crew rotation and training, performance (speed, consumption, delay, weather routing), disaster avoidance, maintenance (including preventative maintenance through sensor and camera technology), and contractual compliance. The ship manager intends to upload all the data such that it can be shared with other Columbia offices and clients' offices allowing remote monitoring.

Captain Pankaj Sharma, control room manager said, "Centralising our operations will give us the ability to better deal with fast-changing scenarios and developments as they happen. With 24/7/365 support, our goal is to have even faster decision-making and greater visibility by using modern technology to achieve cost-efficient vessel operations."



Associated British Ports: 5098009

View from the bridge: East Anglia's energy hub

The UK's Port of Lowestoft is quickly becoming one of the UK's renewables hubs, explains BP's **Ron Crean**

Situated on the east coast of England, directly opposite major Continental ports, the Port of Lowestoft serves the busy sea routes between the UK, Europe, Scandinavia, and the Baltic States.

Together with ABP's other two East Anglian ports, King's Lynn and Ipswich, it contributes GBP360 million (USD455 million) to the UK economy every year, supporting 5,300 jobs nationally. The Port of Lowestoft also provides excellent transport connectivity for its customers, as it is linked to the M11 and M1 and has adjacent rail links.

It is also near Norwich Airport, which is linked to destinations in Europe and the UK. Famous for being the offshore wind energy capital of the UK, the east coast of

England is making the location of the port an even more attractive option for potential investors, suppliers, large utilities, and small and medium businesses.

The 'East of England Plan', published by the Government Office for the East of England, has set an ambitious target of 44% of the region's electricity to be produced from renewable sources by 2020. This means that while the Port of Lowestoft is already home to a wide range of modern operations and maintenance (O&M) facilities as well as a substantial fleet of offshore support and crew transfer vessels, it will continue to improve its offering to offshore wind industry customers.

Throughout the years, ABP's Lowestoft team has provided support for a range of high-profile offshore wind energy projects, including the construction of the Galloper Offshore Wind Farm and operations and maintenance of the Greater Gabbard and East Anglia ONE offshore wind farms.

With a growing reputation as east England's renewable energy hub, the Port of Lowestoft has built



Green energy is driving the Port of Lowestoft's growth

expert teams and the right facilities to accommodate complex demands, placing the requirements of the offshore energy sector at the heart of its strategy.

One of the key offshore renewable energy projects at the port was the recent completion of a two-year contract to support the construction of the Galloper Offshore Wind Farm, a 353MW wind farm located 30 km off the coast of Suffolk. During the construction, ABP worked closely with James Fisher Marine Services (JFMS) as key partners in delivering the project. In the past five years, JFMS has invested heavily in east England, establishing itself as a strong local employer. Its Lowestoft renewables base opened in 2017. JFMS's landmark GBP25 million marine support contract for the Galloper Offshore Wind Farm created more than 100 jobs at the operational base, where it prepares transit facilities, organises crew transfer, and supplies and manages multisupport vessels.

The Galloper Offshore Wind Farm is now in full operation and generates enough green electricity to power the equivalent of more than 380,000 British homes every year. The construction of the wind farm has created almost 700 jobs, 90 of which are long-term jobs in the local area. Through its day-to-day operations and power generation, it continues to support energy security in the UK and power the economy of the region.

The Port of Lowestoft is also home to the operations and maintenance base for the Greater Gabbard Offshore wind farm. The long-term collaboration between SSE and ABP on this project began in 2012 and is projected to positively contribute to the local economy for decades. Greater Gabbard is a 504 MW wind farm located 23 km off the coast of Suffolk in England, representing a GBP1.5 billion investment.

Onshore construction activities commenced in early July 2008 at Sizewell and were completed on 7 September 2012. The investment has delivered 140

turbines capable of providing enough energy to supply about 530,000 homes each year. The GBP1.5 million operations base in Lowestoft employs about 100 people, thus contributing to the local economy on a long-term basis.

In March 2018, The Port of Lowestoft agreed a 30-year deal with ScottishPower Renewables (SPR) to become a construction and operations hub for its East Anglia ONE offshore wind farm. SPR, which is planning four offshore wind farms off the east coast of England, is developing a new operations and maintenance (O&M) site adjacent to Hamilton Dock, leased from ABP to support its three-decade operational lifespan, as well as its construction.

Earlier in 2018, The Port of Lowestoft contracted with SPR to provide the marine-based facilities that will serve the O&M base at the port. As part of this project, ABP will be constructing vital land-side utilities and pontoons to enable the operation of crew transfer vessels from Hamilton Dock, working with contractor McLaughlin & Harvey to design and build the facilities.

Charlie Jordan, project director for East Anglia ONE at SPR, said, "Lowestoft is going to be the home of our wind farm for the next 30 years, so it is pleasing to see construction work under way at the port. The new facility will be a hive of activity for engineers and technicians and will be the base for our marine operations to support the day-to-day operations of the wind farm."

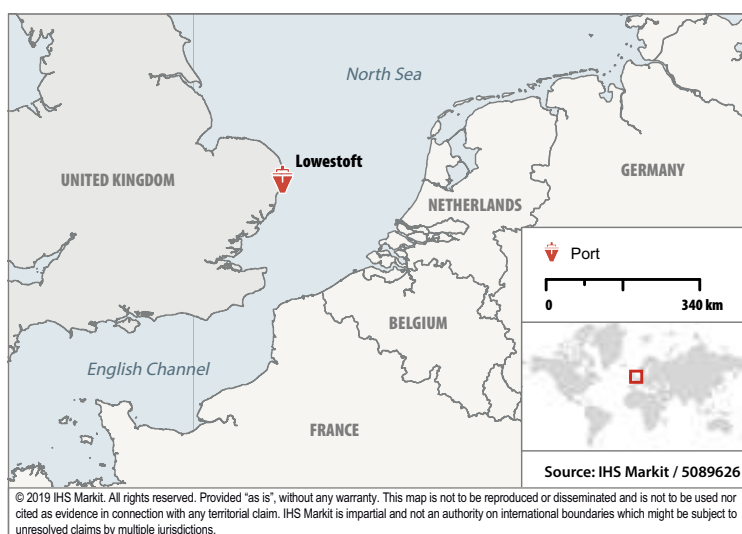
Once East Anglia ONE is completed, there will be about 100 full-time jobs at the Port of Lowestoft, with thousands of supply chain operators and contractors using the site each year. The project will also allow ABP to support the prosperity of the local community, affirming the port's status as east of England's renewable energy hub.

In May 2018, ABP showcased the broad range of business development opportunities available at the port at the East of England Energy Group's (EEEGR's) Southern North Sea Conference. During the flagship conference, ABP unveiled its vision for future development, developed in partnership with acclaimed London architect, Chetwoods.

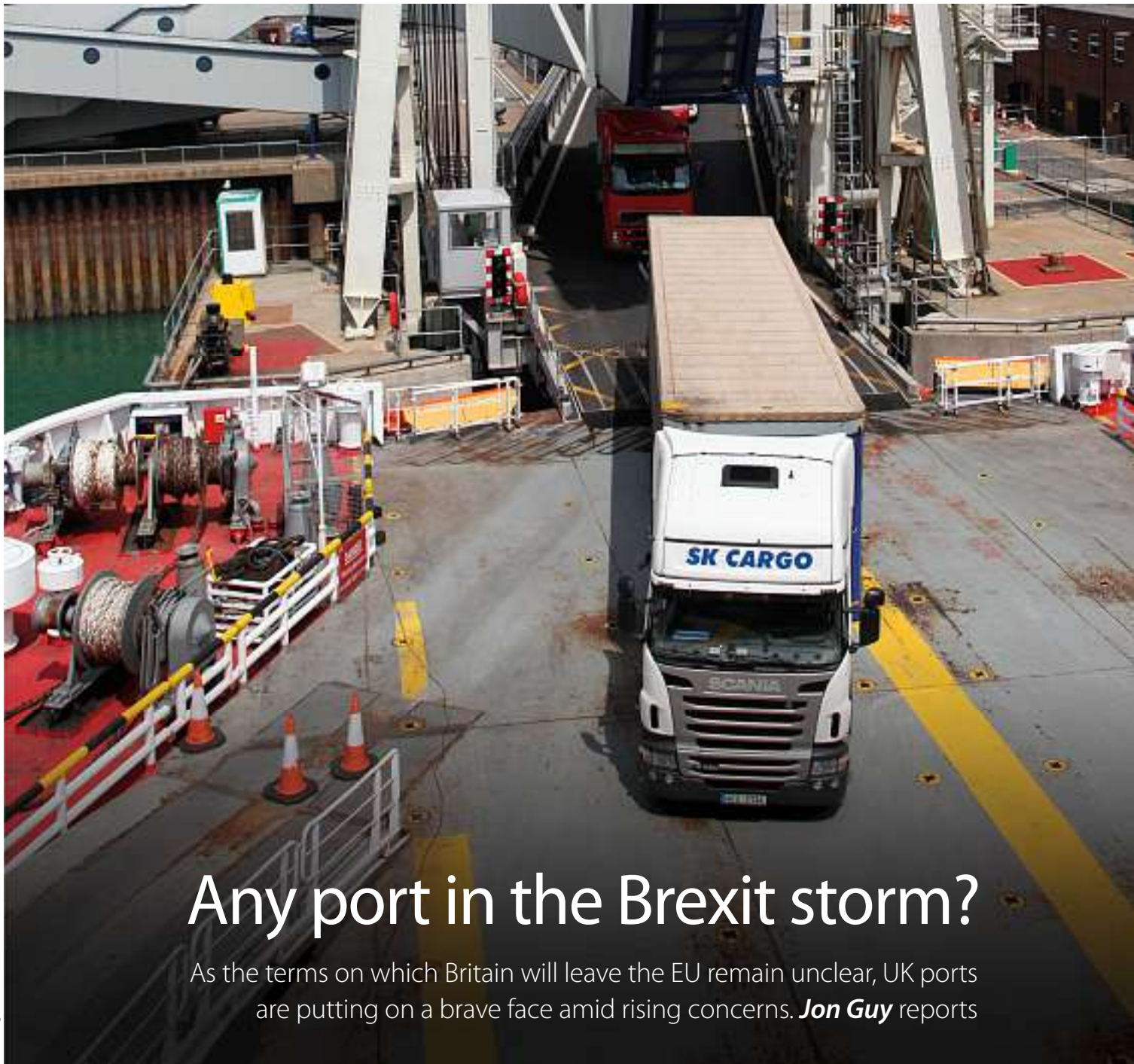
The presentation included visuals illustrating the business potential of the Port of Lowestoft's 5-ha development site, which has direct quay access and has been online since March 2018. A wider marketing campaign is due to take place later this year.

With renowned energy companies such as Vattenfall putting forward ambitious plans for East Anglia, including the proposed development of a 1.8 GW offshore wind farm called Norfolk Vanguard, the renewable future of the region looks bright.

Going forward, ABP's development strategy is to continue to invest in infrastructural improvements and attract more offshore businesses. The unique offer ABP makes is that no one can get them closer – proximity is a useful advantage that helps businesses through all the cycles of renewable energy projects, from planning to building and repowering. **PH**



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Any port in the Brexit storm?

As the terms on which Britain will leave the EU remain unclear, UK ports are putting on a brave face amid rising concerns. **Jon Guy** reports

Martin Wright: 903983

While the political arguments over deal or no deal rumble on, access to the UK's ports have been placed on the frontline of the debate.

Warnings by government officials to ministers of months of delays at ports if no deal is delivered have been made public in the heated discussions over whether the current deal thrashed out by the EU and UK government should be accepted by parliament.

It has produced a dichotomy of views from the ports industry, with some seeing the pressure that will be placed on Dover as a potential opportunity, as vessels seek alternative berths at which to unload and load cargoes, and haulage firms look to ports with shorter queues.

However, all recognise that the lack of any free-trade deal and the implementation of more checks will impact the sector in the short to medium term.



About 177 km of freight traffic passes through the Port of Dover daily

The decision to delay the Parliamentary vote on the Withdrawal Agreement prompted a swift response from British Ports Association's (ABP's) chief executive Richard Ballantyne. He warned the UK ports industry needed a greater degree of certainty if it was to put in place the necessary preparations for the final eventuality, whatever that may be.

"If there is a hard Brexit the roll-on roll-off ports who facilitate tens of thousands of lorry and trailer movements between Britain and Europe every day could face real challenges," he warned. "Adapting terminals and systems to accommodate new border processes at short notice would be very difficult although at non-ro-ro ports, while there definitely could be some issues, the pressures would be less challenging."

Ballantyne cautioned this was not just an issue for the port and terminal operators but would have a wider impact. "This is not just an issue for ports. Wider supply chains could also face major changes," he said.

"We have been speaking extensively to colleagues in the haulage, logistics, manufacturing, and customs agency sectors and it's fair to say that across industry substantial re-organisation and culture change would be needed to prepare for a 'no-deal Brexit'. This will take time and investment. Government warnings that there will be six months of delays and disruption have been denied by pro-Brexit MPs, one describing the suggestion as 'Project Fear on steroids'."

Much of the discussion has been going around the Port of Dover. The port currently handles more international lorries than all other UK ports combined. Up to 110 miles (177 km) of freight traffic passes through the port every day, utilising the 120 ferry sailings a day on the shortest sea crossing to Europe.

The port has long-raised issues over the potential impact of Brexit, warning that a delay of two minutes on each vehicle passing through the port would create 17 mile-tailbacks.

Should there be a no-deal Brexit with no free-trade agreement, it has been estimated by Oxera Consulting the cost of trying to divert traffic from Dover to other UK ports would be in the region of EUR2.5 billion (USD3.1 billion).

Tim Reardon, head of EU exit, Port of Dover, said, "Successful future trade with Europe must be about delivering a realistic solution. That means a free-flowing Dover, whose speed, efficiency, and capacity cannot be replicated without adding significant cost to the supply chain."

"Dover has also been at the centre of contingency planning to minimise disruption in the event of a no-deal Brexit," he added.

The port has been working with the Government "for months" to deliver the plan, outlined in last October's Customs Bill White Paper, for lorry traffic to be pre-notified to customs so that vehicles do not need to be held at the port, he explained.

"We are determined that our customers can continue to rely on Dover, so that their customers can keep

Dover's success will be Britain's success; the solution is here

Tim Reardon, head of EU exit, Port of Dover

factories busy, shops full, and prices low for consumers across the UK. Deal or no deal. Dover's success will be Britain's success; the solution is here," Reardon added.

Other port groups have heavily invested in new facilities in the expectation that a no deal or an exit from the customs union will prompt cargo and shipowners to look to other ports if the worst fears around Dover are realised.

ABP, the UK's largest port operator, said they were working hard to prepare for all and any eventualities.

An ABP spokesperson told *P&H*, "We are committed to working with all the relevant authorities and our industry partners to make sure we can continue to help trade flow and grow after Brexit."

While not willing to be pushed about whether the inability of Dover to handle its current volumes under a hard Brexit offers an opportunity, ABP has been investing heavily in its ports in the expectation that trade volumes will increase.

It is undertaking a EUR50 million investment at the Port of Southampton to increase its ability to handle automobile trade. It has also announced a EUR65 million investment into the Immingham Bulk Terminal.

Tim Morris CEO of trade association UK Major Ports Group told *P&H* the time for UK ports to wonder if they should invest in strategies for all outcomes is over.

"Our members already handle non-EU trade and have the capacity to handle more," he said.

"The events of recent weeks over the proposed withdrawal agreement and the situation around the terms in which we will leave have not become any clearer and as such ports have to engage with their clients to ensure they have systems in place to deal with all eventualities.

"We are now in a situation where we are one quarter away from a no-deal Brexit on day one of our exit from the EU. We are at the point where we can no longer be thinking about the plans we need to put in place," he added.

"They need to be introduced in expectation for the UK's exit. It is important that we move quickly to go beyond planning and put the systems into place. This may well mean that we commit funds to the implementation of these systems that may not be needed. However, if we do not invest now, the cost could be more significant should those systems not be in place when needed," Morris concluded. **PH**



Panama's MIT doubles its female management

A progressive personnel policy has seen Panama's Manzanillo International Terminal double its number of female managers in a few short years, and the results on employee satisfaction, and on productivity, have been dramatic. **Jonathan Robins** reports

Faced with the perception – one often matched by reality – of being male-dominated, ports have not always been successful at attracting and encouraging female talent. But the success of Panama's Manzanillo International Terminal (MIT) in encouraging women to take up senior positions shows that this does not need to be the case. Aided by a policy that promotes staff development and equal opportunities, as well as internal job rotation, MIT has

seen its number of female senior managers more than double from 6 in 2003 to 13 today.

"The change has not only just been about making a break from the taboo of employing women in typically male-dominated roles at the terminal. Once they were in those positions, many have been progressively trained and developed to occupy other roles, which prepared them for a senior managerial position," said Susibel Perigault, MIT's training and development manager.

Perigault highlights how successful the policy has been in encouraging female talent to flourish. Over a 15-year period, her career at MIT has evolved from its beginnings in the terminal planning department, to assistant manager and then planning manager before promotion to her current position of training and development manager. Her rapid ascent at MIT puts her in good company with other senior female managers.

The current claims, health, and safety manager Gina Johnson also rose up the ranks. She started in the documentation department, followed by a role in safety, and then as head of process and claims, before entering her current position. The current security manager Gilda Soto, who is set to retire, began her MIT career as an administrative assistant. "[Security manager] is a really tough job," Perigault told *P&H*, adding, "She is dealing with searches for drugs, illegal workers, and a lot of the other problems that we face. But she's very productive".

When a recent employee satisfaction survey was taken, Soto's team – made up mostly of men – gave her the highest rating of any manager in the company. "She's proven that women can make it even in the toughest sectors", Perigault said with a hint of pride.

MIT has also innovated in terms of employing women in quayside operational roles, in which inclusivity and the support from senior management played a key role, Perigault added.

"Five years ago, we spoke with the vice-president of operations, who wondered whether we might consider bringing women into operational roles as well. We then sat down with the gantry crane fleet manager and mapped out the right profile for this high pressure, productivity focused role – a colleague who would be committed, precise, with proactive attitude, and an ability to work under pressure."

Liduvina Joseph was selected having had experience as logistics co-ordinator and supervisor as well as having been a traffic control operator, while her managers knew her as confident and enthusiastic to get involved in physical operations. "When we offered the post, she accepted with a smile and immediately got to work training alongside her male colleagues," Perigault said.

Joseph, whose father was a heavy equipment operator at a terminal before his retirement, was given extensive support by her colleagues and supervisors. She explained that the first time she climbed into her gantry crane cabin, her focus was not about operating from a 40 m-height, but of making an error. Since then she has become a highly skilled gantry crane operator, working up to 277 effective hours in a three-month period, operating at a rate of 25 container moves per hour. She is now one of the seven female operators of the 19 cranes at MIT, while a majority of new positions to remotely manage a new fleet of automatic stacking cranes are set to be occupied by women.

"The achievements we have made have been due to a policy and ethics code, which considers any form of

“The key to MIT’s success has been its application of its code of ethics in practice”

Patrick Verhoeven, IAPH

discrimination as contrary to our values," Perigault told *P&H*. "We see inclusivity not only from the viewpoint of gender equity, but also in terms of the importance of diversity in ethnic, social, and religious backgrounds as well as giving chance to persons with disabilities."

She said that the selection criteria for any position at the terminal is based on the capability to meet the demands of a job and the commitment by colleagues to support the right candidate, noting that management are always on the lookout for talent, "for men just as much as women".

The effects of employing more women at MIT, especially in senior roles, have been dramatic. With women bringing a slightly different skillset to the company, productivity has risen and costs have fallen. The flexibility of the company to respond to market changes has also increased. It has also acted to improve how MIT relates to its staff.

Absenteeism has decreased because of a better work environment, it has become easier to retain talented people and the rotation of staff has decreased. A recent employee engagement survey indicated that 70% of staff are either satisfied or very satisfied with their current work environment.

Efforts have also been made to promote wellness among MIT employees. Examples of employee engagement include a recent health festival in which MIT celebrated the Safety Health and Environment Day on 28 April 2018. The event saw employees and their families being offered free medicals for blood pressure, BMI body weight, and nutrition, as well as massages and eye examinations. Informal sessions were held on injury prevention and recycling with recreational games for the kids, a small arts and crafts market, and a comedy podium.

IAPH managing director-policy and strategy Patrick Verhoeven said, "The key to MIT's success has been its application of its code of ethics in practice, which should in turn provide inspiration to all our other IAPH members and ports."

"The selection of the theme, 'Empowering Women in the Maritime Community' by the IMO for its World Maritime Day in 2019 re-emphasises the importance of placing this issue at the top of our agendas for the coming decades. Recruiting and developing talented people of all genders, ethnic backgrounds, and experience to the port community will ultimately shape the future of the industry." **PH**

Boosting female participation in the workforce has led to productivity gains



IMO-5098410

The MSC's discussions included the safety impacts of autonomous ships

Maritime Safety Committee meets for 100th session

During the 100th session of the International Maritime Organization's (IMO's) Maritime Safety Committee (MSC) on 3–7 December 2018, members decided to push ahead with a regulatory scoping exercise on maritime autonomous surface ships, while also giving approval for revised guidelines on fatigue,

and adopting motions relating to polar shipping and the safety issues of low sulphur.

IMO Secretary-General Kitack Lim outlined the history of the Committee since its first meeting in 1959, then formed of just 14 member states, compared with all IMO member states today.

"Thanks to the unwavering

commitment to reduce the number of marine casualties and incidents, not least demonstrated by the efforts of this committee throughout the years, and with the unique IMO spirit of co-operation that is perhaps particularly true for the work of this committee, we have come a long way in

ensuring the safe and secure operation of international shipping," Lim said.

"As we look towards the future of the MSC, a number of key issues are on the table before us. They will require our combined continuous efforts to reach sound, balanced, and timely decisions, in order to continue the long and impressive record of this Committee's work over the past 100 sessions."

The MSC took the first steps towards evaluating how the safe, secure, and environmentally sound operations of Maritime Autonomous Surface Ships (MASS) can be incorporated into the organisation's processes. It approved the framework and methodology for a scoping exercise to look at MASS, that will look at issues surrounding safety, collision regulations, loading and stability, training of seafarers and fishers, search and rescue, tonnage measurement, safe containers, and special trade passenger ship instruments.

The first review of the exercise will take place during the first half of 2019. An intersessional MSC working group is then expected to meet in September 2019 with the aim of completing the scoping exercise in 2020.

Safety of ships in polar waters

The Committee discussed how to further develop measures for ships operating in polar waters, which are not currently covered by the Polar Code. A roadmap was agreed, which could see revisions to the International Convention for

the Safety of Life at Sea (SOLAS) and/or the Polar Code considered for adoption in 2022.

A preliminary draft text that would extend the Polar Code to all ships to which SOLAS chapter V (safety of navigation) applies was

agreed for further consideration. Member States and international organisations were invited to submit information to MSC 101 that will assist to determine the feasibility of applying the requirements in chapters 9 (safety

of navigation) and 11 (voyage planning) of the Polar Code to non-SOLAS ships.

The Committee also agreed that a resolution could be developed as an interim measure and invited proposals to MSC 101. The Polar Code is mandatory for certain categories of ships under the SOLAS and MARPOL Conventions.

Notable numbers

<5%

Number of ports that are at least partially automated

177km

Length of freight traffic that passes through the Port of Dover daily

IMO, IAPH working group discusses ESI update

The Port of London Authority hosted the latest meeting of the IAPH Environmental Ship Index (ESI) working group on 6 and 7 December. The main topic on the agenda was the new strategic plan that would enable the updating and upgrading of ESI in the years to come.

On the technical side, the group discussed several modifications to the ESI formula, which would allow better alignment with forthcoming international developments, such as the global 2020 sulphur cap and the initial International Maritime Organization (IMO) strategy on

greenhouse gas reductions. In addition, consideration is given to adding new components such as noise.

A delegation from the IMO attended part of the meeting to update the working group on latest policy developments.



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The issue of plastic pollution has become globally prominent

MEPC takes on ocean plastics

Increased public awareness of concentrations of marine debris floating in the northern Pacific Ocean, known as 'garbage patches', is among the drivers that have resulted in the International Maritime Organization (IMO) taking a harder look at marine plastic litter.

On 26 October, Marine Environment Protection

Committee (MEPC) 73 delegates adopted an action plan to address the problem. It is "intended to contribute to the global solution for preventing marine plastic litter entering the oceans through ship-based activities", according to the IMO.

Dumping plastics into the sea is already illegal under the MARPOL convention, which regulates

the disposal of waste from ships and requires governments to ensure there are port reception facilities to receive it.

In addition, under the London Convention and London Protocol, only materials with certain permits can be dumped overboard and they must be assessed to ensure they do not contain plastics.

Despite these regulations, the IMO has determined that even more must be done to address the problem.

The action plan adopted at MEPC 73 "provides [the] IMO with a mechanism to identify specific outcomes, and actions to achieve these outcomes, in a way that is meaningful and measurable", the IMO stated. Building on existing policy and regulations, the plan "identifies opportunities to enhance these frameworks and introduce new supporting measures to address the issue".

Measures in the plan addressing shipping's contribution to marine plastic litter include a review of the application of placards, waste management plans, and garbage record-keeping in MARPOL Annex V, and potentially establishing a required mechanism to declare the loss of containers and identify the number of losses.

It also includes a proposal to amend the IMO model course on environmental awareness to specifically address marine plastic litter in seafarer training.

MEPC delegates agreed to further discuss concrete measures and details in advance of MEPC 74 in May 2019, with actions preliminarily scheduled to be completed by 2025.

1.7 mil bpd

IEA estimate of
gasoil consumption
in 2020

21.67 mil teu

Estimated
number of
20 ft containers
handled by Busan
port in 2018

Hidden potential

Gerald Munjanganja, a youth speaker at the launch of the IAPH's World Ports Sustainability Program, believes that ports sector must do more to increase its prominence if it is to appeal to a young and skilled workforce. **Jonathan Robins** reports

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As anyone who has dipped their toe in the maritime industry knows, it offers as varied, interesting, and exciting working life as any other. Yet the world of ports, and of maritime in general, often fail to stand out to young people when they are scanning the horizon for their chosen career path.

That is certainly how Gerald Munjanganja, a commercial analyst at Belgium-based StreamLines, sees it. As a youth speaker at the launch of the IAPH's World Ports Sustainability Program (WPSP) in March 2018, he spoke about whether the maritime sector was investing into a talent pool that will meet the future requirements of the industry. On this subject, he is clear: right now, it is not.

A part of the issue, he believes, is a lack of visibility. "Maritime is out of sight and out of mind for many people. They typically don't see ships or ports that often, therefore, they never really think about how they got their food on their plate, or how the sofa that they're sitting on got into the store," he told *P&H*.

With little exposure to the industry, young talent often sees maritime as staid and old-fashioned instead of a place with opportunities for development, or that is undergoing technological innovation.

At the same time, there can be a reluctance among the maritime industry to look for talent from educational, professional, or academic backgrounds beyond the world of shipping. This deprives the sector of energy, drive, and talent.

"The competition for skills is tough. But we need those same skills in our industry as much as



“The longer I’ve been involved with the industry, the more fascinating it has got”

Gerald Munjanganja
Commercial analyst, StreamLines

any other, and that is where we struggle”, Munjanganja explained. The challenges of responding to global warming, the development of blockchain and big data are areas that are shaking up the maritime world, and that will require new approaches to tackle.

“What the industry needs to do is to make people aware of these needs and development and be able to engage the right people and attract the right skills”.

Identifying the issue is one thing; doing something about it is another. Adopting a grassroots strategy that invests in the right education programmes and in partnerships with schools would be a start, Munjanganja believes.

Part of the appeal of this approach is that it would enable students to explore the world of ports and maritime from a creative mindset. “If you do it from that perspective, you’re not only engaging with the right people but you’re also having a different view point on your business.” A strengthening of the industry’s efforts to shed its traditionally male-dominated image is also important if maritime is to expand its appeal to more women.

With the maritime industry undergoing a period of intense change, this also offers opportunities to appeal to a wider talent pool. “The future of shipping will need to leverage the great knowledge and experience of our seafarers, engineers and technicians, and have them work alongside an increasingly diversified pool of talent,” Munjanganja said at the launch of the IAPH’s WPSP.

He cites the new types of engines, IMO 2020 compliant fuels, and efficient ship designs as examples of areas that are crying out for smart, young, and driven people to continue driving efficiencies. But perhaps the biggest need for fresh talent can be found in the world of automation.

“These fully automated terminals are still not as efficient as the ones being operated by humans. To be able to run these fully automated systems and operations, you really need sharp minds and sharp bright people to be able to monitor everything, process everything, and can use it to keep improving our productivity. With the right people the sky’s the limit”, he said.

His advice for other youngsters starting out in ports and shipping highlights the enthusiasm and opportunity he feels the sector has to offer. “Look at the business with an open mind”, he told *P&H*, “Don’t focus on one area, and go out of your comfort zone. You’ll be surprised what the world can give you back”.

It is advice that Munjanganja has put into practice himself, with his story highlighting how a career in ports and maritime can appeal to the youngsters of today. Coming originally from Zimbabwe – a country with no access to the sea – a career in maritime was not something that originally occurred to him. But having been introduced to the industry through a colleague at a mining job in Canada, he has not looked back.

After nearly three years in the industry, his enthusiasm is only growing, and he has no intention of changing careers again. “The longer I’ve been involved with the industry, the more fascinating it has got.”

Does he ever think that maritime could ever be seen as a cool industry to youngsters, to help it attract talent? “It’s just it’s not sort of painted to be something cool,” Munjanganja said, adding that this is not surprising when most people are not exposed to it, let alone understand it.

“I think once people understand it, it really is [cool]! You go to a farmer’s market, and you think it’s local food, but you look under the box and it’s come from the other side of the world. We always seem to overlook this in the industry, but for me it’s absolutely fascinating.”

IAPH Awards: submit your projects!

To encourage members to share their sustainability projects through the World Ports Sustainability Program (WPSP) and to reward best practices, IAPH has transformed its existing award scheme into six 'World Ports Sustainability Awards'.

The new scheme features five Project Awards linked to the WPSP themes, that are open to all members and one specific award for member ports in developing countries. The focus areas are:

- 1) Digital optimisation of infrastructure
- 2) Facilitation of energy transition
- 3) Safety and security as integrated part of business
- 4) Community support for port development
- 5) Port authority leadership in good corporate governance.

An international jury will evaluate the entries and shortlisted projects will be presented for an online public vote.

The winners will be announced during next year's World Ports Conference, which is to be held 6–10 May in Guangzhou, China.

The deadline for applications is set at 15 February 2019.

The full terms of reference are available from the IAPH website.



Participants from 10 Lead Pilot Countries received training in how to develop ship fuel oil consumption data plans

GloMEEP expands training for the Lead Pilot Countries

The GloMEEP initiative, an International Maritime Organization (IMO) project that aims to reduce greenhouse gas (GHG) emissions from shipping in 10 Lead Pilot Countries (LPCs), has developed a new workshop package to train maritime administrations on the provisions of regulation 22A of the IMO's MARPOL Annex VI, which governs data collection about fuel oil consumption.

The GloMEEP training course took place in Hangzhou, China, on 12–13 November, with about 25 participants learning how to develop a ship fuel oil consumption data collection plan, verify the data collected, and report it to the IMO. The workshop was hosted by the

China Maritime Safety Administration.

Representatives of the 10 LPCs learned how to assess maritime and port energy efficiencies and emission levels, as well as the development of national emission reduction strategies based on the Ship and Port Emission Toolkits, which are also being developed as part of the GloMEEP project.

Every LPC that had not yet implemented MARPOL Annex VI said they had drafted legislation and were working on enacting it into national law.

The project co-ordination unit also reported on activities, including the development of four new training packages that have been rolled out in the LPCs, resulting in more than 1,000

participants being trained at national, regional, and global level. The meeting was also updated on the substantial progress made on the activities of the Global Industry Alliance (GIA), the public-private partnership initiative of the Project.

GloMEEP aims to reduce the GHG emissions from the shipping industry via supporting 10 LPCs – Argentina, China, Georgia, India, Jamaica, Malaysia, Morocco, Panama, Philippines, and South Africa – to fast-track the necessary legal, policy and institutional reforms, and driving national government action and industry innovation to support the implementation of the IMO's energy efficiency requirements.

More info:
<http://glomEEP.org>



We value your opinions

Do you have strong views about any of the articles in *Ports & Harbors*?

Are there other industry issues you feel strongly about?

Email your views to ph@iaphworldports.org and we will be happy to include them

► Women's forum

Productivity from the inside out

Ngozi Obikili won the IAPH Women's Forum Biennial Training Scholarship in 2018. She tells **Penny Thomas** about the positive benefits of occupational health in ports

The most recent recipient of the Women's Forum scholarship puts the health and wellbeing of employees at the Nigerian Ports Authority (NPA) at the centre of all her work. Ngozi Obikili, assistant general manager, occupational health at the port explained that while a port has an obligation to look after the mental and physical state of its work force, it also makes good business practice as it can enhance performance and productivity.

Obikili received the scholarship in Baku, Azerbaijan, where she gave a presentation on enhancing productivity through wellness initiatives, with an especial focus on women in maritime. She argued that women are often faced with the "dual-burden" of pursuing their careers while being the primary caregiver at home. She also said that they often bear the brunt of domestic tasks. These forces, combined with extra pressures of competing in the male-dominated maritime industry, can result in "decreased wellbeing" for women followed by "productivity decline" in the workplace.

Speaking to *P&H*, she highlighted the need to focus on women's

occupational therapy requirements.

"When NPA witnessed an upsurge of work-related health issues such as stress, back ache, cancer, signs of aging, diabetes, hypertension, and cardiovascular issues; a focus on wellness programmes and application of healthy lifestyle choices went a long way to reversing the trend and strengthening workforce capacities". She hopes that her presentation will go some way to raising the profile of

operational health in ports. "It gave me the priceless opportunity to stand before a large group of intellectual women to deliver a brilliant paper on what I believe could positively impact women in the maritime industry globally," she added.



Obikili said that the conference offered a real opportunity to problem-solve and create international best practices for the port industry, as well as to support the IAPH Women's Forum set its goals and objectives.

"Through the attendance to plenary sessions, I gained insights into different aspects of challenges peculiar to ports and harbors all over the world, as well as knowledge and skills to improve my job performance in Nigerian Ports Authority."

On winning the award Obikili said, "I was indeed greatly humbled by the amazing news of winning the IAPH Women's Forum Annual Meeting Scholarship for 2018". She hopes her work will support women in maritime going forward.

The IAPH Women's Forum Biennial Training Scholarship is awarded every two years at the IAPH Conference to a woman working in an IAPH member port.

Ngozi Obikili's presentation can be found on the IAPH website:

 www.iaphworldports.org
 info@iaphworldports.org



Ngozi Obikili's initiatives have boosted productivity through a focus on health

Ngozi Obikili: 5098198

Nigerian Port Authority puts health in spotlight

The Nigerian Ports Authority has a number of wellness initiatives in place to support staff to make healthy choices.

It has rolled out programmes to enlighten staff about healthy food choices; hygiene, such as food safety and handwashing; physical health, including workplace ergonomics; mental

health; and smoking and drugs.

In supporting staff to improve their fitness levels, it has introduced 'lift-free hours' between 8am and 11am, during which time elevators are closed to promote the use of the staircase.

Gyms have also been established in all port

locations, along with monthly aerobic classes, and sponsorship of marathons.

Besides that, employees are invited to undergo an annual health assessments, and the port also runs checks on exposure to "noise, dusts, ionising radiation, vibration, fumes, biological agents, and other substances

hazardous to health", said Ngozi Obikili who works in occupational health at the port.

Known as 'health surveillance', the techniques to monitor possible effects on health range from physical observation to use of equipment such as audiometry, spirometry, and eye screening.

Working group discusses future of ESI

The Port of London Authority hosted the latest meeting of the IAPH Environmental Ship Index (ESI) working group on 6 and 7 December 2018.

The main topic on the agenda of the meeting was the new strategic plan that would enable the updating and upgrading of ESI in the years to come. On the technical side, the group discussed several modifications to the ESI formula.

These will allow better alignment with forthcoming international developments such as the global sulphur cap in 2020 and the initial International Maritime Organization (IMO) strategy on greenhouse gas reductions.

In addition, consideration is given to adding new components such as noise.

A delegation of IMO attended part of the meeting to update the working group on latest policy developments.



The Clean Marine Fuels working group is examining how to ensure the safe use of new fuels

Clean Marine Fuels working group hosts its first meeting

The first meeting of the new IAPH Clean Marine Fuels working group was hosted at Port of Le Havre on 27 and 28 November.

The members of the former LNG Fuelled Vessels working group officially decided to broaden the scope of the group to cover the safe and efficient handling and

bunkering of other clean marine fuels, such as hydrogen, methanol, and batteries.

The vision of the group is to facilitate the transition of shipping towards decarbonisation and improving air quality, by ensuring the safe bunker operations of new fuel types in ports. The group will continue to work

on LNG and stars information gathering and consultation with the industry in order to prioritise work on specific fuels.

The group is updating its website in line with the broadened scope and it calls all interested IAPH member ports with experience and/or interest in clean marine fuels to join.

IAPH information sharing discussed in Kobe

Nearly 60 IAPH members attended a meeting of the Asia, South/West, East and Middle East region in Kobe, Japan, in November 2018. The meeting was chaired by Masaharu Shinohara, IAPH vice-president for the region and executive officer of Kobe-Osaka International Port Corporation, who explained his initiative to improve the exchange of information and experience among the region's members and promote IAPH's vision "Global Ports' Forum For Industry Collaboration and Excellence".

Representing the Japanese government, Naruaki Hisada, director of International Policy

Planning Office; Ports and Harbors Bureau; Ministry of Land, Infrastructure, Transport, and Tourism, backed the initiative.

IAPH Secretary General Susumu Naruse gave an overview of the current IAPH activity, including the World Ports Sustainability Program (WPSP). Attendees also heard from the transshipment hub ports Colombo and Busan about their development plans and strategies. The regional meeting was held in conjunction with the Asian Ports Business Forum in Kobe in 26–27 November, hosted by the Port of Kobe.



Shinohara is seeking to improve information exchange between IAPH's Asian members



Captain Subramanian spoke about the IAPH's Trade Facilitation Committee

Vision of excellence

Delivering the keynote speech at the APEC Port Services Network (APSN)'s Port Connectivity Forum in Singapore this November, IAPH vice-president for Asia, South East, and Oceania Captain Karupiah Subramaniam, outlined IAPH's vision to be a forum for industry collaboration and excellence.

The event, which also marked ASPN's 10th anniversary celebrations, heard how IAPH has established nine technical committees comprising volunteers from member ports to tackle issues facing the industry and provide technical advice.

In addition, IAPH has launched the Woman's Forum and World Port Sustainability Program.

Subramaniam, who is also the general manager of Port Klang Authority, Malaysia, spoke about the IAPH's Trade

Facilitation Committee, which focusses on the procedural aspects of port operations, smooth flow of cargo, and vessel movements. He detailed how IAPH organises an IT award presented every two years that recognises the efforts by ports to develop innovative IT projects to improve digital connectivity.





The objective of the award is to promote the use of information technology in ports to face the challenges of globalisation and to recognise the benefits that innovative IT projects have on the ports themselves, their customers, and the logistics supply chain. Examples of such projects are Digital Free Trade Zone, u-Customs, Single Window Ship Clearance System, Vessel Information Sharing with LOGINK, and E-Certificate of Origin.

Membership notes

The IAPH Secretariat is pleased to announce that the following has joined the Association

Associate member

Netherlands Maritime Institute of Technology

 Address: 1, Persiaran Canselor, 79250 Gelang Patah, Johor, MALAYSIA
 Telephone: +60-7-218-2020
 Website: <http://www.nmit.edu.my>
 Representative: Dr. Muhammad Fuad Abdullah, CEO

2019

2020

2021

Dates for your diary

A selection of forthcoming maritime courses and conferences



January

14– IHE Delft Short Course: Port Planning and Infrastructure Design
1 Feb : Delft, the Netherlands
www.un-ihe.org/port-planning-and-infrastructure-design

Commences 22: Lloyd's Maritime Academy: Certificate in container shipping distance learning
www.lloydsmaritimeacademy.com/event/container-shipping-distance-learning

29–31: 16th Trans Middle East 2019
 Safat, Kuwait
www.transportevents.com

February

4–15: APEC Seminar: Legal aspects in port operations and trade
 Antwerp, Belgium
<https://apecporttraining.com/course/legal-aspects-in-port-operations-and-trade/>

11–1: Breakbulk Middle East 2019
 Dubai, UAE
<https://www.breakbulk.com/events/breakbulk-middle-east-2019/>

11– IHE Delft short course: coastal systems
1 Mar : Delft, the Netherlands
<https://www.un-ihe.org/coastal-systems>

12–14: FuturePort
 Bilbao, Spain
<http://www.bilbaoexhibitioncentre.com/en/meeting/futureport>

18– APEC Seminar: Strategic masterplanning and concession policy
1 Mar : Antwerp, Belgium
<https://apecporttraining.com/course/strategic-masterplanning-concession-policy>

19–21: 10th Philippine Ports and Shipping 2019
 Manila, Philippines
<http://www.transportevents.com>

Commences 27: Lloyd's Maritime Academy: Diploma in maritime business management, distance learning
www.lloydsmaritimeacademy.com/event/maritime-business-management-distance-learning-course



Busan Port Authority: 5098081

A port that reconciles public interest

Ki-Chan Nam, president of Busan Port Authority (BPA), explains how the port is looking to cement its credentials as a public good, as well as an economic powerhouse

Issues such as expected berth shortages after 2020 and the global trend for super-sized vessels are also being addressed

Busan port aims to establish itself as a people-centered port. To achieve this, BPA is focusing on areas such as improvements to port management systems, the redevelopment of the centrally located North Port, encouragement of public interest in the port authority, and the promotion of the port's social value.

In 2017, for the first time, Busan port handled excess of 20 million teu of 20-ft container cargo units. In 2018, that number is expected to have risen to 21.67 million teu. Despite the current challenges faced by the global maritime and port industry, Busan port is proud to see continual trade growth at its shores, fulfilling its role as a global 'hub port'.

While Busan port aims for efficiency, profitability, and quantitative cargo growth as a major transshipment port, to sustain this growth it is also imperative for the BPA to strength its positioning as a public good.

For this reason, the 'Busan North Port Redevelopment Project' aims to return the centrally-located and aging Busan North Port to the people of Busan. The creation

of a waterfront will revitalise both the local economy and marine tourism in the area.

In addition, Busan port is working to improve its operating systems, dividing the functions of its two ports – North Port and New Port – so that North Port will serve as a base for the feeder networks of intra-Asia shipping companies, and New Port for the US and Europe.

Issues such as expected berth shortages after 2020 and the global trend for super-size vessels are also being addressed through the creation of new berths. Increased investment shares from BPA are also to improve inefficiencies at Busan New Port caused by operational challenges, and boost public interest in the terminals.

Through these efforts, BPA aims to advance the public function of the port, bringing back social value that was lost in the area's rapid commercial development. We are highly focused on safety, job creation, and the environment, and on implementing technologies such as harbor automation, to bring the port's benefits to the citizens of Busan, and beyond. **R&I**

Unit



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