



PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

Asia expansion

The race is on to meet demand

Brexit confusion

Ports brace for disruption

Greening Barcelona

Natural gas leads the way

Data flow

How vessels talk to ports is changing

Qatar's Main Gateway to World Trade



3 CONTAINER TERMINALS | 7.5 MILLION TUEs | 28.5 sq.km

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Ships calling at ports have always generated large paper trains. But new regulations could see that set to change

Photo: Getty Images

March/April 2019
ISSUE 2 VOL 64

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PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

PORTS & HARBORS

Published bi-monthly by the International Association of Ports and Harbors (IAPH), edited and produced by IHS Maritime & Trade.

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International Association of
Ports and Harbors
Price Japanese ¥12,000 (US\$120 / UK£80 /
€90), postage included. Visa and MasterCard
accepted or for Bank Transfer. You do not have
to be an IAPH member to subscribe – contact
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A fragile path

With global growth already weakening,
threats to output abound in 2019



Susumu Naruse

Secretary General – The International
Association of Ports and Harbors



The global economy has been fluctuating since the beginning of 2019. In its World Economic Outlook Update in January, the International Monetary Fund announced that global output was estimated to have grown by 3.7% in 2018, which was almost the same level as in 2017. Its forecasts for 2019 and 2020 have been revised down to 3.5% and 3.6%, respectively.

This is partly due to the negative effects of tariff increases on trade between the United States and China, a possible “no-deal” withdrawal of the United Kingdom from the European Union, and a slowdown in Chinese economy.

Apart from the economic slowdown, the world also faces many unfavourable events: the longest ever US government shutdown, the ending of a missile treaty between the United States and Russia, uncertainty surrounding the de-nuclearisation of North Korea, and political turmoil in Venezuela. It can easily be imagined that these events could

dampen consumer confidence and lead to a downsizing of consumption and global economic output. I would sincerely like to see positive events take place in the course of this year.

As the Guangzhou World Ports Conference is coming closer, the host port is speeding up its preparation.

The host port and IAPH are finalising the conference speakers

soon and the complete lineup will be announced shortly. As is the case with the other IAPH conferences, exhibition space is also available for attendees, which will provide a good opportunity to show your business profile to the global port industry.

On another note, the two-year term of the current IAPH executives (president and vice-presidents) is terminating soon at the Guangzhou conference, and the elections to select the new executives are now being carried out.

The results of these elections will be announced to the membership for endorsement at the Guangzhou conference. Happening at the conference too, is the announcement of the winners of the brand new IAPH sustainability awards, which have completely different frameworks compared with the previous ones.

A lot of important things are packed up at the Guangzhou conference, so do register for the event now. **PH**

“The world is
currently facing many
unfavourable events”



Port updates

► PORT EXPANSION

Work is set to begin in April on the final stage of the USD120 million channel risk and optimisation project (CROP) at Port Hedland, Australia.

The project will deliver a refuge zone and an emergency passing lane to the 42 km unidirectional shipping channel, as well as remove high spots in the outer section of the channel to optimise navigable depths. Dredging of the refuge zone was completed in late 2018.

► COSCO PERU DEAL

China's COSCO Shipping Ports has signed a USD225 million deal with Peruvian mining company Volcan to buy a 60% stake in Peru's Chancay Port Terminal. It is COSCO Shipping Ports' first investment in South America, and forms part of Beijing's 'Belt and Road' initiative. COSCO Shipping Ports said it will partner with Volcan to build Chancay Terminal into an important gateway to Peru. The terminal is located 58 km north of the capital Lima.

► YARMOUTH UPGRADES

The port of Great Yarmouth, UK, owned by Peel Ports Group, has taken delivery of a new state-of-the-art crane from Liebherr, giving it greater capabilities to handle larger cargoes on the east coast. The new crane with a 84-tonne lifting capacity will allow the port's customers to further use its 24-hour deepwater facility, which is able to handle larger volumes of bulk and unitised cargo. The LHM280 crane is capable of 35 cycles per hour and boosting cargo-handling capabilities.



Contract signing between HMM and PSA International

HMM becomes co-owner of Busan terminal with PSA

Hyundai Merchant Marine (HMM) has regained control over a container terminal in Busan New Port. South Korea's flagship liner operator said on 30 January 2019 that it had bought back a 50% stake in PSA-Hyundai Pusan New Port (PHPNP), which runs pier 4 in the port. The purchase contract was signed during a ceremony attended by South Korea's Minister of Oceans and Fisheries, Kim Young-Choon.

At the height of its liquidity crisis from 2014 to 2016, HMM sold almost all its shares in PHPNP to private equity firm IMM Investment and Singapore-based terminal operator PSA International.

The company had retained a 10% stake after selling a 40%+1 stake to PSA International, reportedly for KRW80 billion (USD70.9 million) in April 2016 as part of its self-rescue plan. IMM Investment had held the remaining interest in the terminal.

Under the terms of the sales agreement with PSA

International, HMM had to process at least 700,000 teu via the terminal annually until 2023 to ensure that the terminal will have a steady flow of cargoes. The company also handles transshipments via the terminal.

Having escaped bankruptcy in mid-2016, HMM targets to return to profitability within five years, having incurred losses from 2016 to 2017. The company is likely to report a loss for 2018, even though it is now South Korea's flagship carrier, following the bankruptcy of Hanjin Shipping in February 2017.

To raise money for the buyback, the company formed a private equity fund, Yuanta-HPNT, with PSA. HMM has an 80% interest in Yuanta-HPNT, which acquired IMM's shares in PHPNP.

IMM's interest in PHPNP was purchased for KRW221.2 billion, which consists of HMM and PSA's investment of KRW177 billion and KRW44.2 billion, respectively. Korea Ocean Business Corporation, recently

established by the South Korean government to finance the local maritime industry, had contributed KRW50 billion of the funds invested by HMM. With that, HMM and PSA each have a 50% interest in PHPNP.

HMM said that it will be assured of berths for a dozen 23,000 teu mega containerships that are on order at Daewoo Shipbuilding & Marine Engineering and Samsung Heavy Industries, and scheduled for delivery in the second quarter of 2020. Furthermore, HMM plans to attract other major container shipping alliances to call at PHPNP to increase transshipment volumes and terminal revenue.

HMM CEO Yoo Chang-eun said, "Through the acquisition of a 50% stake in PHPNP, HMM can strengthen its competitiveness and provide top priority to customer service at the same time. We will do our best to make PHPNP a worldwide hub port."

HMM has been burdened by high-landing fees at PHPNP when it sold its shares.

Port of Savannah expands

Plans have been announced for an expansion of Port of Savannah's Garden City Terminal, to allow the simultaneous handling of six 14,000 teu ships by 2024, accelerating the third-busiest container gateway's effort to become a much larger funneler of Asia imports into the US interior.

The news comes amid increased carrier interest in Savannah's plan to expand its intermodal capacity to enable goods to reach inland destinations such as Memphis and Chicago at least two days faster than now. Through a USD128 million project – with the first phase coming online in late 2019 and full completion set for 2020 – CSX Transportation and Norfolk Southern Railway will be able to fully build unit trains at the Garden City Terminal. That will reduce dwell time and create faster transits because trains will not need to stop at an inland yard to gain more railcars.

"We would like to see how far we can push the envelope west from the South Atlantic. Our desire is to take advantage of the rail connectivity to feed the Midwest and Ohio Valley," George Goldman, the US president of Zim Integrated Shipping Services, said at a conference. Not having an Asia service connecting to Southern



The Georgia Ports Authority had its busiest January ever in 2019

California is pushing Zim to maximise its inland reach from the US east coast.

Double-digit container volume growth, providing the railroads the density they need to build unit trains, coupled with Savannah being the first inbound call on 10 trans-Pacific services are setting the stage for that play. Among the top five US container gateways, Savannah recorded the highest growth in laden Asia imports in 2018, with imports jumping 10.9%, according to trade information service PIERS. Total US Asia container imports rose 7.5% in 2018 from 2017. The port reported its busiest month ever in January, notching a 28% year-over-year increase, to nearly 434,000 teu.

The rail and berth projects, which will also boost the total number of Savannah's 22 ship-to-shore cranes to 37 by 2024, mark Savannah's evolution from a port that became the third largest by attracting the big box retailers, starting in the 1990s, to one that is harnessing the e-commerce tailwinds and intermodal rail's full potential.

The new growth opportunities rail and e-commerce bring do not mean Savannah has lost any of its luster to major retailers looking to feed imports into nearby million-plus square foot distribution centres. Nine million square feet (836,000 m²) of distribution space has been built out in the last 24 months, bringing nearby port capacity to 5.6 million m².

Port of Vancouver to boost rail capacity

The Canadian government, the Vancouver Fraser Port Authority, and CN Rail have agreed to upgrade key infrastructure to increase trade volumes through Vancouver's harbor.

The project is part of a long-term strategy to double track a 4 km section of rail that links expanding import and export terminals on the south shore of the Burrard Inlet to the national rail network.

"By building a second track, CN will create more rail capacity, allow for a better flow of rail traffic in and out of the port, and improve efficiencies in the

supply chain," the group said.

The project is part of several initiatives that have been identified as part of the Greater Vancouver Gateway 2030 plan, which is designed to meet Canadian demand for imported goods from Asia, as well as grow Canadian exports.

"By contributing to new road and rail infrastructure beyond the port, we can help ease the impacts of growing trade on local communities," said Robin Silvester, president and CEO of the Vancouver Fraser Port Authority.

Port updates

► BANGLADESH DREDGING

Jan De Nul group has entered into an agreement to dredge the Rabnabad access channel at Payra, Bangladesh's third-largest seaport. The agreement places Jan De Nul Group in charge of dredging the port's access channels, as well as basins, anchorage, and berthing areas, in the hope of accommodating calls from larger ships. The work will call for anything up to nine Jan De Nul dredgers.

► NAURU CONSTRUCTS

Work has started on a USD80 million port facility at Aiwo, in the Micronesian island nation of Nauru. Due to begin operation from December 2020, the aim of the facility is to increase Nauru's revenue from fishing licences, which currently make up a third of its foreign revenue, by allowing fishing vessels to offload their catches there.

► COLOMBO RECLAMATION

CHEC Port City Colombo, part of China's CCCC group, has completed a USD700 million 269-ha land reclamation off Colombo, Sri Lanka. Construction is now progressing on surfacing, drainage, and utilities, costing a further USD700 million. Around 70 million m³ of sand has been used in the artificial island's construction.

► OAKLAND CRANES

Port of Oakland has ordered three giant gantry cranes to enable it to handle larger vessels. The cranes have been ordered from Chinese supplier ZPMC and will be the tallest on the US west coast, and possibly the country. At up to 440-ft tall, including their booms, the cranes have a lift height of 174 ft above the dock and cost USD30 million. The three cranes will go to Oakland International Container Terminal on Oakland Estuary. They are expected to be delivered in 2020.

Georgia Ports Authority/Stephen B. Morton 876561

Port updates

► VANCOUVER CRANE FALL

A number of containers were damaged after the boom of a container crane dislodged and fell on Evergreen boxship *Ever Summit* at the port of Vancouver in late January. The vessel snagged the crane while docking, dislodging the stowed boom, and causing it to smash into the top row of containers at the aft end of the ship. Fortunately, no one was hurt, but operations at the terminal were heavily disrupted.

► TILBURY APPROVAL

UK authorities have approved a GBP200 million (USD260 million) application to build a second terminal at Port of Tilbury outside London. Tilbury 2 will be the UK's largest unaccompanied ferry port and its largest construction hub. Port of Tilbury is owned by Forth Ports Group, which said it will have invested GBP1 billion in Tilbury's expansion by 2020, in response to market demand from business growth.



► BRISBANE CRUISE

Port of Brisbane, Australia, has contracted Brady Marine & Civil and local construction firm Hindmarsh for the construction of a USD158 million cruise terminal. Work to be undertaken includes civil works and construction of a terminal building by Hindmarsh, as well as construction of the wharf by Brisbane-headquartered Brady Marine & Civil. Once completed, the government expects the terminal to generate USD1.3 billion in revenue over the next 20 years.



Krishnapatnam port: 932943

The new port is 370 km north of Navayuga's existing facility at Krishnapatnam

Battle for cargo heats up in India

An already oversupplied market on India's southeastern coast will become much more competitive and challenging with a new harbor scheduled to open in less than two years.

Navayuga Engineering, which currently operates a deepwater multipurpose port at Krishnapatnam, has broken ground on a 4,800-acre (19 million m²) port complex at Machilipatnam, roughly 370 km north of its existing gateway and 550 km north of Chennai. The build-operate-transfer (BOT) project is designed to handle all types of cargo, including container, bulk, dry bulk, liquid bulk, general, and project shipments, with a capacity of 40 million tonnes in its first phase. Company officials declined to provide container capacity details when contacted. Because of a daunting supply overhang, driven by the emergence of a new breed of privately operated minor ports – including Karaikkal, Gangavaram, Kattupalli, and Kakinada – and continued lackluster market conditions, Indian east coast terminals are being forced to adjust their

service rates downward to attract more calls and sustain operations in the long run. For example, Chennai Port in July rolled out a deep discount programme for vessels handling export-import containers for transshipment.

With another new entrant in the offing, this desperate strategy will play out even more in the coming months, unless demand conditions rebound dramatically.

Navayuga said the Machilipatnam site is strategically located along the Bay of Bengal coast and that the initial development programme will encompass four berths. The group also plans to construct special economic zones, power plants, and other industrial facilities at the site to support the port project, which the company said will help boost the local economy and create considerable new job opportunities.

"Given Machilipatnam's access to prominent international waterways, the project will be a significant catalyst in positioning India strategically as a global international trading hub," Chinta Sridhar, managing director of the Navayuga Group, said. "The port

will herald a new era of economic activity and dramatically transform the lifestyle of the localities by generating umpteen business and employment opportunities." The USD250 billion conglomerate believes the new, modern harbor will emerge as a preferred gateway for container trade to and from the east coast region, given its expansive established rail and highway connectivity to hinterland locations.

Navayuga holds a 50-year operating concession for the project, and work on the first phase is targeted for completion in 18 months. At full build-out, the port is expected to provide a capacity of 150 million tonnes per year.

Machilipatnam boasts a rich maritime history, as it was a major gateway for trade between India and various French, British, and Dutch establishments in the 17th century. "The port, which was operational until the 1980s, will soon witness the lost glory returning back once it is rebuilt with modern facilities," the new concessionaire stated.

As domestic transshipment and coastal shipping gather momentum, propelled by India's recently liberalised cabotage programme, Krishnapatnam has positioned itself to capture rising demand on the strength of ample feeder networks and infrastructure upgrades, including a 250 m berth extension and more quay crane deployments. Further expansions are under way to augment the port's capacity to 2 million teu annually.

The Krishnapatnam container terminal currently features two berths with a combined quay of 2,150 ft, an 89-acre back-up area, and nearly 5,000 ground slots.

The private harbor has been cashing in on the chronic congestion problems facing its nearby public rival Chennai – one of the reasons Maersk Line withdrew its weekly intra-Asia Chennai Express Service call from Chennai in October 2018.



IMO members discuss sulphur cap implementation

Sulphur cap countdown

The sixth meeting of the International Maritime Organization's (IMO's) Sub-Committee on Pollution Prevention and Response (PPR6) took place on 18–22 February, looking at the consistent implementation of the organisation's 2020 sulphur cap, which will limit sulphur pollution from ships to 0.5% of mass from the start of January next year. The Sub-Committee agreed draft guidelines on a package of new and updated instruments that will help industry and national authorities to apply and comply with the new regulations.

The draft guidelines include sections on the effect on fuel and

machinery systems resulting from new fuel blends or fuel types; verification issues and control mechanism and actions, including port State control and samples of fuel oil used on board; a standard reporting format for fuel oil non-availability; and possible safety implications relating to fuel oils meeting the 0.5% sulphur limit. IMO members are expected to approve the guidelines at the next meeting of the Marine Environment Protection Committee in May 2019 (MEPC 74).

In particular, the Sub-Committee drew up interim guidance for port State control in the event of ships carrying non-compliant fuel oil, either because compliant fuel was

not available when it bunkered or because the ship discovered that the fuel oil was not compliant after bunkering. This guidance will be discussed further at MEPC 74.

Regarding exhaust gas cleaning systems (EGCSs) that remove sulphur pollution from vessels' exhausts, otherwise known as scrubbers, the Sub-Committee is undertaking a review of the technology and agreed to extend the target for its completion to 2020. In the meantime, "the Sub-Committee agreed to forward a new draft Appendix 6 to the EGCS guidelines, developed by the correspondence group, to MEPC 74 (13–17 May) for review and finalization, with a view to

potentially issuing it as an MEPC circular." This draft appendix will provide guidance on compliance with the sulphur cap in a situation where the EGCS fails.

The Sub-Committee also reviewed a submission on EGCSs from the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP), an advisory body that focuses on the scientific aspects of marine environmental protection. The Sub-Committee heard from IMO member states who had carried out research on the washwater discharge from EGCSs and the effect that it had on the marine environment. PPR6 encouraged interested member states and international organisations to undertake further scientific research and to submit results to future sessions in order to update EGCS guidelines. PPR6 also requested that the IMO secretariat explore the possibility of GESAMP carrying out a review of the existing science on washwater, as well as a modelling study of its effect.

The Sub-Committee also completed its work on the effect on the Arctic of emissions of black carbon from international shipping, including agreeing on a definition of black carbon, the appropriate black carbon measurement methods, and the compilation of candidate control measures, which will enable MEPC to decide how the IMO and the maritime transport sector can mitigate the effect of black carbon emissions on the Arctic.

The meeting was opened by IMO Secretary-General Kitack Lim and was chaired by Sveinung Oftedal (Norway).

Notable numbers

USD56 billion

Amount that Belt and Road will add to China's 2019 exports



5.4%

2018 decline in Hong Kong's container volumes



Hapag-Lloyd: 383514

The IMO is seeking to prevent accidents when ships are being moored in port

IMO agrees safe mooring rules

Regulation to better protect seafarers and shore-based personnel from injuries during mooring operations has been finalised by the International Maritime Organization's (IMO's) Sub-Committee on Ship Design

and Construction (SDC 6), which met 4–8 February. The regulations are part of the IMO's International Convention for the Safety of Life at Sea (SOLAS) and will require appropriate and safe-to-use designs of mooring arrangements

and will introduce a maintenance and inspection regime as well as proper documentation. The new requirements are supported by new draft guidelines on the design of mooring arrangements, the selection of appropriate

mooring equipment and fittings for safe mooring, the inspection and maintenance of mooring equipment including lines, as well as revised guidance on shipboard towing and mooring equipment. The draft SOLAS amendments and draft guidelines/guidance will now be forwarded for approval to the Maritime Safety Committee (MSC) in June.

Also discussed at SDC 6 was the development of a new draft SOLAS chapter XV on safety measures for ships carrying industrial personnel and the associated draft code, aimed at providing minimum safety standards for ships that carry industrial personnel, to ensure their safe transit prior to or after their deployment in relation to the construction, maintenance, decommissioning, operation, or servicing of offshore facilities. The regulations will apply to personnel working on sites such as windfarms, offshore oil and gas installations, aquaculture, ocean mining, or similar activities. The correspondence group was re-established to further develop the draft code and report back. The SDC Sub-Committee was opened by IMO Secretary-General Kitack Lim and is being chaired by Kevin Hunter (United Kingdom).

Ports discuss onshore power

As key players in the maritime system, ports have a central role in helping the sector achieve its ambitious decarbonisation targets. Recognizing this, the International Maritime Organization (IMO) took part in the Future Port congress in Bilbao, Spain, on 12–14 February, which included a roundtable discussion on

green ports, looking at the necessary steps to initiate onshore power supply projects. This includes looking at ways to ensure equipment is compatible across the world and safe to use. The IMO's Sub-Committee on Ship Systems and Equipment is developing guidelines on the safe operation of onshore power supply

service in ports and considering the need for mandatory provisions. The Future Port congress also discussed the development of infrastructure to support the supply of alternative low- and zero-carbon fuels, as well as ways to further streamline the logistics chain and its planning, including ports.

65 million teu

Singapore's estimated 2040 container capacity

16%

Number of UK ports who have made significant Brexit plans

Just-In-Time to cut emissions and costs

Reducing the time that vessels spend idling outside ports by using 'Just-In-Time' (JIT) operations would help cut emissions and costs, the International Maritime Organization (IMO) believes. Yet there are many contractual and operational barriers to overcome before global JIT implementation.

Ships such as bulk carriers and tankers, for example, have clauses in their charterparty contracts that prevent them from slowing down, making it difficult to achieve JIT. Other ship types such as container vessels have greater flexibility to reduce speed.

The IMO's Global Industry Alliance to Support Low Carbon Shipping (GIA) met at the end of

January in London to bring together representatives from shipping companies, port authorities, terminal operators, service providers (including ship agents, bunker providers, and tug operators) to discuss in detail how to tackle these barriers.

The roundtable identified the need for ports to provide incoming ships with a reliable berth arrival time and to provide reliable departure times from vessels at berth. Ships at berth only depart after loading, unloading, bunkering, provisioning, and other critical services have been completed, yet ports and service providers share very few updates about completion times.

The roundtable also identified the need for global standardisation and harmonisation of data, currently under discussion by the IMO's Facilitation Committee, to provide ships with regular updates about the availability of berths, especially in the hours prior to port arrival. Timing the arrival can allow ships to slow their approach, providing a further reduction in the carbon footprint of shipping as well as fuel cost savings. It also improves navigation safety and rest hour planning of ship crew.

GIA members plan to hold a further meeting this year to discuss contractual barriers to JIT. The alliance is also preparing a real-time JIT pilot trial to test the

tangible solutions identified so far and gather experience. The GIA will submit a progress report on its work to IMO's Marine Environment Protection Committee (MEPC) with a view to support IMO member states tackling emissions.

The GIA is a public-private partnership initiative of the IMO under the framework of the GEF-UNDP-IMO GloMEEP Project, which brings together maritime industry leaders to support an energy-efficient and low-carbon maritime transport system. The GIA has 15 members including shipowners, operators, classification societies, engine and technology builders, suppliers, big data providers, oil companies, and ports.

IMO urges accelerated GHG action

International Maritime Organization (IMO) Secretary-General Kitack Lim has called for member states and the wider maritime industry, including ports, to increase their efforts to achieve ambitious targets – adopted by the IMO last year – for reducing greenhouse gas (GHG) emissions from shipping. The strategy commits to an eventual complete phase-out of GHG emissions from ships, and at least a 50% cut in emissions by 2050.

"We need to focus on technology transfer and research and development; we need expertise; we need IMO's member states to come together as one; we need the member states to bring



IMO Secretary-General Kitack Lim is pushing for greater GHG research

forward concrete proposals to IMO. We need to involve all maritime sectors – not just shipping. Investment in port infrastructure is just as important," he told the High

Level Conference on Climate Change and Oceans Preservation in Belgium, on February 19.

Lim said initial steps to reduce emissions include strengthening the

Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP) for ships and gathering information under the fuel-oil data collection scheme.

Over the medium term to 2030, he highlighted the need to make zero-carbon ships more attractive and to direct investments towards sustainable technologies and alternative fuels. In this context, the reduced sulphur pollution limits for ships, which comes into force at the start of 2020, "should be seen as not only a landmark development for the environment and human health but also as a proxy 'carbon price' – increasing the attractiveness of lower-carbon fuels or other means of propulsion for ships," said Lim.

GBP1.7 billion

Size of UK port investment pipeline

5.2 million m³

Material recently dredged at Rotterdam



BMT-5103773

Ship simulation software can map how vessels should behave in different situations

Smart port software

Phil Thompson, managing director of BMT Ship and Coastal Dynamics, explains how software helps to ensure safe navigation in congested water spaces

Over at least the next two or three decades, it is highly likely that ships with varying degrees of autonomy will be navigating alongside manned vessels. This raises new challenges for the maritime industry. Innovative solutions will be needed in the areas of collision avoidance, ship and shore communications, human factors, mariner and pilot training, cyber security, insurance, and liability.

In terms of autonomous navigation and collision avoidance, the introduction of new

software and hardware on board vessels is bound to cause legal issues. Will, for instance, software suppliers risk becoming liable for navigation under regulations on prevention of collision at sea (COLREGS) based on algorithms developed by them?

The answers to this and other questions are unlikely to be addressed quickly given the relatively slow pace of the International Maritime Organization (IMO). In contrast, national legislators can move much faster as international conventions allow for national

exemptions. Various nations are likely to follow the Norway example of paving the way for local deployment of autonomous vessels before they make their way into international waters. As the commercial case for small autonomous vessels is also strongest for coastal and inland waters vessels, disruption is likely to start in more restricted waterways such as ports and inland waterways.

One of the basic requirements for autonomous vessels is that they should navigate safely and avoid collisions with any other ships/obstacles or with a land mass. Furthermore, to operate harmoniously with other ships – either manned or unmanned – an autonomous vessel should behave in a manner like that of other ships in the vicinity. Since all manned craft are required to adhere to the coastguard COLREGs defined by the IMO, COLREGs-compliant behaviour will be an integral element of any autonomous vessel navigation system.



‘ One of the ... requirements for autonomous vessels is that they should navigate safely and avoid collisions ’

Phil Thompson
Managing director, BMT



BMT: S104059

industrial partners, including UK pilots' representatives and an autonomous vessel designer, BMT has adapted the REMBRANDT navigation simulator to incorporate COLREGS-compliant AI decision making for autonomous vessel hydrodynamic simulation. BMT is also involved in a parallel Innovate UK programme, Synthetic Imagery training for Machine Vision in Extreme Environments (SIMVEE). This second programme is funding new machine vision developments to supplement the REMBRANDT COLREGS-compliant AI systems developed in SWANS. Both programmes together provide enhanced situational awareness and risk evaluation by fusing collision avoidance algorithms with vessel specific manoeuvrability and seakeeping simulation.

REMBRANDT is a Windows-based, time domain navigation, and seakeeping simulation software application. It is fully scalable, designed to run in full mission and single/multiple desktop modes, and has a variety of user controls needed to simulate conventional vessels and vessels with varying levels of autonomy.

It is installed in pilots' and ship operators' offices, training centres, and onboard ships. It is also used by autonomous vessel designers and operators.

REMBRANDT incorporates a wide range of user configurable controls to allow for a variety of environmental conditions. These include day and night screens, reduced visibility, multidirectional swells, and complex current flows. Visual topography, including bathymetric representation is automatically generated from the ENC chart. The system is AIS-enabled, allowing real-time displays of live traffic as part of an autonomous and manned vessel simulation.

The system includes a large database of fully calibrated hydrodynamic ship models of

conventional and autonomous vessels. Physical phenomena such as squat, bank effects, and ship-ship interaction are included to extend applications to collision avoidance in inland waterways.

This new generation of software can be used to explore future scenarios that comprise a growing mix of manned, part autonomous, and fully autonomous vessels in and around port areas. This allows a better understanding of risks associated with

- Collisions and groundings
- Human element aspects, particularly related to remote operation and training
- Future training needs of seafarers and pilots
- Interactions with non-SOLAS recreational ships
- Ship and shore data and communications systems requirements
- Cyber security
- Equipment failure
- Losses or interruptions to GPS.

For example, the REMBRANDT software is currently being used as part of wider UK studies looking at the effect on the loss of individual vessel ship and shore communications and area-wide GPS.

The future challenge will be for AI navigation algorithms to detect and quantify a deliberate GPS spoofing and compensate accordingly. This will require real-time or near real-time processing of the available data. Other ongoing work involves simulating rudder and engine failure of autonomous vessels and identifying what actions are required from the autonomous vessel, while drift predictions serve to highlight effects on wider port operations and traffic.

Future scenario testing described above is currently ongoing within the Innovate UK SWANS and SIMVEE programmes and will be reported in detail over the coming months. **PH**

Research by companies such as Rolls-Royce and BMT have demonstrated the application of new algorithms that allow existing COLREGs to be applied safely in a crewless environment. This has been achieved by introducing artificial intelligence (AI)-based navigation systems that are able to enact the rules to avoid collision effectively, even when approaching manned vessels that interpret rules differently. Most of these software developments incorporate some form of multi-objective optimisation framework, using a technique called particle swarm optimisation (PSO). PSO has been adopted in wider computational science using the position and velocities of proximate objects to simulate social behaviour, such as movement of bird flocks or fish schools.

Much of this development by BMT has been funded through the Innovate UK Shared Waterspace Autonomous Navigation System (SWANS) programme. Working with a range of

Brexit: Deal or no deal?

Richard Ballantyne, chief executive of the British Ports Association (BPA), and the IAPH's Patrick Verhoeven discuss what Brexit could mean for UK ports, customs checks, and London's position as a maritime hub.

Jonathan Robins reports

Open any British newspaper from the past two and half years, and you will most likely find an article about trade and how best to facilitate it. As Brexit dominates UK political life, perhaps for the first time ever ports are right on the forefront of national debate.

Yet greater debate does not equal greater clarity. While the impact of Brexit, what it will look like – and even whether it will take place at all – are still being discussed, ports are doing their best to prepare for the change. However, as Richard Ballantyne of the BPA said, Brexit's impact will not be felt equally across the sector.

"I want to underline that leaving the Customs Union and the single market has consequences that are inconsistent for UK port operators," he explained, adding, "Ro-ro ports that handle tens of thousands of road-based vehicles every day have the most at stake."

With most lorries leaving a ro-ro vessel containing different goods, it will require each one to send and receive customs clearance, and possibly even face inspection, before being allowed to enter the UK. This threatens to be a "hugely problematic" process, Ballantyne said.

The ability of the Her Majesty's Revenue and Customs (HMRC) to cope with this extra workload is also questionable, something that is not helping to calm nerves. "There's a lot of work going on behind the scenes, but I'm sure the authorities would concede they probably haven't got enough trained staff yet."

The undertaking of pragmatic customs decisions could help to smooth the process out, but will not eliminate problems entirely. "[The government] is directing resources in the right way and making practical decisions that will aid the resources they have, i.e. there could be quite pragmatic approaches to port checks on freight." This would mean that while Brexit will see fresh requirements for customs declarations, the authorities may decide to waive checks on goods. As well as acting to prevent queues and disruption at ports, this reflects the current shortfalls in the UK's capabilities.

Leaving the Customs Union and Single Market would also see health controls return, although as the UK is moving out of an aligned health environment with the EU, standards are expected to be broadly the same.

Goods are therefore not expected to face obstructive inspections, although stopping ro-ro freight for even very brief document checks would create significant congestion. For non-ro-ro traffic, Ballantyne believes that Brexit poses less of a threat. Ports that handle containers, for example, already have extensive experience of handling third country goods – as EU states are set to become from a UK standpoint. An ability to issue just one customs declaration per ship for products such as bulk goods will also make the process of seeking and obtaining customs approval much smoother, to the extent that it may not be onerous at all. Ballantyne believes this is a subtlety that has been largely lost in the mainstream debate.

"You see headlines that ports are going to be rammed and congested, which could be true for one

“Leaving with a deal would be more manageable, certainly on the customs side”

Richard Ballantyne

Chief Executive, BPA

British Ports Association: 5103154



Ports are physically where they are. But shipping companies can move more easily

Patrick Verhoeven

IAPH managing director, policy and strategy



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Despite this uncertainty, port investment appears to be continuing apace, with plenty of large developments and expansions in play.

In Aberdeen a vast new scheme focused on the offshore industry is set to create the largest port area in Scotland. The Dover Western docks development is also progressing, having been committed to before Brexit, aimed chiefly at cargo and cruise operations. The Tilbury 2 facility, which is still in the proposal stage, also looks set to make it off the planners drawing board and into reality.

"The port industry in the UK is looking at GBP1.7 billion [USD2.2 billion] of investment in the pipeline, either on the way or about to begin. That sounds pretty healthy," Ballantyne said. "I think a lot of big investment plans are being ordered and continue. But you may find there are certain new schemes they have held back on," he added. "Generally, port owners are going ahead with their operations because they probably see the UK as remaining a stable and an important market."

Yet despite this confidence, risks do remain. Not least that a no-deal Brexit could have a dramatic effect on the UK economy. "We're all waiting with bated breath to see whether a no deal would have a really negative impact on the economy such as the UK Government has forecast. If it did then you start to see a slowdown in things like throughput."

This evokes one of the central concerns about Brexit; that the signal it sends out to the world is that UK is a place where it is becoming more difficult to do business. But as well as being relevant to the issue of trade, the UK's dominant economic sector is services, with London being perhaps the world's pre-eminent center for the financing, insuring, broking, and many other important aspects of the shipping industry, including vessel owning. Brexit could alter this dynamic, too.

"You see that there are companies – insurance and legal and other professions – that are looking to relocate," Patrick Verhoeven, IAPH managing director, policy and strategy, said. P&O is just one maritime firm to eye other locations, recently choosing to flag its vessels in Cyprus. While the location that vessels are flagged in is likely to have next to no impact on the wider UK economy, the relocation of other businesses could leave more of a mark.

"Ports are physically where they are. But shipping companies can move more easily," Verhoeven said, with other global shipping centers targeting London's dominance even before Brexit.

"Singapore has always had a proactive policy to attract companies to set up business outside Europe, including the UK. But with the IMO being in London of course it will remain an international maritime power, and Brexit could even give the UK more freedom to operate from state aid rules," he explained. "I firmly believe London will continue to play a very important role as global maritime centre, regardless of Brexit." **PH**

or two ro-ro terminals, but it probably isn't true for the non-ro-ro sector. And the non-ro-ro ports, or certain ro-ro ports that are away from some of the potentially more congested areas, see some opportunities – they don't exactly think Brexit is the best thing – but they do see some opportunities."

Hauliers and freight movers are eyeing the potential to diversify their operations away from ports that are predicted to be hit by severe congestion, which could benefit more secondary facilities, although Ballantyne noted that the issue of customs declaration and inspections for animal and plant products would remain regardless of the port's location. "I would say most port operators who are ro-ro operators have been focusing on agreeing something with UK government in the case of a no deal that would mitigate the need to halt traffic."

When *P&H* spoke with Ballantyne, a Brexit deal was still very far from being agreed with the UK parliament, so many port's planning was hobbled by a lack of information. "Until we actually get a firm detailed description of what the arrangements will be, it will be quite difficult for most port operators to make major commitments. A lot of them will be looking to set down storage areas for vehicles and looking at access into motorways."

This should not give the impression that the sector is sanguine about Brexit. On top of the potential customs complications, the industry is wrangling with issues concerning environmental and planning rules, fishing regulations, and others.

Longer-term confusion over Brexit is, if anything, even greater. A key fact, also sometimes overlooked, is that the current deal that has been agreed between Prime Minister May and the EU – but that is still undergoing political wrangling in the UK – is only a transitional agreement.

"Leaving with a deal would be more manageable, certainly on the customs side, but we don't know yet how much easier it would be than no deal. [A deal] is more a route to get somewhere else, but by agreeing one I would assume that a similar agreement would follow for the long term," Ballantyne said.

Future-proofing the facilitation of maritime transport

The issue of electronification of information exchange between ships and ports sits at the heart of efficient maritime trade. Gradually, regulatory developments are emerging that will see it become a reality, reports **Catherine Austin**

Shipping has long generated lengthy paper trails, with non-standardised reporting procedures emerging from port to port. The result is that while the type, format, and number of separate documents that a ship must submit often varies, the information sought on cargoes and persons carried is often identical.

The norm for information exchange between ship and port has, until recent years, been the manual submission of data. Considering any one ship might

call at many different ports during a voyage, the crew could be expected to dedicate many hours to port call administration, through providing information to their agent or to the port directly.

However, over the past decade, the digitalisation of maritime transportation has accelerated at rapid speed, catalysed by progressions in smart technology and improved connectivity. Yet it was clear to the industry that when it comes to the electronification of data exchange, more needed to be done.

With a digital storm brewing, the push to streamline ship-port interactions landed at the International Maritime Organization (IMO). The pressure on the IMO was intensified by action from the EU to digitise shipping and ports within its boundaries. In response, the IMO took to its principal legislation concerning the facilitation of maritime transport: The Convention on Facilitation of International Maritime Traffic (FAL), to make some impactful amendments to several key elements.

In the latest evolution of the treaty, revisions to the Annex were made following a 2016 review that included electronic ship clearance, support of electronic ship certificates and an update to the FAL compendium. The revised FAL convention now encourages the use of modern information and communication technology, and the electronic exchange of information, including electronic data interchange (EDI), to transmit information related to maritime transport.

From a practical perspective the convention amendments make the implementation of electronic ship clearance mandatory from 8 April 2019. This means that the 118 member states that have ratified the FAL

convention must introduce an electronic information system (known as port EDIs) for port administrative procedures. A provision for a transitional period of at least 12 months has been put in place, during which paper and electronic documents are allowed.

In EU countries this obligation came into effect in July 2015. However, an issue remains that some countries have not established port EDI systems because of a lack of technical capability. Chiefly, this means less developed countries where the reliance on paper documents is strong. Therefore, it can be expected that assistance in creating these platforms within developing countries will be required.

Electronic and digital port clearance will simplify the port call process, but it will also force authorities to examine their reporting requirements. This will in turn alleviate some of the confusion over what information is required, in what format and what port. The decision to amend the FAL convention annex to mandate electronic data exchange also resulted in the IMO identifying this use of a 'single window' for data exchange as a recommended practice. A single window is a digital platform concept that allows shipping companies, agencies, and authorities

involved in the exchange of data to do so via a single point of contact without duplication.

However, the use of a single window is not mandatory. The obligation to create systems for the electronic data exchange does not refer specifically to single window, which means member states can use a system other than that of a single window type to comply with the mandated electronic data exchange requirement.

In 2017, a decision was taken by the IMO to develop a prototype single window based on the maritime single window systems that had already been used in several member states.

That same year it was announced that certain countries had already started work on creating a single window platform. For example, Antigua and Barbuda had started to test the implementation of a maritime single window relating to stay and departure of ships, with the technical expertise and finance being provided by Norway.

described “an international single window” as an “unrealistic aspiration at this stage” due to unavoidable differences in national requirements. It also pointed out that creating a national maritime window would be problematic – a view shared by other critics who stated that smaller ports could not be expected to use systems similar those implemented by major ports that invested in bespoke electronic information systems.

The ICS points out that disharmony amidst systems would subvert the aim of reducing the administrative burden on ship operators and crew who would be required to repeatedly fill out forms rather than the electronic systems sharing information amidst themselves – thereby eliminating the need for duplication of information. “The single window should use a reporting procedure and format, which embodies ‘report once’ reporting by the ship and/or the Company,” the association said, also suggesting that any technology adopted be capable of evolving in tandem with technology and trade, and also be robust from a legal and cyber-risk perspective given that commercially sensitive information is being sent electronically.

Perhaps most importantly the ICS called for regional and port authorities to have a plan for situations in which there is a malfunction of the single window system, so that vessels would still be allowed to berth, clear customs processes and depart without significant commercial impact.

It is of note that these are not fresh concerns given that efforts to craft a working system that appeases the agitation of various stakeholders have been under way for a number of years. In 2015, the EU Commission launched the eManifest pilot project, with the support of EMSA, in consultation with member states and the shipping industry. The main objective was to demonstrate how cargo information required by both maritime and customs authorities could be submitted together with other reporting formalities required by Directive 2010/65/EU in a harmonised manner, and via a European maritime single window environment.

In early 2019, a deal was agreed between the European Parliament’s Transport Committee, the EU Commission and EU Council on a proposal for a European Maritime single Window (EMSW), through which shipping companies and agents will communicate with Europe’s national maritime authorities (see full article next page). As the proposal keeps many of the aspects of the current arrangement that ports and the shipping industry believe work well, it has received a strong backing from the sector.

However, it is expected that considerable investment would be required by the EU to develop the single window that connects to the national windows. While the scope of this investment remains uncertain – particularly by smaller ports with shallow pockets – the drive towards electronification of information exchange cannot be held at bay indefinitely in an increasingly digital and automated world. **PH**

Implementing a single window is always a challenge

Julian Abril Garcia, head of facilitation, IMO

The aim of the Antigua and Barbuda project was to install a fully functional single window system that connects all terminals with stakeholders, such as customs, defence, police, maritime authorities, and ports. Ships arriving at the country are now able to register mandatory arrival and departure information via the single window, and this information will be forwarded to individual authorities and ports.

Julian Abril Garcia, head of facilitation at the IMO, told *P&H* that the Antigua and Barbuda single window system would be presented at the next meeting of the FAL committee, and could be adopted by other countries. “It will be offered under an open source license, meaning that this system can be very useful for developing countries to implement single windows in ports and to comply with the new international requirement for electronic exchange of information.” He added that “implementing a single window is always a challenge, not for technical reasons, but because of the need for strong political will to co-ordinate national authorities for aligning requirements and procedures, in co-operation with the private sector”. Any effort to bring forward the digitalisation of the shipping industry might be welcomed, but the idea of a single digital platform simply does not work for many. The International Chamber of Shipping (ICS) is one of the industry bodies that believes it is an unrealistic aspiration.

In April 2018, ICS submitted a statement to the 42nd session of the IMO facilitation committee that



Joachim Affeldt/93851

Cleaning the EU maritime 'single window'

Despite initial skepticism, a drive to establish a European maritime 'single window' has been welcomed by ports, reports **Catherine Austin**

European ports have welcomed an agreement to create a 'single window' to streamline maritime trade

In early February, a European Commission (EC) proposal to establish a European maritime single window (EMSW) for the exchange of data between ships and ports was agreed politically with the European Parliament and Council. Expected to enter into force in 2025, the agreement has been warmly welcomed by the maritime industry, including European ports.

However, the EC's push for the mandated use of an EMSW was not without controversy, with many elements being initially opposed by port authorities.

The new EU rules arrive following great investments already made to establish National Single Windows

(NSW) under previous obligations set by the EU's Reporting Formalities Directive (RFD), which entered into force in 2015.

The NSW requirements resulted in governmental agencies in most EU countries establishing separate but well-developed electronic information systems and existing port community systems (PCS), which facilitate single-data submission for port and cargo authorities.

Ahead of agreement on the EMSW, port authorities had voiced concerns around the need for EU regulation to take well-established systems into account and not to increase complexity. The ports of Hamburg, Antwerp, and Rotterdam urged the European Transport Committee to vote against the EMSW when an amendment proposal sought to introduce an EU level access point interface, in addition to the new harmonised interface that would be developed at European level for the NSW.

Were an additional EU level access point interface to be introduced for ship reporting, the ports said that it would result in delays, which would in turn endanger safety. By further extending the reporting chain at the access point at the EU level, the level of availability of operational safety data would be reduced and the risk of losing data will be enlarged. The same applies for environmental protection in European seaports, which would suffer due to data availability impact.

Ultimately, support for the EMSW among the maritime industry was secured because the agreement takes several concrete steps to reduce the administrative burden of the EMSW, including the repealing of the current RFD.

European ports will be able to report the same data sets to each NSW in the same way by creating a EMSW maximum dataset, while EU member states will be able to ask for additional data under exceptional circumstances without having to ask the EC first. The regulations will also build on the existing NSWs and PCSs, allowing ports and shipping lines who are currently using a PCS as a one-stop-shop for the reporting formalities and other services to continue doing so.

In addition, the EMSW will be technologically neutral, the EC said, and will require EU states to designate a competent national authority for the NSWs with a clear legal mandate. This provides the NSW with a governance function.

The European Sea Ports Organisation strongly welcomed the deal. "We see the agreement as a real breakthrough on this very technical but important matter for the maritime and logistics sector," said secretary-general Isabelle Ryckbost. "The outcome provides clear engagements towards administrative simplification and a more efficient supply chain. We are very happy that the new framework is recognising the bottom-up efforts and investments already made by European ports towards creating a one-stop shop for both the reporting formalities and all other services rendered to stakeholders in the logistics chain." **PH**

Australian ports race to diversify

To meet future challenges, Australian ports are looking beyond their traditional role as export hubs for raw materials. However, as **Zoe Reynolds** reports, the competition is tough

Future-proofing has become the latest buzzword in the Australian port industry. Although export volumes of raw materials currently remain strong, an awareness is growing that this may not last forever.

Newcastle, the world's largest coal export port, is preparing for a world without thermal coal. The International Energy Agency forecasts global coal demand to remain stable through 2023, although banks, insurance companies, hedge funds, and others in advanced economies are exiting the coal business. Keeping this in view, Newcastle port is keen to diversify.

Pilbara Ports, which stretches over five locations, including Port Hedland and Dampier, is busy safeguarding against any future shocks to global markets. While the group boasted a record annual throughput in FY 2018, volumes at its Port Hedland iron ore export port fell slightly from previous years. Having 94% of all exports to be one commodity and 85% of those exports to one nation, China, leaves the port vulnerable.

"When China sneezes, Australia catches a cold," Tim Buckley, director of Energy Finance Studies, Australasia, the Institute for Energy Economics and Financial Analysis told *P&H*.

Would a trade war between the United States and China adversely impact Australia?

"They are two of our biggest trading partners. Australian exports are all predicated on China's growth. All Australian ports, other than Sydney port, which is predominately an import port, are geared towards exporting to China. "Any port which exports one product for one major customer, like Port Hedland does, is at greater risk," he said.

In January, Pilbara Ports announced it was future-proofing Port Hedland and investing in a new general cargo facility to accommodate a logistics hub, general cargo wharves, and cargo lay down area. The port is also exploring emerging opportunities, including lithium and other battery minerals and agribusiness exports.

In the case of Newcastle, where 99% of exports are thermal coal mainly to Japan and China, diversification is more urgent. The port is busily establishing cruise ship facilities, a new bulk terminal, and a specialised automotive and ro-ro hub, alongside its coal, wheat, fuel, and fertiliser trade. Its key ambition, however, is to become an international container terminal.

In 2018, port management commissioned a report by HoustonKemp on containerisation trends. Unlike coal, containerised trade is the fastest growing component of seaborne trade in the world, double the growth of overall seaborne trade, the report highlighted.

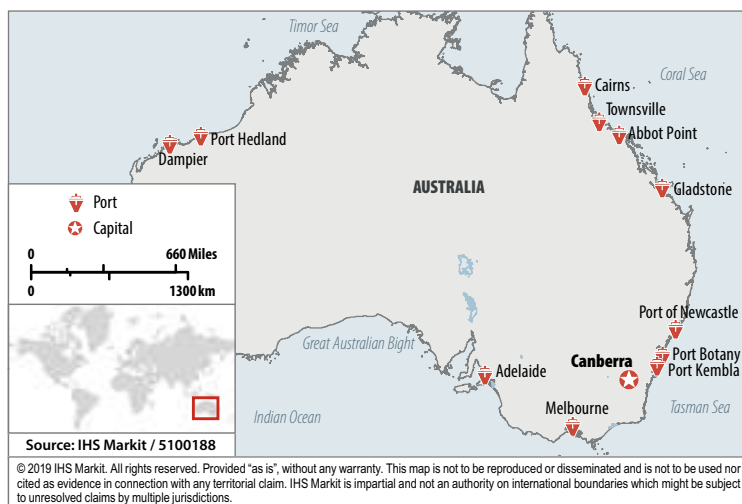
New ship build are predominantly about 14,000 teu. Such vessels are too big for Port Botany, Brisbane, or Melbourne terminals to accommodate, but well within the scope of Newcastle.

Newcastle has dreamt of a container terminal since its steel mills shut down in 1999. After China Merchants Port Holdings and Australia's Hastings (now The Infrastructure Fund) took a 50/50 stake during privatisation (leasing) of port assets in 2014, these ambitions were revived.

However, a deal struck with NSW Ports – which holds a 100-year lease on Port Botany and Port Kembla – and the state government puts a 30,000-annual box cap on any new terminal, forcing Newcastle to otherwise compensate its competitor. "Ultimately, plans for a new terminal can't proceed while restrictions on the number of containers are in place," a port representative told *P&H*.

"The terminal would cost AUD1.8 billion [USD0.7 billion] to build and private investors are not willing to part with their money while the restrictions eat into profitability. We will be ready to go once that one obstacle is removed. Several major shipping lines are ready to send bigger ships once the port is ready to receive them," he continued.

The matter is now in the hands of the Australian Competition and Consumer Commission (ACCC). In December 2018, the ACCC took NSW Ports and its subsidiaries to the Federal Court for alleged "anti-competitive and illegal" agreements. The dispute also went to a state parliamentary enquiry, which was due to report back in February.





“When China sneezes, Australia catches a cold”

Tim Buckley, director of Energy Finance Studies, Australasia, the Institute for Energy Economics and Financial Analysis

Newcastle port is looking to diversify away from coal

Emboldened, the Port of Newcastle management has drawn up its Port Master Plan 2040, featuring a world-class 2 million teu container terminal. Unlike Australia's existing five terminals, the plan accommodates vessels larger than 10,000 teu. “The global trends in container trade and shipping are clear; Australia needs an ultra-large container vessel terminal,” Port of Newcastle CEO Craig Carmody told *P&H*.

Addressing the Hunter Business Chamber Infrastructure Luncheon in November 2018, Carmody locked in the port vision. “As the global trade systems scales up, our east coast container ports are stranded assets – built inside bottlenecks,” he claimed.

Carmody touted Newcastle's natural strengths – vacant land, deep channels, direct road, and rail corridors that come right to the water. The port had already received several unsolicited bids to develop and operate a terminal, he said. Newcastle is certainly the biggest and boldest Australian port development proposal currently on the table.

Flinders Ports in South Australia announced a channel widening project in June 2018, to commence within two years. It involves dredging some 1.55 million m³ along 7 km of channel to accommodate post-Panamax vessels. Townsville in Queensland, Northern Australia's largest general cargo and automotive port, is embarking on a AUD75 million channel upgrade project to allow larger vessels.

Kim Gebers, general manager for infrastructure at the Port of Townsville said, “Asia is the port's biggest trading partner, with more than 76% in trade volume with this rapidly growing region. It is vital that Port of Townsville remains capable of handling the vessels of the future.”

Meanwhile, Cairns has just started its expansion and Gladstone is going through the government process now, according to Ports Australia.

At the same time, Indian multinational conglomerate Adani Group has abandoned its port expansion proposal for Abbot Point coal terminal in North Queensland, and Port Waratah Coal has scrapped its AUD5 billion plan for coal export expansion in Newcastle.

Victoria's deepsea terminal out of Melbourne, Australia's largest container terminal, has been shelved until capacity at the Port of Melbourne reaches approximately 8 million teu. Meanwhile, the port is struggling to cater for bigger liner vessels ready to enter the North-South trade.

What has proved a headache for Australian container terminals, however, has been a boon for neighbouring New Zealand. Across the ‘ditch’ as it is known locally, the Port of Tauranga dug deep several years ago in anticipation of larger vessels, and it has paid off.

In 2017, it became the only New Zealand port to be “big ship capable”. Vessels ranging between 7,500 and 11,500 teu now regularly call each week, compared with a pre-dredging 4,500 teu ships. New services from Maersk, Hamburg Sud, and Seatrade are putting Tauranga on their trade routes. The port is now the nation's biggest hub port. In 2018, 25.7% (approximately 310,000 teu) of container traffic at the port was transshipments. This followed a 23.3% growth in transshipments in 2017, including Australian cargo. The Port of Tauranga success story is a model the port of Newcastle in Australia is keen to emulate. **PH**

Courtesy NSW State Treasury/914262



Building on success

Despite stiff competition from Chinese ports, Singapore is preparing for significant expansion, **Martina Li** reports

While Singapore works on relocating its container port to its far-western region, the city-state has maintained its position as the world's second busiest container port.

Even as Chinese ports are emerging, Singapore banks on its status as the world's busiest transshipment port, thanks to its location at the crossroads of the Asia-Europe route.

Singapore's container throughput grew 8.7% year-on-year to 36.6 million teu in 2018, behind the 42.01 million teu that Shanghai processed in the same year. Not content to rest on its laurels, the city-state's authorities work closely with the shipping industry to attract cargoes in order to maintain its status as a shipping hub.

On 20 December 2018, pan-Japanese liner group

PSA 890229

Probe underscores HK's struggle

Terminal operators band together for efficiencies as volumes slide by, writes **Martina Li**

Hong Kong's competition watchdog's probe into an alliance involving four terminal operators underscores the decline of the territory's port, in contrast to facilities on the Chinese mainland.

On 9 January 2019, COSCO-HIT Terminals (Hong Kong) announced that it had formed Hong Kong Seaport Alliance with Hongkong International Terminals, Modern Terminals, and Asia Container Terminals to jointly operate and manage their 23 berths across 8 terminals in Kwai Tsing in the New Territories.

Citing mainline operators' growing deployment of mega container ships, COSCO-HIT Terminals (Hong Kong) said that the alliance will create additional capacity by increasing the flexibility in the overall berth and yard planning among the 23 berths to better accommodate

the needs of shipping alliances and optimise utilisation and cost synergies.

The following day, Hong Kong's Competition Commission announced that it will investigate the formation of the alliance.

"In particular, the Commission is investigating whether the agreement may constitute a contravention of the First Conduct Rule of the Competition Ordinance by preventing, restricting, or distorting competition in Hong Kong," it said.

A representative of COSCO Shipping Ports told *P&H* that notwithstanding the Competition Commission's investigation, the alliance is going ahead.

"We're confident that the alliance does not break any competition rules. When we formed the alliance, one of the members took the initiative to inform the Competition

PSA Singapore terminals

Ocean Network Express (ONE) and Singapore's main terminal operator PSA Singapore launched a joint venture to operate four berths at Pasir Panjang Terminal.

The berths have combined annual handling capacity of 4 million teu. With the latest joint venture, PSA has such collaborations with all three container shipping alliances: THE alliance (of which ONE is part of), Ocean Shipping Alliance, and 2M (comprising Maersk Line and Mediterranean Shipping Company).

COSCO-PSA Terminal Pte Ltd (CPT), a joint venture company between COSCO Shipping Ports Limited (CSP) and PSA, now operates five berths at PSA's Pasir Panjang Terminal (PPT) 5 and 6, after adding two in November 2018. This raised CPT's annual handling capacity from 3 million teu to about 5 million teu, strengthening COSCO's presence in Singapore. It also supports the needs of China's COSCO Shipping group with the advent of mega-vessels and mega-alliances in the shipping industry.

In March 2017, PSA and French liner group CMA CGM, part of Ocean Shipping Alliance, launched the second phase of CMA CGM – PSA Lion Terminal (CPLT), doubling the latter's capacity to 4 million teu, compared with when the terminal first started operations in July 2016.

CMA CGM's 2016 acquisition of APL, the liner operator previously controlled by the Singapore government's investment firm Temasek Holdings, helped to draw traffic away from Malaysia's Port Klang. The latter was the French operator's main port of call in Southeast Asia.

Mediterranean Shipping Company also operates three berths at Pasir Panjang Terminal, with annual capacity of 2 million teu, through a joint venture with PSA, MSC-PSA Asia Terminal. This joint venture began in March 2006.

Work on the new mega-port in the Tuas area is progressing according to plan. The Maritime and Port Authority of Singapore stated that reclamation works for the first phase of the development are on schedule, with all 221 caissons required for building the wharf slated to be installed in early 2019.

Even as global warming has made Arctic shipping a viable alternative to the Straits of Malacca, Singapore's maritime authorities have regularly stated that they want to maintain the efficiency and cost-competitiveness of its port operations to stay ahead.

Upon completion in 2040, the new mega-port will be able to process up to 65 million teu of boxes, up from a current capacity of 40 million teu.

Currently, the majority of containers passing through Singapore are processed by port operator PSA International's Tanjong Pagar, Keppel, Brani, and Pasir Panjang terminals. The first three of these terminals are in Singapore's city centre, and since 2016, PSA has been diverting container volumes to the Pasir Panjang facility. This is due to the lease for the city facilities expires in 2027 and the Singapore government plans to redevelop the prime area for commercial and residential purposes. The lease for the Pasir Panjang terminal expires in 2040, when the Tuas terminal starts its operations. **PH**

Commission and that's how this review came about." The situation reflects the predicament of Hong Kong's container port, which last enjoyed top billing in 2004.

In 2018, Hong Kong processed 19,641,000 teu of containers, down 5.4% from the 20,770,000 teu handled in 2017. Shanghai, the world's busiest port, processed 42.01 million teu of containers in 2018, up 4% from 40.23 million teu in 2017.

Nearly two decades ago, Hong Kong vied with Singapore for the crown of the world's busiest container port. That title has been held by Shanghai for the last nine years as China ascended into an economic powerhouse.

As Chinese ports underwent rapid development to facilitate growing imports and exports, Hong Kong's port fell to seventh place in 2018.

Drewry's senior analyst for ports and terminals, Neil Davidson, told *P&H* that while Hong Kong's early growth owed to underdeveloped ports on the mainland, the situation had reversed.

"For many years, through to the 1990s, Hong Kong was really the only effective port for serving southern China, as mainland Chinese ports were under-developed. Hence, it grew rapidly and gained a dominant position, due to the shortcomings of mainland Chinese

ports. Since then mainland Chinese ports like Shenzhen and Guangzhou have seen huge expansion and investment in modern facilities, and have become much more effective competitors to Hong Kong.

"At the same time, these mainland ports are closer to China's factories, which have seen huge growth since the opening up of China's economy. Much of Hong Kong's traffic is barge volumes, carrying cargo to and from the mainland before being shipped internationally, and these barge moves have been replaced in part by direct mainline vessel calls in mainland Chinese ports."

In addition, due to higher living costs in Hong Kong, dock labor costs are higher than the mainland, noted Davidson. Hong Kong also has notoriously high property prices, generating pressure for land to be used for non-port developments. These factors mean that terminal handling charges are higher in Hong Kong than in mainland ports, said Davidson. But all is not lost for Hong Kong yet, said Davidson.

"Hong Kong does have highly experienced and professional terminal operating companies, excellent facilities, and many strengths in terms of the soft side of doing business [eg, finance, laws, and regulation]. These factors should not be underestimated." **PH**



Port Authority: 401928

Courting China

While ports in Japan and South Korea have positive outlooks, the benefits of surging Chinese consumption will not be felt equally, writes **Jon Guy**

Port of Busan is looking to capitalise on China's Belt and Road Initiative

For South Korea, the benefits of China's ongoing moves to create new transport routes via its Belt and Road Initiative (BRI) are paramount.

A study by global credit insurer Euler Hermes found the country will be the biggest economic beneficiary of the BRI this year, with an estimated USD7 billion in exports due to the initiative in 2019.

Euler Hermes predicts that the BRI will add USD56 billion to Chinese exports in 2019. "We expect South Korea, ASEAN, and India to be the main drivers helped by a rise in domestic demand," he said.

However it is not simply a one-way street, with BRI countries' exports to China set to grow by USD61 billion in 2019, driven by stronger trade integration with China.

South Korea will likely be the main winner, according to Euler Hermes. Korean exporters are expected to profit from the rise of the Chinese middle class and improved political relations between both markets. Ports are already gearing up for the expected uptick.

Busan Port Authority President Nam Ki-chan announced that the authority has begun a series of marketing initiatives aimed at targeting Chinese major

liners, to enhance its partnerships and increase cargo volume. President Nam said, "Through these marketing activities in our top trade partner, Tianjin China, we expect to create new cargo volume."

Busan has been seeking new partners for Busan New Port's distripark, with Japanese investors targeted, given they account for 40% of international invest in the park.

However, the South Korean government is also looking north for port growth and is seeking greater tie up between South Korean and North Korean ports in anticipation of the easing of international sanctions on North Korea.

The country's Ocean and Fisheries Minister announced his ministry is to undertake research on closer ties with North Korean ports in preparation for a time when sanctions against Pyongyang are lifted.

"It is economical to build a joint industrial complex near (North Korea's) port cities, such as Nampo and Haeju," said minister Kim Young-Choon.

For the Japanese ports and terminal sector, much of the activity is driven by efforts to gear up for another rise in the level of container traffic. Drewry Shipping Consultants (Drewry) predicts that while the level of container traffic will not match the 2018 growth figure of 4.7%, it expects growth to be slightly above 4%. Estimated exchanges in the traditionally strong third quarter, when seasonal goods are shipped out of Asia, produced a rise of 4.5% in 2018.

However, with changes to the global supply chain taking place, terminal operators and port authorities continue to seek to expand their activities beyond the port gate into the wider supply chain, to try and diversify sources of revenue, tie in traffic and get closer to cargo owners. However, Drewry caution the field is becoming increasingly crowded, with the heavyweight liner shipping companies aiming to do the same thing.

Port modernisation is expected to continue with Japanese oil and gas terminals set to lead the world in the use of new technologies to drive efficiency and lower costs, accounting for nearly a third of the global market by value by the end of 2025.

Japanese cruise terminals are bracing themselves for another record breaking year in 2019 having seen a 5.9% increase in visits to Japanese ports for the 12 months to December 2018. The Japanese government has publicly stated it aims to increase the number of cruise ship visitors to 5 million in 2020.

While both Korean and Japanese port operators remain bullish over trading conditions, all have added concerns over the potential for geopolitical risk.

The continued dilemma over China's trading relationship with the US and the ongoing uncertainty surrounding the UK's departure from the European Union have the potential to impact trade across the region. As such the appetite from investors has been tempered. However, there is an expectation that once the risk of an all-out trade war diminishes the sector's attraction will increase. **PH**

Bullish sentiment drives Thailand capacity growth

As Hutchison Ports opens its Laem Chabang Terminal D facility, the group feels it has little to fear from rising Thai port capacity reports. **Peter Shaw-Smith**

Hutchison Ports officials believe the only threat to the success of Thailand's Eastern Economic Corridor, part of the Thailand 4.0 strategic plan to revamp manufacturing and services, is a global economic slowdown.

"I don't believe that there is any significant downside for Thailand as long as the economies of Thailand's main trading partners [stay firm]. Our growth and volumes are driven by, and dominated by, exports," said Stephen Ashworth, managing director for Thailand and South East Asia, Hutchison Ports, on January 30, the day the operator's Laem Chabang Terminal D facility officially opened. "50% of our volumes are export-led, and 30% are import-led. The other 20% is the balance, in empties."

Upon completion, Hutchison Ports Thailand's 3.5 million teu Terminal D facility will comprise of 1,700 m of berth and 17 remote-control super post-Panamax quay cranes. It will also boost capacity at Laem Chabang port to around 12 million teu in total, with Hutchison Ports Thailand having an eventual capacity of around 50% of this at the facility.

"It's an export-driven economy and therefore, by definition, Thailand will only likely see a negative impact, in my opinion, from a downturn in the global economy – and that's completely out of our control. The possibility of a US-China trade war or even just a general global slowdown will impact Thailand as the country is a significant part of the supply chain."

For now, volumes are holding up. Hutchison Ports' volume at Laem Chabang grew about 6% year on year. "We did about 2.7 million teu in 2017 and 3 million teu last year. If you take the 3 million we did roughly last year, the bulk of that, 70%, is what we call interregional trade, in particular going north on rotations which capture Thailand, possibly Vietnam, Hong Kong, Shanghai, up to Korea and Japan, that kind of loop. It's dominant."

This is where most of Hutchison Ports' volumes originate from. They have a weekly service to Australia and handle four direct call services, serving east-west trades, which are two trans-Pacific services, one to the US East Coast – to Savannah and New York – and a European service too. Interregional volumes make up around 70% of Hutchison Ports Thailand's total volumes and the rest of it, including direct call services, is about 30% of volumes. This gives the company confidence that the rising capacity will be required.

Further bolstering need for capacity growth at Thai ports, Hutchison noted that Thai consumers are increasing their spending on consumer products because of a growing middle class, with inbound volumes picking up over the course of the last year.

Terminal D has also taken great strides towards greater automation. Ashworth believes it is the first container terminal in the world where all the ship-to-shore cranes and rubber-tyred gantry cranes are operated using remote-control technology, which should provide around 20% improvement in gross moves per hour compared to a conventionally operated quay crane.

"We are not automated in the sense that the transfers from the yard to the vessel are still manually operated. To say 100% automation, where there's nobody in the terminal, we are probably looking a bit further down the road," he said, adding that heat and height made even RTG operators' life tough.

Ashworth said there was constant pressure from shipping lines to upsize their vessels to 14,000 teu. "The 14,000 teu vessels are becoming relevant here and will be relevant to Phase Three. In November 2018, our Terminal D handled the first 14,000 teu-class container vessel, [Ocean Network Express's] *One Columba*, to ever call Thailand. These are not feeders. These are the routes the alliance operates, from south Vietnam, Singapore, Colombo, into the Suez Canal, and then into Europe." **PH**

Terminal D, Laem Chabang port



Kaohsiung eyes capacity gains

Taiwan's largest port eyes growth from new and existing terminals, **Jonathan Robins** reports

Growth has been brisk at the Port of Kaohsiung in recent years. Throughput hit 10.45 million teu in 2018, an expansion of 1.7% against the year before, according to the Taiwan International Ports Corporation (TIPC), the state-owned authority that manages the island's ports. However, this statistic does not paint the full picture. The port was hit by network restructuring that impacted volumes in the first half of the year, which bounced back strongly in the second. Transshipment volumes grew by 3.5% in the final six months alone.

Kaohsiung recently signed a lease agreement with Evergreen to operate the under-construction Terminal 7. The largest construction project ever undertaken in Kaohsiung, when complete it will include five deepwater berths with a quay length of 2,415 m and a water depth of 18 m. Capable of accommodating five 22,000 teu ultra-large container vessels at once, it will have an annual



capacity of more than 4.5 million teu. Terminal 7 will be completed in two phases, in 2022 and 2023. The shifting of Evergreen to the new terminal will free up Terminal 4 and 5, which TIPC is expected to re-allocate to existing operators, with a view to maximising Kaohsiung's overall throughput and integrating leased berths into one terminal to reduce costs, a representative told *P&H*.

"It's like playing checkers. Evergreen first moves to Terminal 7 and other operators will consequently move

Economy of scale

As in other Chinese regions, Guangdong's facilities are consolidating, **Martina Li** writes

Port of Guangzhou is working to strengthen its status as the largest hub port in southern China through mergers and acquisitions with neighbouring ports in the Guangdong province.

The port's state-owned operator Guangzhou Port Group has acquired a 52.51% stake in Zhongshan Port & Shipping Enterprise Group for CNY500 million (USD74.12 million). Once the transaction has completed, Zhongshan Port & Shipping Enterprise Group will become a subsidiary of Guangzhou Port Group.

"The manufacturing sector around Zhongshan is growing and is thus a major source of containerised exports in the Pearl River Delta. Zhongshan Port & Shipping Enterprise Group is in a strong financial condition and the acquisition will enable us to integrate our logistical networks to create economies

of scale and improve operating efficiency," Guangzhou Port Group told *P&H*.

The municipal governments of Guangzhou and Zhongshan have signed an agreement to jointly develop ports and major infrastructure projects. The two parties will work together on the fourth phase of the building of a container terminal in Nansha port, which is scheduled to be completed in the second half of 2020. Connected to the Pearl River Delta, Zhongshan is a natural estuary port.

In April 2018, the Guangzhou provincial government issued the "Three-Year Action Plan for the Construction of Guangzhou International Shipping Centre". This involves widening the Guangzhou Port Channel to enable two-way navigation for container ships with capacities ranging from 9,000 to 14,000 teu.



TIPC-881572

several new intra-Asia service routes in January provided by APL, Yang Ming, and Evergreen to connect the region to North America and Europe.

In total, the port currently serves 137 shipping routes, connecting it to 207 ports in 75 countries. Twenty-five east-west bound joint service routes run from Kaohsiung, operated by several carriers as well as the shipping alliances 2M, Ocean, and THE.

"Kaohsiung port accounts for 68% of the total throughput and 90% of transshipment volume among all ports in Taiwan," TIPC told *P&H*.

Future plans envisage the installation of state-of-the-art facilities at wharves and nearby yards that would further increase handling capacity, strengthening Kaohsiung's position as a container transshipments hub.

The port is currently run through a landlord port business model that leases container terminals to carriers and operators. TIPC is planning to set up joint-venture terminal companies with current operators to run terminals in Kaohsiung. This would see TIPC become a strategic co-operative partner rather than landlord to the tenant carrier, and reduce the operating costs of joint-venture partners. It would also enable TIPC to team up with carriers to attract container alliance's service routes.

In addition to the works that are taking place at Terminals 4, 5, and 7, the port has opened piers 2–10 to the public. With the piers having been important trading points in the island's colonial period, they contain numerous historical buildings and warehouses. **PH**

Port of Kaohsiung accounts for 68% of Taiwan's total port throughput

to their 'new' terminals based on 'One Terminal Center, One Operator' principle." With the terminal re-allocation completed, the port's throughput is expected to rise by at least 1.5 million teu annually.

Even without Terminal 7, expansion at the port is continuing apace. In April, the port will inaugurate a new East Asia to North Europe service by Ocean Alliance using 14,000 teu ships, in addition to another service route using 20,000 teu vessels. It will also welcome

After the completion of the project in around 2020, the 66.6km waterway to the west of Weizhou Island will be widened from the current 243 to 385m. This will allow container ships to reduce the sailing time to Nansha, a sub-port of Guangzhou, by three hours.

Being the only deepwater port on the west side of the Pearl River Delta explains the growth in Nansha's container volumes. Nansha processed 15.57 million teu of containers in 2018, up nearly 12% from 2017. This accounted for almost 71% of Guangzhou's entire throughput. Guangzhou's municipal government is also taking steps to promote Nansha as a shipping centre, with the establishment of a maritime arbitration centre and financial incentives to the local shipping cluster.

More cargoes are expected to come to Nansha once the Nansha port on-dock railway, which runs through Jiangmen, Zhongshan, Foshan, and Guangzhou, starts operations in 2020. The freight trains will transport cargoes from inland cities to Nansha for export.

To position Nansha for growing throughput, four berths (two for handling ships of up to 9,000 teu and two for handling ships of up to 5,000 teu), are being constructed to increase the port's annual capacity to 20 million teu by 2021.

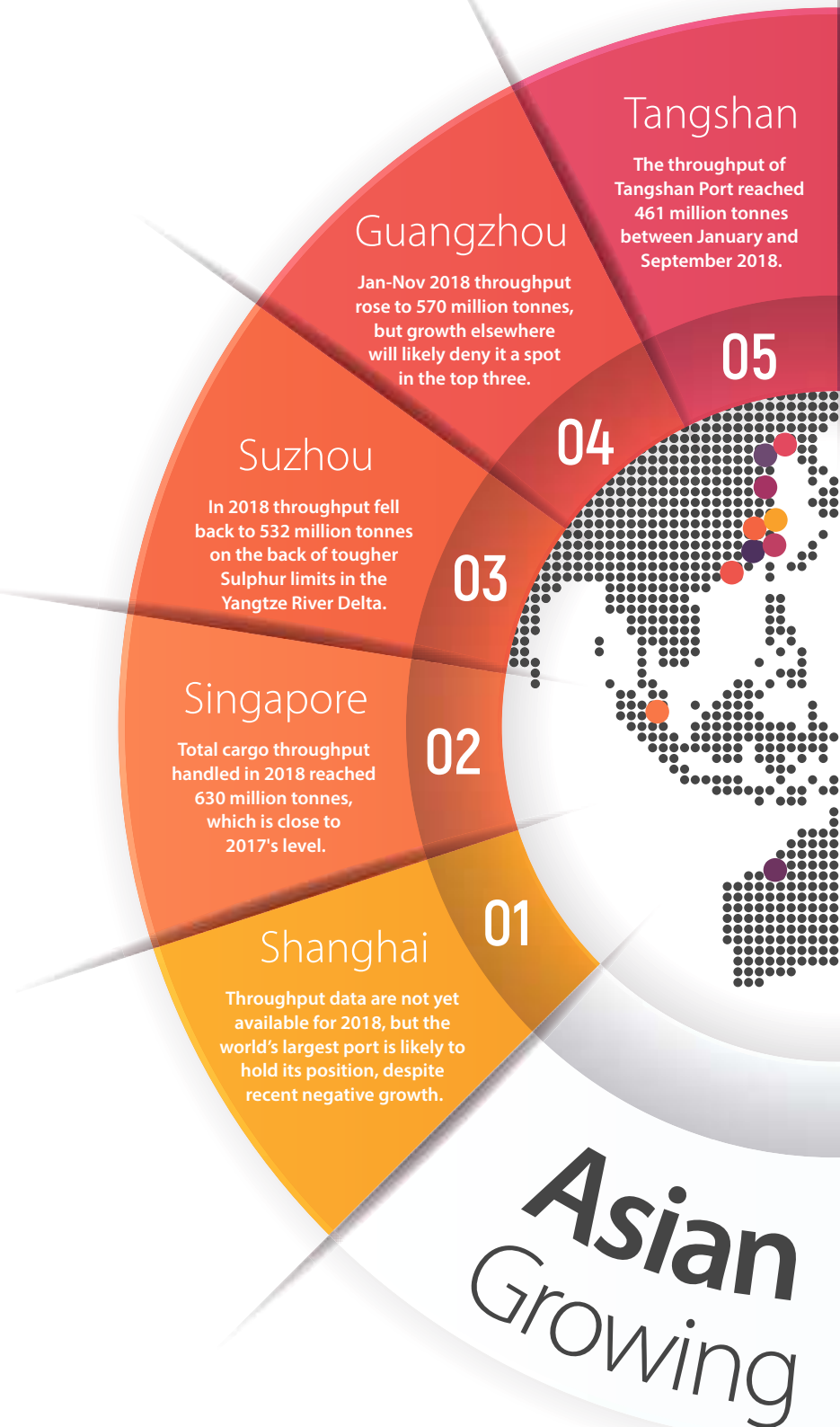
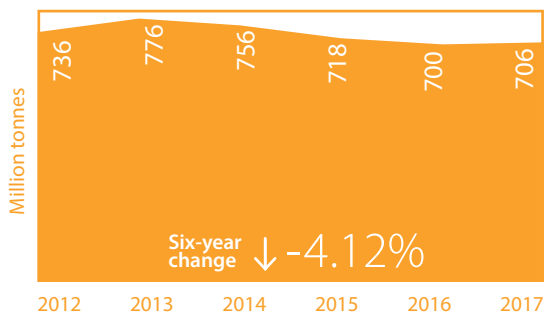
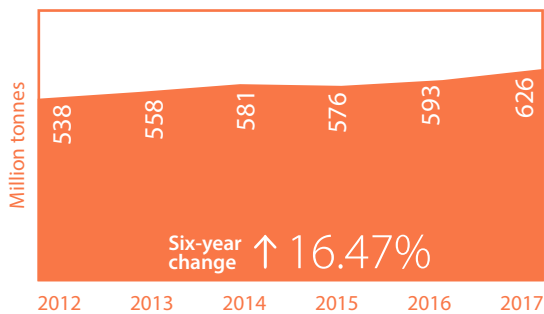
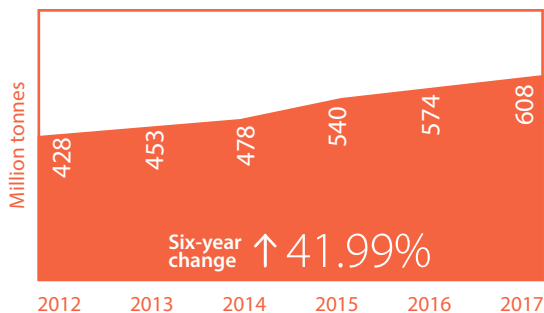
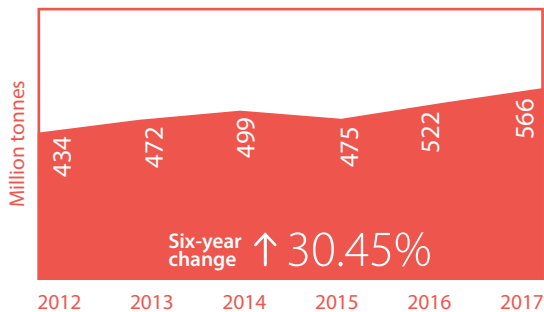
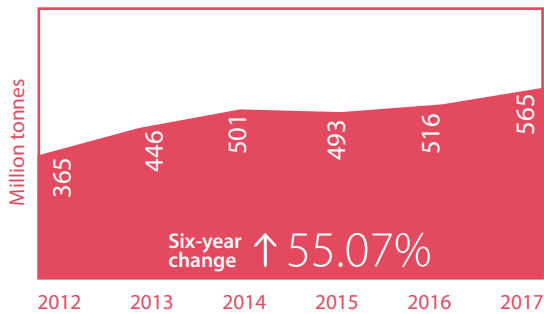
Nansha's position at the mouth of the Pearl River estuary also makes the port a focal point in the Chinese authorities' plan to create a 'Greater Bay Area' (GBA) in southern China as the 'Belt and Road' initiative expands.

The GBA strategy envisions an economic hub encompassing 11 urban southern Chinese cities, which include Guangzhou, Shenzhen, Dongguan, and Zhuhai, as well as Hong Kong and Macau. These are home to large industrial clusters, enabling parts of the supply chain to be handled in the GBA.

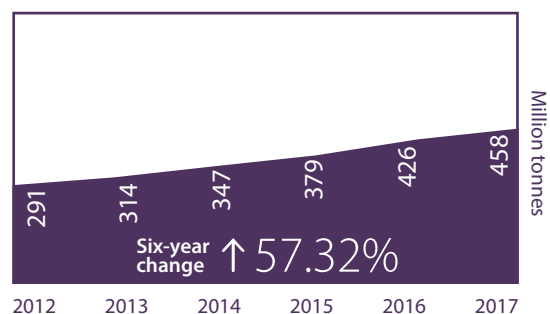
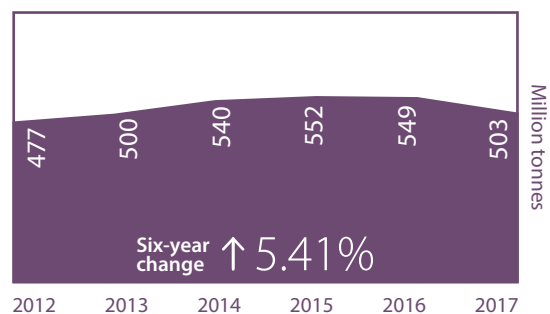
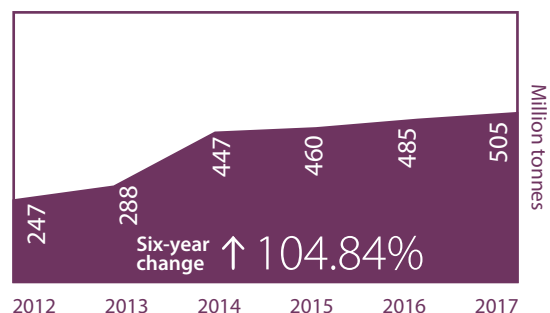
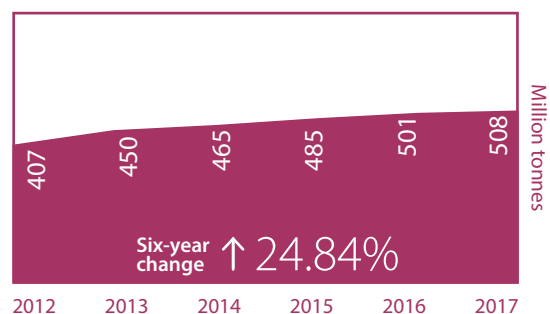
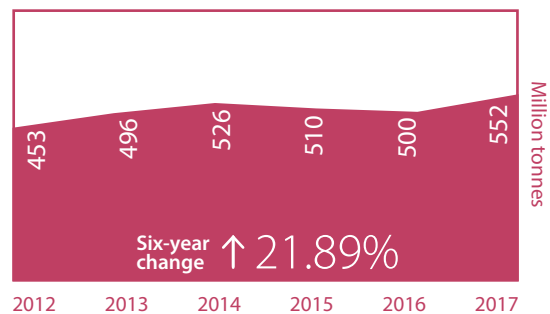
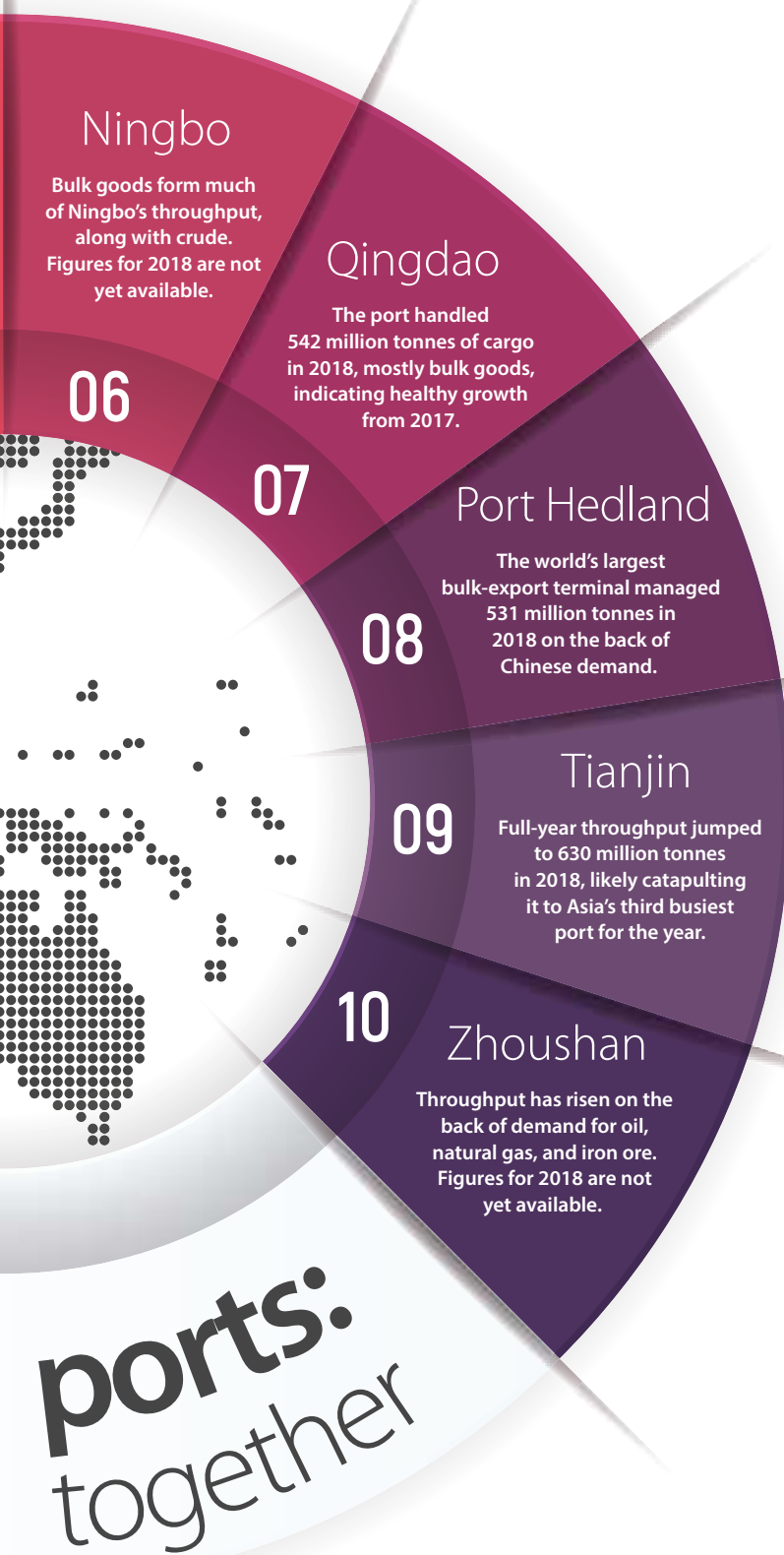
Nansha is seen as having potential as the other cities in the GBA have been mostly commercialised and urbanised, resulting in land shortage.

Drewry's senior analyst for ports and terminals, Neil Davidson, told *P&H* that across China ports and terminals are being merged or entering into joint ventures and collaborations, resulting in much larger port groups emerging.

"Guangdong is part of this important trend. We've seen similar moves from other provinces including Jiangsu, Zhejiang, Liaoning, and Fujian. The plan to consolidate Guangzhou, Shenzhen, Zhuhai, Shantou, and Zhanjiang, as well as river ports Foshan and Zhaoqing will create a huge port entity," he said. **PH**



The region's largest ports have expanded steadily in recent years, with preliminary 2018 figures showing no slowdown





Bert Visser: 5102100

Get moving

2018 was an exciting year for dredging and port construction around the port of Rotterdam region.

Bert Visser reports for *P&H*

No less than four national and regional authorities have been working together on projects around Port of Rotterdam. These are Rijkswaterstaat, which is part of the Dutch Ministry of Infrastructure and Water Management, the Port of Rotterdam, the municipality of Rotterdam, and the Waterschap Hollandse Delta – the regional waterboard.

The centrepiece of the activity is a major deepening project by Rijkswaterstaat and Port of Rotterdam to improve access via the fairway, known as Nieuwe Waterweg, which Rijkswaterstaat is responsible for, and the harbor basins of the Botlek, for which the port of Rotterdam is responsible.

The project was launched in March 2018 and is being carried out to accommodate increasing larger seagoing vessels, in particular tankers and dry bulk carriers. Deepening of 1.2–1.5 m will take place, depending on the location.

The Nieuwe Waterweg is being dredged over a total length of 25 km. For the downstream section from Hoek van Holland to Maassluis it will be from 15 m to 16.2 m deep, while the upstream section to the Botlek and the Benelux Tunnel will be dredged to 16.4 m.

The upstream section needs to be 0.2 m deeper because the lower salt content creates reduces buoyancy, meaning large vessels need the extra draught. In the Botlek harbors, the depth changes from 14.5 m to 15.9 m. This will allow Aframax and New Panamax vessels, with a draught of up to 15 m, to enter without restrictions.

As part of the project, which was completed at the end of 2018, some 5.2 million m³ of material had to be dredged, 3.2 million m³ from the Nieuwe Waterweg and 2 million m³ from the Botlek.

The delta around Rotterdam is highly dynamic and there are some river sections where erosion poses a serious problem. Such is the case in the river Oude



**Dredgers Strandway
and Causeway in the
Mississippihaven
near the Hartel
Tank Terminal**

Maas, as well as near the dam that separates the Nieuwe Waterweg known in Dutch as Splitsingsdam, and the entrance to the Europoort area opposite the Hoek van Holland.

Over the past few years the progress of erosion has been intensively monitored, and it became clear that without intervention, in some places it would become a hazard to infrastructure such as dykes, dams, and bridges.

The deepening of the Nieuwe Waterweg gave the opportunity to repair the most critical erosion pits with dredged sand. A total of four erosion pits were filled with sand from the Nieuwe Waterweg; three in the Oude Maas and one near the Splitsingsdam.

The Maashaven in the centre of Rotterdam is one of the oldest harbors in the region. With the aim of making this area more attractive for its habitants and creating a future-proof space for inland shipping, over the last decade industrial activities in the harbor have gradually been moved to other locations in Port of Rotterdam.

The Maashaven has been given a completely new layout, part of a project by the municipality of Rotterdam, in co-operation with Port of Rotterdam. Still to come is the creation of a tidal park with a nature-friendly shoreline.

This park will offer a special habitat for valuable aquatic flora and fauna. Next to it, an attractive area to go for a stroll will be developed with lots of green space and possibilities for recreation.

Part of the new layout of the harbor will also be the reallocation of the berths for inland vessels by the port of Rotterdam.

The dredging activities needed to create the tidal park are managed and supervised by Port of Rotterdam on behalf of the municipality.

An operation to dredge the harbor bottom was completed by mid-2018, and was followed by the placement of sand that will constitute the foundation of the park. This sand, about 200,000 m³, was also dredged from the Nieuwe Waterweg.

Port of Rotterdam is also currently constructing the Hartel Tank Terminal along the Mississippihaven, in the Maasvlakte 1 area.

The Hartel Tank Terminal is a development of HES International BV, a company that has two important activities, storage of dry and of liquid bulk goods. For liquid bulk, it has a need for more storage capacity and the so-called Hartel strip along the Mississippihaven is a perfect location, in view of its excellent accessibility by seagoing and inland vessels as well as by road and train.

The terminal has a surface of 27 ha and will have a capacity of 1.3 million m³ of liquid bulk, such as diesel, gas oil, gasoline, petrol components, and kerosene, as well as all kind of biofuels, including ethanol.

As a part of this development, a new quay wall and a jetty will be built, for which Port of Rotterdam tendered a contract and awarded it to a joint venture of Van Hattum en Blankevoort, belonging to the VolkerWessels Group, Boskalis, and Mobilis, a subsidiary of TBI.

The scope consists of 1.2 km of deepsea quay wall, 1 km of quay wall for inland shipping and a jetty of 350 m with four berths. Both quay walls have been designed as combi wall, ie, a combination of steel tubular foundation piles and steel sheet piles. For the anchoring of the combi wall, Müller Verpress (MV) piles were applied.

The deepsea quay wall will have berths with a water depth up to 23.5 m and the inland shipping quay wall up to 7 m. Construction activities started at the beginning of 2018 and are scheduled to be completed by the end of 2019.

It is expected that the coming years will be just as exciting as 2018, with many projects in the Rotterdam area scheduled for the near future. One of the most fascinating projects is the construction of a new motorway tunnel under the Nieuwe Waterweg.

This tunnel is a part of a new link between the A20 and A15 motorways near Maassluis and Rozenburg and will be a major asset in the improvement of traffic around the port, which in line with the recovering economy, as it starts to feel the pain of significant congestion. The current highway will be extended into a three-lane highway between the two existing highways. The A20 highway will be widened with the addition of one lane and emergency lane.

The link is known as the Blankenburg Link, named after a village on the former island of Rozenburg. Blankenburg was abandoned in 1960 with the creation of the Europoort port area. Rijkswaterstaat has awarded the contract for its realisation to the so-called BAAK consortium, consisting of Ballast Nedam, DEME Group, and Macquarie Capital.

The actual construction will be covered by Ballast Nedam Infra and DEME Group subsidiaries DIMCO and Dredging International. Macquarie Capital will act as financial advisor. The commissioning of the new link is scheduled to take place between 2022 and 2024. **PH**



Ports braced for no-deal Brexit storm

With Brexit looming, ports are scrambling to understand what it means and how they will handle far-reaching changes. However, as **Jon Guy** reports, ongoing political uncertainty is not helping



While politicians publicly state that they are working to deliver an agreement on the UK's imminent departure from the European Union, a no-deal Brexit is becoming increasingly likely. For UK and European ports, the hopes of a deal, which have been steadily fading since the UK announced its intentions in 2016, are almost exhausted, but the impact is still unclear.

For its part, the UK government says it has and is working on ways in which it can ease any potential problems at UK ports. The thorny issue has been that of enhanced custom checks, amid claims that the briefest of checks have the potential to cause significant delays to ro-ro traffic.

In January, the UK held a series of tests to look at how it could combat the impact of any delays. It involved a convoy of 89 lorries travelling from an airfield in Kent to Port of Dover in a drill designed

to explore the viability for lorries to be held at the airfield to mitigate the threat of long queues to UK ports. Although the test went well, hauliers said the small number of vehicles involved meant the exercise was largely pointless.

In February, the government announced it will implement a scheme designed to negate the need for EU imports to undergo physical checks at UK ports in the eventuality of a no-deal Brexit.

The government said the Transitional Simplified Procedures (TSP) for customs will be implemented for an initial period of one year, should there be no deal.

Under the scheme, once businesses are registered for TSP, they will be able to transport goods from the EU into the UK without having to make a full customs declaration at the border, and will be able to postpone paying any import duties.

Mel Stride MP, the financial secretary to the Treasury,

explained, "Leaving the EU with a deal remains the government's top priority. This has not changed. However, a responsible government must plan for every eventuality, including a no deal scenario. Businesses and citizens should ensure they are similarly prepared for leaving the EU."

"HMRC [Her Majesty's Revenue and Customs] is helping businesses get prepared and, amongst other significant communications, has written three times to affected businesses, each time stepping up the advice and encouraging them to take action."

"This latest letter, and new GOV.UK guidance, announces Transitional Simplified Procedures for EU trade, which will ease the transition, especially for businesses new to the rules associated with importing."

The new procedures will reduce the amount of information importers need to give in an import declaration when the goods are crossing the border. They allow importers to defer giving a full declaration until after the goods have crossed the border and paying any duty until the month after import.

The scheme has been met with a mixed response. Some have applauded the efforts; however, haulage firms have said the scheme does not solve the problems they face.

Rod McKenzie from the Road Haulage Association (RHA) said the guidance would not help trucking firms.

"Business is simply not ready for a chaotic no-deal Brexit," he said. "The systems aren't in place, the staff are not trained; there isn't a time in the day for hauliers and businesses to do all the paperwork."

The RHA said it blamed "complacent failure" across government departments for a lack of understanding of the vital role haulage plays in the economy, and urged MPs not to believe reassurances that preparations are advanced and well developed.

"Eleven thousand lorries cross the English Channel each day; even a two-minute customs check would lead to a 20 mile [32 km] traffic jam, causing chaos on the roads and bottlenecks at ports," it added. "If preparations for customs and other border tasks were under control, we would not be needing massive holding areas for lorries and would not need backup ferry services."

The fears that UK ports are struggling to plan for the

“Eleven thousand lorries cross the English Channel every day; even a two-minute customs check would lead to a 20 mile traffic jam”

Rod McKenzie, *Road Haulage Association*

impact of a no-deal departures look to be backed by the majority of UK port senior management.

CEOs and directors at almost every UK port and harbor authority – in total around 100 – were asked about their state of readiness by the Maritime & Shipping Practice at executive search firm Odgers Berndtson. Only 16% said they had made any "significant or practical" plans for Brexit. The remainder were equally split between ports doing "only some high-level planning" and nothing at all.

"The ports industry is keen to seize on any opportunities arising from Brexit, but this is the first real indication of what's actually happening outside ports like Dover," added Paul Butterworth, head of the Maritime & Shipping Practice at Odgers Berndtson.

The study found that despite the lack of preparation, only 25% of UK port leaders think they are currently in a position to handle Brexit well. A third believe they could cope, but ideally with further investment, while over 40% either do not know or doubt their ability to handle additional demands. Nevertheless, UK ports are investing in plans to meet the expected challenges.

A representative for Associated British Ports (ABP) said, "ABP has invested GBP250 million [USD321 million] since the referendum to ensure that we have the very best services on offer for our customers. We continue to work with all relevant authorities, and our industry partners to make sure we can continue to help trade flow and grow after Brexit. ABP stands ready to fulfil our mission 'Keeping Britain Trading'."

ABP said it is "actively working" to support businesses anxious about the event of a no-deal Brexit and the potential severe disruption this may cause at Port of Dover. The firm added its container and ferry facilities on the Humber "are capable of helping businesses bypass such disruption, providing regular and reliable links to Europe. Over 70 sailings every week connect the Humber to a number of destinations, including Belgium, the Netherlands, Denmark, and Poland".

ABP CEO Henrik Pedersen said, "For ABP, 'Keeping Britain Trading' is a responsibility that we are passionately committed to. We are continuing to invest in our people, equipment, and capability, so that we have the flexibility and resilience we need to help UK trade to flow and grow. We have already seen volumes begin to rise at our



16%

Only 16% of respondents said that they had made any "significant or practical" plans for Brexit



Martin Wright 437892

The need for individual customs declarations could hamper ro-ro traffic from mainland Europe

ports on the Humber as customers look for alternatives to Dover. Our ports have been operating to world-class standards for many years; we have proved that we are ready to handle new customers' requirements."

Port of Felixstowe and Danish ferry operator DFDS have announced they are to increase their ro-ro capacity at the port by over 40%, as it gears up for the potential for a no-deal Brexit seeing ro-ro traffic diverted to ports around the country to speed entry and exit times.

Commenting on the move, Port of Felixstowe CEO and Hutchison Ports Executive Director Clemence Cheng, explained, "As well as being the UK's largest container port, Felixstowe is also a key gateway for roll on-roll off trade with Europe. Demand on DFDS's service to Rotterdam has been growing steadily for a number of years and we are delighted to have agreed a new contract with them to secure the service at Felixstowe for another 15 years."

“Ports that handle tens of thousands of road-based vehicles every day between the EU and the UK have the most to lose”

Richard Ballantyne, BPA

He added, "We are seeing increasing interest in both ro-ro and short sea container connections at all three of our UK ports as shippers seek to minimise risks to their supply chains resulting from Brexit."

Niels Smedegaard, CEO and president of DFDS, said, "This is a further step in our striving to provide necessary capacity to continue supporting our customers' trade

and business, even in a possible post-Brexit world."

Richard Ballantyne, chief executive of the British Ports Association (BPA), said that while investment into the UK's post sector was so far holding up, the issue for UK ports was complex and that the impact of Brexit will differ from facility to facility.

"Ports that handle tens of thousands of road-based vehicles every day between the EU and the UK have the most to lose because the introduction of new customs controls would be felt there the most," he said. Whereas, "other ports, such as bulk handling ports, that have either experience in third country traffic, and traffic arriving from Asia particularly", will have little to fear. "Vessels that will involve just one customs declaration per ship or one or two will be okay as that is relatively straightforward to process with HMRC."

Yet, he added that uncertainty was still bighting ports' attempt to put processes and plans in place.

"Until we actually get a firm detailed description of what the arrangements will be, it will be quite difficult for most port operators to make major commitments. A lot of them will be looking to set down storage areas for vehicles and looking at access into motorways," Ballantyne explained.

Across the North Sea, European ports are also working on ways they can mitigate a no-deal scenario. PortBase and co-operating sector organisations in Dutch ports have launched the 'Get Ready for Brexit' initiative to support the entire logistics chain in the run-up to Brexit.

The initiative is designed to enable the exporters, importers, and their logistics service providers in the Netherlands to move their cargo quickly to the UK once the country leaves the European Union. The campaign website is expected to alert and activate the stakeholders in the logistic chain.

PortBase Managing Director Iwan van der Wolf said, "A lot has already been achieved in recent months, and a central working method has been embraced by all participating parties. But there's no time to sit on our laurels, as 29 March will be here before we know it, and we really need to be ready." **PH**

Streamlining incentives

Plans are afoot to allow ship operators to find, access, and apply for port subsidy schemes and incentives online, saving time and money for ports and their customers. **Jonathan Robins** reports

Finding simplicity in a complex world is often difficult, yet doing so can bring huge rewards. As the number of port environmental subsidy schemes and incentives available to shipowners and operators has mushroomed, so has the time, effort, and cost that has gone into finding and applying them.

Enter a new initiative from the Port of Vancouver, which along with several other industry stakeholders is exploring the creation of a one-window approach to allow ship operators to access information about port subsidy schemes online, and perhaps even automatically, at ports around the world.

Although still in the planning stages, the port is looking to create a web-based platform that could even include an incentive calculator, which would enable customers to enter specific routes, ports of call, and vessels, so operators can understand the cumulative incentives they are eligible for.

"Building another level onto that would enable ports to access the information entered by the shipping line so that they would no longer have to register for or apply for incentives. Ports around the world could just apply the discounts automatically," Christine Rigby, environmental specialist for the Port of Vancouver, told *P&H*. This would save vessel operators from having to go through the process of figuring out what incentives ports have, how to apply for them, and then getting the paperwork to the port and having that port verify the documentation where needed.

"On the environmental infrastructure side there's a need to increase the understanding of what ports offer in terms of environmental infrastructure, such as shore power, and to develop more confidence for users of that infrastructure so that it gets used more frequently," Rigby explained.

Who would run the website is still to be determined, but the aim is for it to include information on subsidy

and environmental infrastructure schemes globally.

"That's really the whole point of it," she said. "Any port around the world would be free to let their information on their incentive programme and their environmental infrastructure and work through that site."

Doing so would not only make it easier to achieve the environmental outcomes, but it would also lower ports', shipowners', and operators' administrative costs.

The first phase of the scheme is focused on validating that the idea is sound, Rigby said, but to do so "we need to talk to more people".

Therefore, the port launched a series of surveys in mid-February. One survey is targeted at shipping lines, another at ports, and an additional survey at other industry stakeholders. Readers who are interested in taking part can access these surveys and see further information at porttalk.ca/Ship-incentive-collaboration. The surveys are expected to be open until the end of March, with a final concept expected to be settled around mid to late summer.

So far, the port has seen significant interest in the programme, with stakeholders expressing a need and an interest in reducing administration from ports and shipping lines, as well as ensuring that the environmental benefits of authorities' incentive programmes and infrastructure are maximised.

"If the first phase says 'yes continue moving forward', then the second phase is when we would start to explore that business model. How would it work? How would it be funded? Who could actually operate the website? This isn't meant as a revenue scheme," Rigby said.

If everything goes to plan the port is hopeful there could be an initial website running by 2020–21, although the scope of the scheme is expected to be expanded incrementally. It could take some time before the website allows ship operators to automatically apply for incentive schemes, for example.

The platform could also support raising awareness about third-party environmental rating systems such as the IAPH's Environmental Ship Index (ESI), the port said, which frequently form the basis of criteria in incentive programmes. The ESI is a database of vessels that calculates their emissions of nitrogen oxide, sulphur oxide, and greenhouse gasses. Currently 8,193 vessels are registered with the scheme, and 55 incentive providers. **PH**

“There’s definitely a need and an interest in reducing the administrative burden”

Christine Rigby, *Environmental specialist, Port of Vancouver*



Omerisukugoksu/Getty Images 5104312

Barcelona bets on natural gas

As part of its commitment to environmental sustainability, Port of Barcelona is promoting the use of natural gas on land and at sea, reports **Jonathan Robins**

With natural gas eliminating emissions of sulphur dioxide (SO₂) and particulate matter (PM10), as well as massively reducing nitrogen oxide, Port of Barcelona is turning to the fuel to power large and small vessels, port machinery, and onshore transport.

Key to the strategy is an initiative run in tandem with ferry owner Baleària, which has seen the installation of a liquefied natural gas (LNG)-powered auxiliary motor on board its ship *Abel Matutes*, which operates between Barcelona and Palma. The motor generates electrical

power while in port and during arrival, departure, and docking, with vessels at these stages responsible for 90% of the port's air pollution.

The first truck-to-ship LNG transfer to the *Abel Matutes* took place in February 2017, following an agreement with Spanish natural gas firm Naturgy (formerly Gas Natural Fenosa) to supply Baleària's vessels in Barcelona and Mallorca. The initiative is known as Cleanport, and is part of the EU's Connecting Europe Facility (CEF) programme.

Port of Barcelona is hoping that its first forays into LNG as a vessel fuel are a foretaste of a much wider adoption of natural gas in the sector. It is also working with Spanish energy firm Enagás to develop terminal infrastructure that will enable bunker barges to operate on LNG, while a further study will examine converting a tug boat to run on diesel and LNG. The project has the ultimate aim of fitting LNG-powered engines to the port's entire fleet of tugs, and is part of Enagás 'CORE

Port of Barcelona's efforts to improve air quality show true leadership

Patrick Verhoeven, IAPH managing director-policy and strategy

LNGas hive' project, which seeks to develop the use of natural gas in the maritime sector, and is partially funded through the CEF.

With Port of Barcelona estimating that 71% of NOx emissions come from vessels when they are at berth, a programme has been launched to power vessels from LNG while docked, in conjunction with the ports of Vigo and Tenerife. This has seen two quayside installations fitted; one regasification unit with LNG tanks, and an 850kW generator that will provide power to vessels via a cable. After initial successful testing in the ports of Barcelona and Vigo, the system is undergoing final evaluation at Tenerife.

While Barcelona's current main focus is to offer LNG bunkering to ferries via truck-to-ship transfers, as well as to tugs and bunker barges on a small scale, longer term it wants to offer LNG to any vessel calling at the port, including cargo vessels.

"From an environmental point of view, [CORE LNGas hive and Cleanport] are strategic for Port of Barcelona because they allow it to build the infrastructure required to supply LNG to vessels and because they prove to port operators and agents that this gas is a viable alternative fuel for goods transport," the port said, adding, "Barcelona will become the first Mediterranean port able to supply LNG to any boat requesting it."

Upcoming International Maritime Organization (IMO) rules that limit sulphur emissions from vessels to 0.5% from 2020, down from a maximum of 3.5% currently, are spurring interest in LNG as a fuel source for large ships, something that has not gone unnoticed. In addition to the environmental benefits of LNG, the port noted that "it is also a cheaper source of energy whose prices is more stable than conventional fuels". Encouraging the use of LNG involves regulating bunkering operations in a "clear and transparent manner", as well as incentivising those owners and operators who incorporate LNG in their vessel fleets and vehicles with port fee-rate rebates, the port told *P&H*.

"Without doubt, the IMO decision to put in place

the 0.5% limit on sulphur content in marine fuels for use at sea represents a stimulus to the shipping sector to use LNG as an alternative fuel source. The owners have to take an important decision to meet these new limits and LNG is one option more on the table for newbuilds," Jordi Vila, environment manager at Port of Barcelona told *P&H*.

Barcelona is particularly well-placed to explore the potential of natural gas because it is the location of Europe's first regasification plant, owned by Enagás.

Recognising that 10% of NOx and PM10 emissions are produced by machinery and wheeled vehicles, 26 trucks used to transport containers between the port of Barcelona and the city have been converted to a dual-fuel system, 25 of which can run on compressed natural gas (CNG) and the other on LNG. A study has been launched to monitor the impact of this on local pollution levels.

José Alberto Carbonell, general manager of Port of Barcelona, commented at the launch of the scheme, "The objective of this initiative is to show the viability, in technical, economic, and safety terms, of using natural gas as an alternative fuel for heavy trucks."

The port has also constructed Spain's first natural gas fuel station to supply port automobiles on site, in collaboration with Spanish LNG services provider HAM and Portuguese energy first Galp. It will also see two 150kW diesel engines for a straddle carrier converted to run on natural gas, something that involves the installation of two 500-litre LNG tanks. The system set to be tested in October 2019, with no loss of performance expected.

"The port of Barcelona's Air Quality Improvement Plan focuses mainly on measures to reduce emissions from vessels, wheeled traffic, machinery, bulk cargo operations, and infrastructure works. The plan also encourages rail and shortsea alternatives to road cargo transport while improving sustainable mobility using either gas or electrification in the port," said Vila.

"The next steps also involve working closely with the Spanish State Ports Authority as well as Classification Societies and the Clean Marine Fuels working group of the IAPH to ensure safe and efficient future LNG bunker operations," he explained.

"The authorities are also already looking with us at legislation that provides port dues incentives to owners with ships that exceed standard environmental performance. Port of Barcelona intends making itself a top destination for the next generation of LNG-powered container ships, cruise ships, and ferries."

IAPH Managing Director-Policy and Strategy Patrick Verhoeven praised the port's efforts to become a key example of how to reduce emissions. "Port of Barcelona's efforts to improve air quality show true leadership based on the principal that commercially viable alternative fuel solutions are achievable by closely partnering in the long term with suppliers, customers, and technological innovators," he said. **PH**

Port of Barcelona is looking to be a leader in LNG bunkering

Abel Matutes receives LNG via truck-to-ship transfer



Port of Barcelona: 5'03191

Taking a stand

Elizabeth Blanchard, a commissioner at the Port of Stockton in California, has faced sexism throughout her career. However, she is not standing for it anymore, and neither, she insists, should anyone else. **Jonathan Robins** reports

Many women have tales of discrimination at the hands of male colleagues, something that, sadly, the world of maritime is no stranger to. For the Port of Stockton's Elizabeth Blanchard, the sexism she has faced has not always arrived in the form of subtle language or careless exclusion, as most women report – it has been far more overt than that.

"When I first started working in ports, I attended a meeting, but we were told that we do not have a quorum [the minimum number of people in attendance], so we cannot start yet." Including herself, there were enough people present, but it was as if she did not even exist. "I spoke up; I said 'I am here, we can start!'" she explained, her voice rising with anger. "They didn't count me, but I do count!"

It is one instance of the many challenges faced by women in the ports industry. Promotions are another area that female workers in particular have struggled with, Blanchard said. "Women certainly have had difficulty switching from lower level positions to supervisors." These problems are not only confined to those in junior levels. "Our port has been going 89 years and I am only the third women commissioner," she said, with a hint of exasperation. "Men feel they are still in charge – women should not expect to be treated equally."

This is not to say that improvements have not arrived. Even in the early 2000s the world of ports was often run like an old boy's country club, she said, whereas now many ports are at pains to improve their engagement with women, especially as female leaders have become more prominent in the corporate world, and in the public sector. "The government is helping to drive changes through legislation, and through local, regional, and national policies. There is certainly pressure from our representatives." Yet, with the most attention being focused on the larger ports, that is where the biggest strides have been made. For smaller operators, the pace is slower and the pressure is off.

"In 30 years, the port industry will have changed, but larger ports will have made

Blanchard's resume

- President of the Association of Pacific Ports 2017–18
- President of the California Teachers union, San Joaquin Delta college chapter
- President of the Disabled American Veterans Charities of San Joaquin County
- Retired Professor Emeritus of the San Joaquin Delta College Psychology Department and the University of the Pacific School of Education
- Stocktonian of the year 2018

more gains than smaller ones," she told *P&H*. "It's up to people like me to make people aware of this."

Her own influence at the Port of Stockton has been to push greater engagement with the local community, to educate people about what the port does and how it does it, as well as the benefits that it brings to the city. She said that with incredulosity that only 15 years ago in Stockton, many people were not even aware that there was a port in the town, describing it as "a well-kept secret". That push to engage with the community has turned from total ignorance to pride.

"I serve as an ambassador for the port; I attend as many functions as possible to present about it." What reaction does she usually get from local people when she talks about the port? "Oh gee, I didn't know that the port does so much for our community!" or "Oh I didn't know you created so many jobs!" Blanchard told *P&H*. The attempts to outreach have raised the profile of the port, and even how people speak about it. "It has gone from being their [the owners'] port to our port – everybody owns the port."

A professor of psychology by background and Stocktonian of the year 2018, Blanchard became a commissioner at the port in 2008,

although her involvement in the sector goes back decades. She was introduced to it through her late husband Dr Joseph Blanchard who served on the committee of the Port of Stockton for 20 years. From reading his paperwork and talking to him about the port and the personalities that worked there, bit by bit her knowledge grew, and her confidence. "He was a great mentor. I learned how to negotiate, how to be diplomatic in conflicts," she told *P&H*. "I am an orphan, I am a survivor, I've had to survive on my own, although I've had lots of help."

Blanchard became involved in the IAPH's women's forum when it was founded in 2013, being appointed as vice-chair for the North American region at the group's Baku conference in May 2018. The forum was set up to advance and empower women in the industry, looking at the issues they face, promote training, and encourage more women to become involved with ports at all levels. It is work that Blanchard is proud of, and she feels there is plenty more to do.

The way to increase female participation in the sector, she believes, is to get women involved in ports early on. This is especially important given the industry's poor reputation for inclusiveness.

"We have to start back in high school," she told *P&H*, including integrating a knowledge of shipping and maritime into schools' curriculum, something that is currently entirely absent. "The shipping industry is so foreign to most students that they have no idea what it is like." It is rare to even find universities or post-graduate schools that take more than a cursory glance the shipping sector. "People don't realise that everything we touch, we use, and we buy has probably been on a ship. We talk about trade, about cars and trucks, but we don't talk about ships." Bringing about this change would transform the debate. "I hope every US college in the future will have a message about shipping, about what it can offer." Tackling the old boys' club mentality would also help to improve female participation, and change the perception that

shipping is a profession for men. "It's the same as how little boys are given cars and guns as toys. The shipping industry is not seen as for girls. It's about perception." She is determined this should change.

Blanchard believes that bringing more female workers into the industry would also benefit ports themselves.

"Women come in with a different perspective, different ways to deal with things. We manage differently because we think differently. We look for win-win situations," she said, adding that, as *P&H* reported in its January/February edition, bringing women into management position in ports had been shown to increase productivity, boost job satisfaction, and reduce absenteeism.

What advice would she give other women starting out in their careers in the ports sector? "You should be good at math – the finance is important." However, perhaps most importantly, "have good skills in human

relationships – how to handle conflict. Women need to know how to survive, and deal with conflicts" said Blanchard. But the most important advice she can give concerns attitude – and on this she is emphatic. "Don't let people say you cannot do it. I was told that I didn't understand, I said I do understand," she states. "Young women need to know gender has nothing to do with ability. They are a person equal to anyone. You are a human being just like any other." **PH**

“Men feel they are still in charge – women should not expect to be treated equally”

Elizabeth Blanchard

Commissioner, Port of Stockton



IAPH Scholarship

Following the second IAPH Women's Scholarship (2017–18), the IAPH Women's Forum is delighted to offer again these opportunity to two female IAPH members. Both scholarships represent a fantastic opportunity to impress your port peers with your knowledge and potential, raise your profile within the industry, and establish new contacts.

The first of the two scholarships is the biennial training scholarship, which includes USD15,000 to supplement two years' training at a college, university, or other port-related training institutions. You will get the chance to attend the IAPH World Ports Conference 2021 in the second year of your training and deliver an original presentation.

The second scholarship, the Women's Forum Annual Meeting Scholarship, includes up to USD5,000 to attend and deliver your original presentation at the Women's Forum of 2020 Mid-Term Conference.

To be in with a chance of winning one of these scholarships, you must complete an application form explaining why IAPH should fund your training and what you could bring to the Women's Forum.

For more information including conditions and application deadline, please visit the website:

 www.iaphworldports.org

Training scholarship

The scholarship is aimed at giving staff of developing ports the opportunity to attend advanced port training programmes overseas in order to gain the latest knowledge on port management and operation, and expand their personal network of contacts. The maximum amount of funds offered to an individual is USD5,000. Since the scheme was set up in 1980, more than 100 people have received financial assistance through the scholarship. Distance learning programmes are also offered for members who cannot travel.

A typical applicant would be a staff member with an IAPH regular member port in a developing country.

A maximum of two scholarships can be awarded each year. Applicants for training scholarships should submit a form to the IAPH secretariat by email at info@iaphworldports.org.

MORE INFO:

http://www.iaphworldports.org/iaph/wp-content/uploads/2IAPH_Training_Scholarship_20172.pdf

Registration open for World Ports Conference

Registration for the 2019 World Ports Conference is now available online. The organising committee is dedicated to presenting an unrivalled platform for the world's port professionals to discuss, develop, and plan network strategies on a global scale. The 2019 World Ports Conference will be held from 7 to 9 May at the Guangzhou Baiyun International Convention Center, Guangzhou, China, with pre- and post-event tours on 6 May and 10 May. Under the theme 'Collaborate Now, Create Future', the conference will bring together top-level speakers from across the industry to discuss trends in global trade, logistics, innovation, sustainability, and port co-operation. Interactive sessions will take place on port investment, disruptive technologies, emerging cruise markets, e-commerce, urban land pressures, and port call optimisation. The World Ports Conference will also provide an informal setting for delegates to foster new and develop existing business relationships, while experiencing the best that the city of Guangzhou has to offer.

Overall programme (as of January 2019)

Monday, 6 May

All day:

- Pre-conference tour

Tuesday, 7 May

Morning:

- Council meeting
- Women's forum

Lunch:

Parallel regional lunch meetings (6)

Afternoon:

Parallel technical sessions (tentative agenda)

- Infrastructure and operations
- Environment, safety, and security
- Governance and community

Evening:

- Visit the Guangzhou Urban Planning Exhibition Centre
- Welcome reception

Wednesday, 8 May

Morning:

- Opening ceremony
- Opening exhibition
- Keynote speeches

Lunch:

- Parallel sessions

Afternoon:

Evening:

- Welcome dinner
- Pearl River night tour

Thursday, 9 May

Morning:

Parallel sessions

Lunch:

Afternoon:

- Parallel sessions
- Closing ceremony
- Annual general meeting

Evening:

- Gala dinner and IAPH awards ceremony

Friday, 10 May


All day:


- Post-conference tour

For information on the programme, registration, and hotel booking, please visit the official conference site:

 https://www.iaphgz2019.com/iaph_english/Index.html

Or contact the conference organising committee:

 Telephone: +86 20 83050206

 Email: newsletter@iaphgz2019.com

Membership notes

The IAPH Secretariat is pleased to announce that the following have joined the association

Associate member

Resinex Trading SRL


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 Representative:

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Maurizio Prestini, managing director

Temporary member


Solomon Islands Ports Authority

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Eranda Kotelawala, chief executive officer

IHS Markit to produce IAPH annual conference

IHS Markit, a world leader in critical information, analytics, and business solutions, has entered into a three-year agreement with the IAPH to produce its annual World Ports Conference, beginning 2020. IHS Markit will leverage its extensive experience in organising events and producing quality editorial content in the maritime industry to build the World Ports Conference into a world-class event with a focus on positioning ports front and center in the global maritime conversation. The conference will highlight the indispensable role of ports in global maritime trade and bring together key industry stakeholders for learning, information sharing, networking, and collaboration.

IHS Markit and IAPH agreed to extend their long-standing collaboration on IAPH's *P&H* publication by upgrading its content and design. IAPH's access to experts in member ports will also be combined with IHS Markit knowledge and unique maritime and trade data resources to develop indices and benchmarks to support IAPH's port sustainability initiatives. "IHS Markit has a wealth of know-how on ports. This agreement marks another important step for us and our World Ports Sustainability Program as we partner with a global leader in maritime intelligence, publishing, and conference production," said Patrick Verhoeven, managing director of policy and strategy at IAPH.

Strong response for the first IAPH Sustainability Awards

The call for entries for the first IAPH World Ports Sustainability Awards yielded more than 60 projects, corresponding to the five themes of the World Ports Sustainability Program. Following an initial screening, a long list will be forwarded to the international jury of experts who will be invited to rank the submissions. The shortlisted projects will be presented for a public vote to make the final selection. The winners will be announced at the gala dinner of the World Ports Conference in Guangzhou, which is scheduled on 9 May 2019.

Dates for your diary

A selection of forthcoming maritime courses and conferences



March

- 13-15:** 1st World Congress on Maritime Heritage
Singapore
wcmh2019.com
- 17-19:** Annual International Maritime and Logistics Conference "Marlog 8"
Alexandria, Egypt
marlog.aast.edu/en/home
- 20-21:** AAPA Spring Conference
Washington DC, US
bit.ly/2Bav61f
- 25-29:** IPER Training: Gestion du domaine public portuaire
Le Havre, France
www.iper.fr

April

- 1-3:** IAPH Regional Meeting
Panama City, Panama
www.iaphworldports.org
- 4-5:** WMU: Empowering Women in the Maritime Community
MALMÖ, Sweden
conferences.wmu.se/maritimewomen2019/
- 8-12:** IMO: Facilitation Committee (FAL) – 43rd Session
London, UK
www.imo.org/en/
- 9-10:** TOC Asia
Singapore
www.tocevents-asia.com

May

- 6-10:** IAPH World Ports Conference
Guangzhou, China
www.iaphgz2019.com/iaph_english/Index.html

Ports & Harbors new editor

Jonathan Robins is the new editor for *P&H*, taking over from Penny Thomas. Robins previously worked for shipping magazine *Fairplay*, and prior to that was at energy news service Argus Media. "With so much going on in the industry right now it's an exciting time to be starting in this new role. I'm really looking forward to working with IAPH, and am keen to hear from as many *P&H* readers and IAPH members as possible, so please do get in touch at jonathan.robins@ihsmarkit.com with ideas, tips, and feedback," Robins said. He will also be working closely with IAPH on its annual World Ports Conference, pulling in IHS Markit's experience and knowledge to create an industry-leading event.

Jonathan Robins



Courtesy of the 30th IAPH World Ports Conference, Bali, 2017-5050070

Promoting south China's 'city of opportunity'

As Guangzhou gears up for the IAPH's World Port Conference 2019, **Yuan Yue**, deputy director of the port of Guangzhou, explains how the prosperity of the port and city have been entwined together throughout history

With two months to go before the World Port Conference 2019 in Guangzhou, we, the hosts of the event, sincerely welcome you to the meeting, which will be held in the Baiyun International Convention Center from 6 to 10 May 2019.

Under the theme of this conference, "Collaborate Now, Create Future", we will introduce and discuss many related topics, such as "The new pattern of world economy and the future trend of global trade", and extend the discussion to the leading role of the Chinese internet economy, and the new driving energy brought by the 'Belt and Road' initiative to the global economy.


Eight thematic forums will be set up. The 'Belt and Road' and port shipping exhibitions will aim to introduce worldwide co-operative efforts in shipping, while the exhibition area will showcase the innovative technologies and services in the development of shipping.

Around 1,000 participants from the port, logistics, and maritime sectors in various countries are expected to attend the conference, including IAPH members, government officials, company executives, professionals, operators, consultants, journalists, bankers, and fund managers.

Guangzhou is a city with a 2,000-year history. In its early years, it was a distribution centre of rare tropical products. The port and the city are witnesses to each other's prosperity.

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The World Port Conference 2019 will allow participants from all over the world to experience the charm of Guangzhou city and China's history and culture. Guangzhou is now ranked as China's third-largest port.

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