September/October 2014 Vol 59 No 5

# PORTS HARBORS

Official Journal of the International Association of Ports and Harbors



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Asian growth is fuelling changes

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### Secretary General Naruse looks at key issues for members to focus on during the coming months



Susumu Naruse Secretary General - The International Association of Ports and Harbors

Agenda for growth

he IMF marked down its global growth projection for 2014 from 3.7% to 3.4% due to the weak first guarter performance in the United States and several emerging economies. As increased geopolitical risks in some parts of the world have led to higher oil prices, some expect the global economy could be weaker for a longer time this year. It is hoped that the volatile global economy may not adversely affect global trade and consequently the global port industry.

In order to pursue economies of scale and overcome the supply and demand gap, the two biggest container shipping companies seek to form a new alliance, now 2M, after the P3 alliance was rejected by the Chinese authorities. Ports that face fierce competition are following suit and integrating their operations. In France, the ports of Le Havre, Paris and Rouen along the Seine River have formed a port complex named HAROPA to offer the most suitable logistics solutions for their customers. HAROPA has now become the fifth-largest port complex in Northern

## **Discussions on IAPH** reform should be accelerated

Europe and is trying to survive in the cut-throat competition between ports in the region.

In Japan, two of the busiest container ports - Port of Tokyo and Yokohama - are now seeking a way to integrate their operations to improve efficiency and save infrastructure cost. They are trying to survive in the region so as not to completely lose

the main container port status in the Asia-Pacific region. It is very interesting to see whether this type of port alliance would be a new trend of port management in future.

Two big IAPH figures visited Tokyo this summer. IAPH president Grant Gilfillan attended the IAPH Japan Seminar organised by the Japanese Foundation and made a great presentation. After explaining the background of administrative change at his port, he discussed the organisational reform of IAPH, which was welcomed by the Japanese IAPH members.

Gichiri Ndua, IAPH former president, was invited by the Japanese Government to attend a Kenya and Japan co-operation seminar. He made an impressive address saying Kenyan ports were playing an important role for neighbouring land-locked countries.

Now that summer vacation season is over, discussions on IAPH reform should be accelerated in order to finalise drafts for next year's Hamburg Conference. I look forward to receiving a variety of input from members about this. PH



### Port **updates**

### **APM TERMINALS INVESTS**

Terminal upgrades and the installation of four new cranes have helped APM Terminals Algeciras overtake rival Spanish port Valencia as the Mediterranean's top container port. Throughput reached 4.33M teu in 2013, up by 6.6% from the previous year. At Maasvlakte II an additional 22 automated rail-mounted gantry cranes are scheduled to start in November 2014.

### **GREENER FELIXSTOWE**

The Port of Felixstowe has taken another step in improving its operational and environmental efficiency with the introduction of its first electric-powered rubber-tyred gantry cranes. Four machines have been converted from diesel to electric. They are expected to help drive further carbon savings towards a reduction of 30% by 2017.

### EXXONMOBIL AT

ExxonMobil is to invest more than \$1Bn to install a new delayed coker unit at its refinery in the Port of Antwerp to meet European demand for fuels and other oil products. The new refinery will convert heavy, high-sulphur remainder fractions into cleaner oil products and transport fuel such as diesel and fuel oil for shipping. Developing this platform will strengthen ExxonMobil's product range at Antwerp and also help the firm deliver cleaner diesel to its European customers.





LNG carrier Arctic Princess

## LNG to drive use of Northern Sea Route

Ice-class vessels are currently a small percentage of the Chinese fleet but LNG is fuelling building orders, reports Gary Li.

In September 2013, Chinese state-owned energy company China National Petroleum (CNPC) bought a 20% stake in the \$27Bn Yamal project in the Russian Arctic. CNPC also signed a contract to buy 3M tonnes of liquefied natural gas (LNG) from Yamal after its projected completion in 2018.

In the same month, COSCO container ship *Yong Sheng* was the first merchant vessel to transit the Northern Sea Route (NSR), but its success has not yet brought about a major shift in the Chinese fleet using the NSR as a trading route. *IHS Maritime* data show that out of 5,899 ships operated by Chinese companies, only 1,184 (20%) are classified as ice-capable, with only five such vessels on order. Only 15, including the *Yong Sheng*, are classified to the Arc 7 requirement demanded by the Russians for safe transit of the NSR.

If there is one commodity that will increase China's use of the NSR, it is LNG. As China's energy needs increase, the demand for natural gas including LNG is also growing strongly. The government is keen to diversify its energy supplies. In July, another Chinese state company, the China National Offshore Oil (CNOOC), secured a \$1.6Bn deal to build liquefaction equipment for Yamal.

Chinese investment into Yamal is substantial and is being followed up by orders for nine Arc 7 class LNG carriers with Daewoo Shipbuilding and Marine Engineering (DSME): six jointly ordered by Canada's Teekay and China Shipping LNG and three through joint orders between Mitsui OSK Lines (MOL) and China Shipping Development (CSDC) (both these China-based companies are state owned).

Currently only 15 ice-capable LNG tankers are on order, with 10 of them earmarked for the Yamal project. Eventually, the project will require 16 such vessels. At 172,000m<sup>3</sup> gas capacity each, these tankers will be the most advanced and icehardened tankers afloat when they are delivered towards the end of 2017.

Once Yamal is up and running, the journey from the site to the Chinese terminal at Dalian would take only 24 days, shaving off 13 days and more than 7,500nm from the Suez Canal route. This is even after factoring in slowsteaming in the ice at 10kt compared with the average 15kt on the Suez route. The fastest speed record in the NSR route is 14kt, which was achieved by *STI Heritage* in 2011.

## LNG bunkering extends at Rotterdam

In response to proposals from the Port of Rotterdam Authority (PRA), the Municipality of Rotterdam has amended Rotterdam Port Management by-laws to allow sea-going vessels to bunker liquefied natural gas (LNG) in Seinehaven. Previously, only inland shipping could do so.

The move is expected to add impetus for the introduction of LNG as fuel for shipping as other ports may follow Rotterdam's example. LNG "is cheaper and cleaner for the environment than fuel oil", said a PRA statement. The authority aims to promote LNG as shipping fuel and become a leading LNG hub. It supported a Gate initiative to open an LNG terminal on Maasvlakte in 2011. The Seinehaven facilities opened last year, letting inland shipping bunker LNG from an LNG tanker. The European Union (EU) awared a EUR40M (USD53M) subsidy at the end of 2013 to stimulate the use of LNG as shipping fuel on European waters. This ties into the LNG Masterplan for the Rhine-Main-Danube Canal, in which the Port Authority plays an important co-ordinating role. The Dutch LNG Platform also supports the use of LNG by trucks and inland and sea-going ships.

## Piracy, sea robbery rise 16%

Singapore-based anti-piracy organisation ReCAAP Information Sharing Centre (ISC) has highlighted a 16% year-on-year rise in reported sea robbery and piracy incidents for 1H14.

From January to June this year, ReCAAP ISC recorded 73 incidents, up from 61 in the first half of last year. In 69 of this year's 73 incidents robbery and piracy took place, while the remaining four were failed attacks.

ReCAAP ISC also underscored its concern over the Category 1 (very significant) incidents of fuel/ oil siphoning in the first half of this year. Five cases were reported in 1H14, compared with none during the same period last year.

The piracy watchdog noted that the *modus operandi* for the fuel oil thefts has evolved, with most of these incidents targeting 1,000–2,000gt tankers. The pirates and robbers tend to board the ship, armed with knives and guns, and then carry out the oil siphoning operation without harming the crew. While guns were reported in some incidents, none were discharged.

ReCAAP believes these robberies are related to organised crime syndicates as some incidents are thought to have involved assistance from insiders connected to the targeted vessels.

Meanwhile, UK-headquartered anti-piracy watchdog International Maritime Bureau (IMB) has expressed concern over the rising rate of piracy incidents in Southeast Asia and also highlighted the apparent increase in tanker hijacking.

"The recent increase in the number of successful hijackings is a cause for concern," said IMB Director Pottengal Mukundan. Prior to fuel-related hijackings, the region's most frequent incidents were petty theft at anchorage. In recent cases, however, attackers have targeted small coastal tankers rather than – as has been usual – barges or tugs.

Bangladesh, Indonesia, Malaysia, Nigeria, and Singapore Straits accounted for 70% of all attacks this year. Rising piracy in Southeast Asia has prompted German insurer Allianz to warn of the "potential for such attacks to escalate into a more organised piracy model unless they are controlled".

The insurer also stated that pirates in Southeast Asia may be imitating their counterparts in West Africa in targeting tankers and fuel oil on account of the ease of moving cargoes from a hijacked vessel to another ship.

### Port updates

### **SOHAR TRAFFIC RISE**

With the relocation of commercial shipping lines from Muscat, Sohar Port expects an extra 50 vehicles per hour – a rise it expects to accommodate without difficulty. Sohar has said it expects to receive an additional 300,000teu in container traffic and 200,000 freight tonnes of general cargo through the transfer of commercial ships from the capital.

**TEESPORT RAIL TERMINAL** 

PD Ports is planning a new rail service with Freightliner at Teesport with an investment of more than GBP3M (USD5M) in a new intermodal rail terminal. This is part of a GBP16.7M container terminal expansion project started in 2011. Construction is scheduled to begin in July and will link the port with Felixstowe and Southampton. On-demand operations will expand to Scotland and to the Midlands and Northwest of England.



### ► TRANSNET FUNDING South Africa's Transnet National Ports Authority in the 2014/15 financial year provided maritime bursaries to 156 students. The corporation sees the investment as providing it with a pipeline of mission-critical skills.

► ROTTERDAM STEADY H1 Port of Rotterdam's first-half figures were largely unchanged from last year. Total throughput edged up 0.6% and turnover was up EUR8.6M (USD11.5M) on the first half of 2013. The port targets a 1% rise for the full year, in line with an expected further recovery in the European economy.

## Bunker supplier opens ops in Singapore

Bunker supplier Unicore Fuel, a subsidiary of Denmark's Bunker Holding Group, has started its operations in Singapore.

In a statement, Bunker Holding said Unicore Fuel, incorporated in Singapore in March, officially commenced business on 1 July. It will be headed by managing director *Ho Ting Teck*, with *Andrew*  Siew Yew Hoong as general manager for trading and supply. The startup already has 16 staff based at its offices in Singapore.

"Unicore is a purchasing organisation, purchasing all grades of bunker fuel in Singapore, Johore [Pasir Gudang], and Tanjung Pelepas. We co-operate closely with all oil majors, major independent suppliers, and stateowned companies," it said.

Bunker Holding, itself part of United Shipping & Trading Company, encompasses 34 firms across 24 countries, specialising in the purchase, sale, and supply of bunker fuel and lube oil to ships, as well as risk management and associated services.

## World's first LNG bunkering vessel ordered

NYK has ordered the first LNG bunkering vessel targeted at LNGfuelled vessels, from South Korean shipbuilder Hanjin HI & Construction (HHIC).

HHIC told *P&H* the ship would be constructed in its Youngdo yard. Built under an initiative by NYK, French gas supplier and trader GDF Suez, and Mitsubishi Corporation, the ship will distribute LNG bunkers in Europe and chiefly the North and Baltic seas. After its delivery in 2016 the ship will be based at the Port of Zeebrugge, Belgium.

"With increased emission regulations, demand for LNG as a fuel is growing in the seas around Europe," said NYK. The firm added that its LNG supply and sales business would initially target LNG-fuelled car carriers operated by Oslo-based United European Car Carriers and other LNG-fuelled vessels operating in the North and Baltic seas. GDF Suez is a charterer and co-owner of NYK's LNG carriers.

NYK, Mitsubishi Corporation, and Cameron LNG intend to establish a company to own the LNG bunkering vessel, as well as an LNG-fuel sales company, which will charter the vessel, with a view to expanding business globally.

### Cash&Cargo

### MACGREGOR'S SOLUTIONS

MacGregor, part of Cargotec, secured \$50M of orders for further highefficiency cargo handling solutions from Hyundai Heavy Industries comprising hatch covers, a comprehensive lashing system, and product software. The purchases came as United Arab Shipping Company exercised its options to increase its initial container ship order to 17.

### **LA VOLUMES RISE**

Overall containerised cargo volumes at the Port of Los Angeles rose 8.2% year on year in May. Cargo totalled 689,141teu as loaded imports and exports climbed 6% to 509,876teu, up from 481,019teu in May last year. Empties went up 15% year over year.

### **BUSAN TRANSHIPMENT**

Busan Port handled 9.115M teu in the first half of 2014, up by 3.5% year on year. Transhipment now accounts for 50.5% of cargo at the port, which has established a foothold as a transhipment hub port for Northeast Asia.

### ANTWERP VOLUMES

The Port of Antwerp handled 98,229,046 tonnes of freight in the first half of 2014, up 2.7% year on year. Container freight volume gained 4% to 53,553,954 tonnes. Liquid bulk volume also rose by 4%, up to 30,429,085 tonnes.

### DP WORLD SUCCESS

DP World handled 29.4M teu across its global container terminals during the first half of 2014, with gross container volumes up 9.3%. This growth was largely driven by terminals in Europe, the UAE, and the Asia Pacific and the Indian subcontinent, said the firm. Jebel Ali Port is poised to drive further expansion with a boosted capacity of 19M teu.



Maersk Essen – just one of 2M's 185 container vessels

## When three becomes two

After Chinese authorities blocked the proposed P3 alliance of Maersk Line, Mediterranean Shipping (MSC), and CMA CGM, Maersk has announced a 10-year vesselsharing agreement (VSA) with MSC on the Asia-Europe transpacific and transatlantic routes.

To be known as 2M, the alliance will have a total of 185 vessels and 2.1M teu capacity across 21 strings. Perhaps unsurprisingly, the China Shipowners' Association, along with the Chinese government, have expressed disquiet at the agreement.

However, a statement from Maersk identifies significant differences between P3 and 2M.

"The 2M VSA differs from the earlier proposed P3 alliance in two important ways: first of all, the combined market share is much smaller. Secondly, the co-operation is a pure VSA. There will be no jointly owned independent entity with executional powers," it said.

"Each party will continue to have fully independent sales, pricing, marketing, and customer service functions."

Depending on successful filings and permissions, the VSA is expected to start early next year.

## IT Club warns of cyber-crime risks

TT Club freight insurance specialist Mike Yarwood has warned of the increasing dangers for carriers, ports, terminals, and other transport operators from cyber criminals.

As invasive cyber technology becomes more widely available, a greater risk to legitimate trade is emerging, exposing operators in the supply chain to economic and commercial damage. Advances in IT systems undoubtedly provide greater opportunities for carriers, transport operators, and cargo handling facilities to reduce their exposure to theft and fraud, but increasingly sophisticated solutions also benefit criminals.

Yarwood has made a particular study of the fast-growing trend. "We see incidents which at first appear to be a petty break-in at office facilities. The damage appears minimal – nothing is physically removed. But more thorough post-incident investigations, however, reveal that the 'thieves' were actually installing spyware within the operator's IT network."

More common targets are individuals' personal devices where cyber security is less adequate. Hackers often make use of social networks to target operational personnel who travel extensively and truck drivers to ascertain routing and overnight parking patterns. The type of information being sought and extracted may include release codes for containers from terminal facilities or passwords to discover delivery instructions.

## Seacurus calls for enforcement of PSC rules

Specialist marine insurance intermediary Seacurus has called for "proper enforcement" of Port State Control (PSC) regulations in the lead-up to the adoption of amendments to the Maritime Labour Convention (MLC) 2006 to protect abandoned seafarers and seafarers injured in occupational accidents. The MLC amendments are scheduled to enter force in early 2017, when countries that have ratified MLC 2006 will be bound by those amendments unless 40% of ratifying nations reject them in writing. However, on 20 August, a 2006 ILO resolution comes into effect so that full Port State Control can be applied by nations that are a party to MLC 2006, regardless of whether or not the ships being inspected are flagged by ratifying nations.

## EU prepares maritime security action plan

Drawing conclusions from the success of EU NAVFOR Somalia in reducing piracy in the Gulf of Aden, European Union (EU) member states have approved a new maritime security strategy based on enhanced co-operation to produce comprehensive solutions, reports Andrew Spurrier.

EU member states recently approved a new maritime security strategy based on strengthening co-operation between EU governments and institutions to produce comprehensive responses to security problems.

EU NAVFOR Somalia, otherwise

known as Operation Atalanta, may turn out to be a model for much wider-ranging future co-operation between EU member states in the field of maritime security.

The Italian EU presidency is to use the strategy as the basis for an action plan, expected to comprise some two dozen individual proposals, which it hopes to publish before the end of the year. Details of the plan have yet to be revealed, but it is expected to heavily feature co-operation and comprehensivity.

Commissioner Maria Damanaki recently stated: "Ensuring the

security of our seas and ocean has never been so important. Today's risks and threats have to do with piracy, terrorism, drugs, human trafficking and organised crime. They are so complex [and] multi-faceted that they impact not just maritime transport but also tourism, environment, fisheries, immigration ... in one word, the economy."

She called for a co-operative response that is "exhaustive, powerful, and co-ordinated between member states and EU institutions", rather than reflecting the interests of individual nations.

### Dredging

### COWES BREAKWATER

A coastal protection project at Cowes, on the Isle of Wight in the UK, has completed its second stage. Dutch dredging contractor Boskalis has installed an initial 1.5m layer of sand and gravel along Cowes Harbour's new outer breakwater and is beginning phase 3 of the 18-month project. The breakwater will "transform the port into a true sheltered harbourage".

### **BAHRAIN CONTRACT**

Great Lakes Dredge & Dock (GLDD) has been awarded a \$35M dredging contract to support development at Hidd Port in Bahrain. The contract, secured with Bahrain's Ministry of Works, is part of a two-phase project to create a 63ha footprint on which to build a factory and other facilities.

### HAMBURG DREDGING

Hamburg City Economy Minister Frank Horch is confident the Port of Hamburg will overcome a legal challenge and be able to dredge its River Elbe access channel in September. Planning started in 2007 for the project to deepen the channel by 1m and widen it in some sections. But environmental and safety objections have so far held up the actual dredging.



## LAEM CHABANG

Thailand's gateway port Laem Chabang is planning an upgrade that would include dredging a draught of 18m. The port may also introduce inland waterway transport and singlerail transfer. There are also plans to develop double-track railways with a single operator.

## Lamu Port berth deal advances LAPSSET

A contract signed for the construction of the first three berths at the proposed Lamu Port in Kenya "reinforced the government's resolve to make infrastructure key in social and economic development", said President Uhuru Kenyatta.

The deal was sealed between the Kenya Ports Authority and the China Communication

Construction Company on Friday. The construction forms part of the Lamu Port Southern Sudan – Ethiopia Transport Corridor (LAPSSET), a transport and infrastructure project in Kenya, estimated to cost \$22Bn.

The project, initially conceived in 1975, failed to take off due to cost implications, but has since been revived as part of Kenya's Vision 2030. This is aimed at opening up Kenya to neighbouring markets through a sea port, airport, railway, and roads.

"The project started making headway about two years ago, but the issue has mainly surrounded on how the money would be raised," a Kenya-based reporter told *P&H*.

The setup cost of the three berths is KES42Bn [\$470M] with money also set aside for compensating people who have been living on the land.

Speaking at the announcement, LAPSSET Director General Silvester Kasuku said the project will "trigger a positive social and economic revolution along the corridor".

IHS East Africa Senior Economist Mark Bohlund said: "This development will make a huge difference. Up until now, the majority of the trade comes through Djibouti and Ethiopia, but for countries like Ethiopia to expand its trade and manufacturing sector, it will need increased capacity through ports like Lamu; the same goes for South Sudan.

"The expansion will also alleviate congestion at the Port of Mombasa, which at the moment serves both the inland countries of eastern Congo, Rwanda, Uganda, as well as Ethiopia and South Sudan."

Kenya's other transport corridor is the Mombasa-Uganda Transport Corridor that passes through Nairobi and much of the Northern Rift.

## Shipowners, ports seek scrubbing clarity

Following the plenary meeting of the European Sustainable Shipping Forum, European shipowners and port authorities have called for urgent clarification of the rules pertaining to the use of scrubbers.

The EU Sulphur Directive is set

to come into force on 1 January 2015. Ships sailing in the Sulphur Emission Control Areas – the Channel, the North Sea, and the Baltic Sea – will have to use bunker fuels with a sulphur content of no more than 0.1% or produce an equivalent level of emissions through other means.

Scrubbers have been identified as one of the few abatement technologies available, allowing ships to reduce the sulphur content in their emissions. However, a lack of clarity in EU rules jeopardises their uptake.

## Bought&Sold SCA announces new lane

### **KALMAR STREAMLINES**

Kalmar, part of Cargotec, will deliver a SmartLane automated gate system to the Port of Liverpool, which is operated by Peel Ports Group. The new system will reduce waiting times and administration for hauliers, speeding up turnaround. The project is due to be completed by early 2015. This investment is part of Peel Ports' GBP5.5M (USD9.2M) port infrastructure improvement package. Kalmar will also supply 12 terminal tractors, seven lift trucks, and a reach stacker to Novorossivsk Commercial Sea Port by October 2014.

**CRANE FOR DRAMMEN** The Norwegian Port of Drammen started operating in June its second mobile harbour crane. With a lifting capacity of 144 tonnes, the new Liebherr crane is 40 tonnes stronger than the port's existing machines and doubles its handling capacity.

### **KONECRANES**

NC Nielsen, which distributes Konecranes' lift trucks in Denmark, delivered in June a 100-tonne capacity reach stacker to Jutlandia Terminal in Esbjerg. The terminal is using the reach stacker to handle and transport blades and components for wind turbines. Per Jensen, terminal and stevedoring manager at Blue Water Shipping, said: "Assembling wind turbines on an industrial scale is challenging. Working with reliable equipment is essential... It helped us to assemble and commission the turbines in record time."



Egypt President Abdel Fattah al-Sisi has announced that the country intends to spend \$4Bn to add an extra 45-mile (72km) lane to the Suez Canal, reports Tony Slinn.

The announcement was confirmed by Suez Canal Authority (SCA) Chairman Mohab Mamish. Now, the canal only provides for one-way traffic, with passing places in the Ballah By-Pass and Great Bitter Lake. The new lane would allow ships to travel in both directions for just under half its 101-mile length.

The move is seen as a response to the Panama Canal expansion, set to open in 2016, which will double that canal's capacity, potentially taking traffic from the Suez Canal.

Suez Canal revenues total about \$5Bn and are a crucial



source of foreign currency for the Egyptian economy. Egypt hopes

the new lane's extra capacity will attract more ships and thus more foreign currency. "This giant project will be the creation of a new Suez Canal parallel to the current channel," Mamish stated, adding that he hoped the new channel would be onstream within a year.

Such a quick result is thought by most analysts to be unrealistic, with a more likely three-to-five years being cited. It is also not clear to what extent the expansion would speed up the canal's operations.

President Sisi said the project would receive no overseas financing and hoped the \$4Bn cost would largely be met by contributions from individual Egyptians. "We want all Egyptians to hold shares in this project," he said.

## Panama appoints next commissioner

Jorge Barakat Pitty has been ratified by the Plenary Session of the National Assembly as the new administrator of the Panama Maritime Authority. He has been appointed to serve a five-year term from 2014 up to 2019.

"From today onwards, we set out to achieve new goals that

will be in force during this fiveyear period of work. The task will be arduous, but I intend to make a radical U-turn within the Maritime Authority, placing it as an honest and effective entity, at the service of the international maritime market," he said.

name that of promoting a strategy on the subject of the concessions so that the state's revenues and the job opportunities in this area grow for the benefit of the country. We have a huge task ahead of us that needs to be done; it starts right now."

"Among our plans, we can

## Port of Long Beach names its new CEO

The Long Beach Board of Harbor Commissioners has named Jon Slangerup, a veteran corporate executive with extensive experience in global logistics and environmental technologies, as the Port of Long Beach's new chief executive.

Harbor Commission President Doug Drummond noted: "He's an extremely capable leader, proven teambuilder, and expert at managing a world-class organisation.

"In our highly competitive, quickly changing industry challenged by major environmental and energy issues, he's the perfect person for the job."

With the pending expansion of the Panama Canal and the aftermath of the 2008 recession, port communities throughout North America have been highly focused on maintaining and growing their business.

At the same time, ports have faced public pressure to 'green'

their operations.

"With a strong operational and environmental track record, we're confident that Jon can move us ahead as the Best Green Seaport in the world, while providing experienced leadership in developing advanced cargohandling technology and infrastructure," said Drummond.

He also expressed his "deep appreciation" to interim executive director Al Moro, previously the port's chief harbour engineer.





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## MACGREGOR

# The port, the public body

Alison Oldfield, partner at UK firm Eversheds, explains the potential risk that the decisions of port authorities could soon be challenged by judicial review proceedings he suggestion that ports are public bodies may seem a little strange. The greater majority are now private entities being either trust ports or private limited companies. However, the position may not be quite as clear cut as it first appears. The legal landscape is shifting and recent developments suggest that the concept of a public body is an expanding one.

If ports can be regarded as public bodies the implications could be significant in a host of areas of operation and could be challenged by judicial review proceedings. If they are, what might be the implications be for ports and those who would do business with them?

Judicial review is the means by which the courts supervise public decision-making functions to ensure they are made lawfully and fairly. It is about ensuring that the proper process has been followed, not about re-opening the merits of the decision which has been reached.

The sort of grounds upon which a judicial review claim might be brought are that, in reaching a decision, an established process has not been followed; the decision is irrational or 'Wednesbury' unreasonable, or that the decision has been pre-determined or is tainted by bias.

What that also means is that if the decisions of ports can be challenged by judicial review proceedings then their internal processes could be open to scrutiny as never before.

If judicial review is a means of scrutinising public law decision making then, historically, it has been very obvious who has been carrying out those functions. Traditionally, they have been the preserve of central and local government.

In reality many private companies, quangos, and voluntary sector organisations now carry out activities which historically fell within the remit of the state.

The critical issue has become whether the entity in question is exercising a public law function. If it is, that decision could be open to



a judicial review challenge.

According to case law, the sort of factors which might demonstrate that public functions are being exercised are:

whether the functions in question are underpinned by public statute;

whether, but for the existence of a nonstatutory body, the government would itself almost inevitably have intervened to do or regulate the activity in question; and

whether the body is exercising monopolistic powers. If individuals have no alternative but to submit to regulation in order to participate in the activity concerned, that might be evidence of a public function.

Applying these principles has led to a number of private companies and organisations being deemed to be exercising public law functions.

Most major port and harbor authorities in the UK are now constituted as private companies, or subsidiaries of such a private company. Some are trust ports, originally established by private Act of Parliament and now operating under Harbour Revision Orders. They are also constituted as private entities.

Consequently, very few ports are directly managed by local authorities and can be regarded as public bodies in its purest sense.

However, do ports exercise public law functions which could be challenged by judicial review? The point has never been tested, but a recent case in the European Court suggests that the time is approaching when that might happen.

That case was 'Fish Legal and Emily Shirley v Information Commissioner, United Water Utilities Plc, Yorkshire Water Services Limited and Southern Water Services Limited (Case C-279/12)'.

It posed the question of whether three water companies were bound by the Environmental Information Regulations that embody the European Union (EU) directive on Public Access to Environmental Information 2003/2004 into UK law.

One of the key questions it specifically considered was whether or not the water companies fell within the definition of public authority for the purpose of the regulations.

Article 2(2) of the EU directive defines 'public authority' in three different ways. The relevant provision for present purposes was paragraph b) of Article 2 (2), which establishes the concept of a public authority as being a person performing public administrative functions.

In the Fish Legal case, the European Court

If a port authority is exercising public law functions it must concern itself with how, as well as what, it decides.

Alison Oldfield: Partner at UK firm Eversheds

concluded that the definition was met if it could be said that the entity was performing "services of public interest ... and which are for this purpose vested with special powers beyond those which result from the normal rules applicable in relations between persons governed by private law".

The sort of issues which the European court said would be relevant to that analysis were matters such as the power to make byelaws and the power to regulate access to the service – in the case of water companies, by imposing hose pipe bans and cutting off the water supply.

How this test is to be applied within the specific context of the Fish Legal case has been referred back to the UK Upper Tribunal. The precise implications for UK law have, therefore, yet to be resolved. Though there must be a risk of a conclusion that some of the powers exercised by the water companies fall within the European Court's definition of public administrative functions.

Moreover, given the parallels between the privatised water industry and ports, the final determination of the Fish Legal case could also have important implications for ports.

Applying the principles laid down by the European court in *Fish Legal*, it is arguable that a range of activities carried out by port and harbour authorities constitute the exercise of public functions.

Under section 33 of the Harbours Docks and Pier Clauses Act 1847, in return for payment of harbour dues, port authorities are required to allow public access to the harbour or port. Their functions, including those of navigation and dredging, are intended to regulate that access. They too have the power to make applications to the Secretary of State to expropriate land and they also control the operation of ports through byelaws. For the existence of the harbour authorities, the government would almost certainly have to intervene and regulate the activities of ports. Theirs is also a regulatory framework which individuals have no alternative but to submit to in order to access ports.

Furthermore, if there is a risk of some of the activities of ports being deemed to be public functions, then there is also a risk that the decisions of a port authority could be challenged by judicial review.

The prospect of decisions by ports authorities being susceptible to judicial review challenges introduces a new dimension to the way they are made. If a port authority is exercising public law functions it must concern itself with how, as well as what, it decides.

The prospect of the lawfulness of decisions being challenged by judicial review proceedings also presents the risk of greater uncertainty for the ports themselves and those with whom they do business. Full-scale judicial review proceedings can take more than a year to resolve with all the uncertainty about the status of the decision under challenge in the meantime.

These types of proceedings can also be reputationally sensitive as the judicial spotlight is shone on the decision maker's internal processes.

On one level ports have nothing to fear from this possibility if their processes are fair and robust. The fact remains, however, that the potential for judicial review challenges raises the possibility of scrutiny not previously experienced by ports. Ultimately, they would be well advised to consider what the implications might be for their internal systems and decision-making processes as the possibility of this legal development looms over the horizon. **PH** 



## Size matters

Port of Shanghai prepares itself for further throughput growth, reports *Dexter Yan* 

Port of Shanghai, the world's biggest port by container throughput, sees terminal expansions at the Yangshan Deepwater Port as a springboard to prepare itself for further throughput growth. In tandem, China's central government is also lending a hand to the port to improve its international transhipment performance.

Since 2010, Port of Shanghai has held onto the throne as the world's busiest container port, overtaking Singapore. This is thanks to Yangshan Deepwater Port, which completed its third phase of construction in 2008. The port, including Yangshan, is fast approaching full capacity, and is even poised to exceed this limit as cargo flows are predicted to continue to rise. More than 2,000 container ships depart from Shanghai every month to major ports worldwide. It is estimated that cargos handled by Shanghai account for 25% of China's foreign trade.

The port's position at the mouth of the Yangtze River has been attracting cargo flows from inland cities along the river to boost its water-water transhipment business. The central government is gearing to tap into the potentials of the Yangtze as a route into inland areas, and so Shanghai is positioned to handle more and more goods to and from these areas.

Shanghai also serves the vast hinterland in the Yangtze River Delta and the entire Yangtze River valley. The Yangtze River Delta is home to a cluster of cities which are China's most economically vibrant areas.

The Jianghan Plain and Sichuan Basin are areas that are densely populated and have a developed agriculture and industrial base. These areas have sustained Shanghai's throughput, providing export cargos.

Although it also caters to breakbulk and ro-ro carriers, the Port of Shanghai is best known for its container terminals in Waigaoqiao and Yangshan.

To make the two ends meet, the Shanghai International Port Group (SIPG), the biggest port operator in Shanghai, is hoping to boost its box handling capacities with the fourth phase project at Yangshan. Nearly eight years after the launch of its first phase (in December 2005), SIPG has seen container throughput at the Yangshan Deepwater Port growing 1.5% year on year (y/y) to nearly 14.4Mteu in 2013 on a handling capacity of 16Mteu per year.

For the first half of 2014, throughput at phase 1 and 2 of Yangshan Deepwater port grew 8.9 % y/y to 4Mteu, setting a new half-year record since its launch. Since the 2008 launch of the third phase, Yangshan has 16 berths along an aggregate 5.6km of shoreline.

The fourth phase of construction of the Yangshan Deepwater Port will probably start at the end of 2014 after winning approval from relevant authorities, SIPG said. According to the plan, the fourth phase at Yangshan will include the construction of two 70,000dwt and five 50,000dwt container ship berths,



Yangshan Deepwater Port's fourth phase should cater to the expected increase in small vessels accessing cities along the Yangtze River which are estimated to take two years to be completed. Unlike the previous three phases of Yangshan, the fourth phase will mainly be built to serve short sea and river trades, as SIPG hopes to develop Yangshan as a transhipment hub to be berthed by both small and ultra-large container ships.

"From SIPG's perspective, we hope it would be a completely automatic terminal with the highest possible efficiency," said Jun Yan, president of SIPG.

However, challenges are anticipated, he said. The planned fourth phase will be located about 1nm away from the second phase of the Yangshan Deepwater Port, and will have limited yard and transit capacity, Yan explained. According to estimates provided by third parties, the fourth phase is likely to accommodate more than 20 cranes along a shoreline of less than 3km.

Besides this additional planned capacity at Yangshan, the Port of Shanghai is bracing for policy changes in its favour on the cabotage rule, which are estimated to bring increasing box volumes to the port in the future and help it expand its international box transhipment business.

In June 2014, China's customs authority rolled out new policies to help Shanghai bolster its standing as a container transhipment hub in East Asia. The customs move came after the country's Ministry of Transport decided to relax its cabotage rule in September 2013. Both moves are part of the government-guided establishment of the China (Shanghai) Free Trade Pilot Zone.

According to the new policies, non-China flagged box ships that are owned by companies registered in China will be allowed to use Shanghai as a hub between other

# ■ The actual impact of China's relaxed cabotage laws on Shanghai port remains to be seen ■

Jun Yan President, SIPG

Chinese ports to ship heavy containers in foreign trades.

The relaxation on the cabotage rule is widely expected to help the Port of Shanghai to win back its shares in container transhipment from regional rivals such as Busan and Kaohsiung. Previous Chinese regulations prevented non-China flagged vessels from operating all coastal services, which prompted foreignflagged container ships to use Busan or Kaohsiung for box transhipment.

Waigaoqiao port and Yangshan Deepwater Port, both of which are the major container terminals operated by SIPG, will be the main beneficiaries of the revised policy. Although the Port of Shanghai is making an all-out effort to build up its status as an international hub by expanding its transhipment business, the sector missed expectations in recent years. In 2013, the annual box throughput of both Yangshan and Waigaoqiao rose 3.8% y/y to 33.8M teu, enabling the Port of Shanghai to keep a firm hold on its status as the world's largest container port. In contrast, international transhipment volumes for Shanghai – at both Waigaoquao and Yangshan ports – accounted for a single-digit percentage of around 7% to 8% of the total throughput, SIPG admitted.

SIPG remains cautious of the relaxation of the cabotage rule's significance, as the customs authority and the transport ministry still treat the policy change differently. SIPG wants Chinese customs to relax regulation on international transhipments conducted at the port, while customs' concerns over smuggling means it does not want such relaxation. So while customs prefers to regulate cabotage shipping as trans-customs transport, the port seems reluctant to do so.

"Surely the new policy will be positive for the box transhipment business of the Shanghai port," Yan said. "But the actual impact on Shanghai port remains to be seen." **PH** 

### **MORE INFO:** www.portshanghai.com.cn

### Stop the press

Shanghai Mingdong Container Terminals Ltd (SMCT) is a 50:50 joint venture between SIPG and Hutchison Port that operates the 5th & 6th phases of the Waigaoqiao Container Terminals.

SIPG has announced plans to dispose of a 20% stake; the price will be set after an asset appraisal.

## Major ports fight back

India's state ports struggle to match private competitors, but are back on track, reports *Christina Anto* 

ndia's major ports, owned by the Union government, are back on track as the country's foreign trade moves into the fast lane. Iron ore and containers had been the main laggards at major ports, due to muted global demand and a ban on iron ore exports, to combat illegal mining, which is gradually being lifted. But exports – especially of iron ore – are now steadily increasing.

Imports have also registered healthy growth. Coal imports are expected to rise drastically to alleviate the huge coal scarcity facing the state-run National Thermal Power Corporation's coal-fired projects. And, as the oilstarved country's crude production declines, huge refineries increasingly depend on imported crude.

Drags on growth at major ports over the last three to four years, including inadequate infrastructure and rigid tariff rules, have driven some of their traditional cargo to private ports.

During the last financial year to March 2014, the 12 major ports handled a total of 555.5M tonnes, up 1.78% from the previous financial year (545.79M tonnes), according to data from the India Ports Association (IPA).

However, leading Mumbai-based rating agency ICRA said private ports grew faster: up 13% from 185M tonnes to 209M tonnes during the first half of the last financial year to September 2013.

Private ports have many factors in their favour, Suren Vakil, managing director of maritime advisory firm BMT Consultants India, told *P&H*.

"They market themselves better,



utilise capacity and have better equipment," he said. "They carry out operations in a state-of-the-art way. They have better efficiency parameters and more flexible tariff structures."

Major ports are now trying to catch up with the many private ports mushrooming around the country and have announced a slew of projects to boost capacity.

In May, after a long delay, India's largest container port, JNPT, signed a concession agreement with Bharat Mumbai Container Terminals Private Limited (BMCT), a subsidiary of Singapore's PSA International, to develop a fourth container terminal with a capacity of 4.8M teu. The agreement is on a design, build, operate, finance, and transfer basis for a period of 30 years. JNPT's current capacity is 4.1M teu.

Ajay Lokhande, chief manager for port

**Container terminal** 

at Pipavav



planning and development at JNPT, told *P&H*: "The estimated project cost is INR7,915 crore [\$1.3Bn]. Phase I of the terminal is likely to be operational by 2017. Once operational, the terminal would more than double JNPT's capacity, and push it above the 10M teu mark by 2020."

VO Chidambaranar Port Trust (formerly Tuticorin Port) in the south of the country won a mention in the recently unveiled Union budget. The finance minister reiterated the previous government's plan to spend INR116.3Bn to develop Phase I of the historic port's outer harbour project.

In four stages, the INR234.3Bn project will deliver 17 berths: 10 for container, six for coal, and one each for petroleum, oil, and lubricants. The port envisages that its traffic will total 290M tonnes on the project's completion.

By 2015-16, Chidambaranar Port will increase its capacity to 85M tonnes, up from 33.34M tonnes today, by commissioning five new berths under a public private partnership (PPP) mode and upgrading its existing facilities.

Another major port, Paradip Port on the east coast, is also in expansion mode. Over 10 years, Paradip Port Trust (PPT) will invest INR160Bn in projects to increase the port's capacity to 270M tonnes, up from 108.5M tonnes today.

Paradip's expansion plans include constructing a western dock with six berths and a total capacity of 75M tonnes, mechanising existing berths, building an offshore breakwater with an LNG terminal, and developing a multi-purpose clean cargo berth and an iron ore berth.

At a press conference in Mumbai in June, Paradip Chairman Sadhansu Sekhara Mishra said: "Of the total investment of \$2.7Bn, the port trust plans to raise INR15,100 crore through the PPP route and the remaining amount will be invested by the port."

These are the good news stories, but many of the major ports' capacity-building projects have been delayed.

Kandla Port Trust (KPT) on the west coast was taken over in March by the private Mundra Port. But it was unable to attract bidders for its mega container terminal project at Tuna-Tekra. A senior Kandla Port official told *P&H*: "The project has been restructured to 2.2M teu from the earlier 4.2M teu."

The dedicated container terminal project proposed for Kolkata Port's Diamond Harbour is being restructured after failing to find investors.

Similarly, Chennai Port Trust's plan for a 4M teu mega container terminal project failed to attract private bidders.

But the port plans to develop the container terminal as part of a new outer harbour project (estimated cost of more than \$1Bn) to include a container terminal plus project cargo and ro-ro cargo. Port chairman Atulya Misra said the outer harbour will be connected by rail and has received the key environment clearance from the government. **PH** 

### Minor ports set the pace

India's minor ports – administrated by regional governments or private companies – are presenting tough competition to the government-owned major ports.

In fact, their combined cargo volume is set to overtake that of the major ports in the next couple of years.

According to ICRA, major ports' share of total throughput fell to 55% from 58% in 2012-13. Meanwhile, minor ports accounted for about 45% of total throughput in 2013-14, up from 42% in the previous financial year.

Private ports in India with better infrastructure, diverse cargo handling, and better connectivity are quickly racing ahead of the major ones. These ports have been able to attract cargo and offer a better service to users.

The growth of India's minor ports has propelled the rise of the Indian billionaires Gautam Adani and the Ruia brothers. Adani's Adani Ports & Special Economic Zone (APSEZ) and the Ruias' Essar Ports are the leading firms operating India's most efficient private ports.

APSEZ operates Mundra, Dahej, and Dhamra (after the recent takeover), while Essar Ports operates Vadinar, Hazira, and Salaya. These two companies also run several other privatised terminals at major ports.

India's important private ports also include: Pipavav (run by APM Terminals), Gangavaram (DVS Raju Group), Karaikal (MARG Group), Kattupalli (Larsen & Toubro), and Krishnapatnam (promoted by the CVR Group).

PIPAYAY

### COVER STORY



## Indonesia invests in infrastructure

Trade growth necessitates better port infrastructure for Indonesia, writes *Lily Bertha Kartika* 

he key to Indonesia's long-term economic success remains in improving its infrastructure. Despite being rich in natural resources, Indonesia's economic growth has been hampered by underdeveloped infrastructure. The country is in dire need of more roads, ports, airports, bridges and highways.

According to the Indonesian Logistics Association, Indonesia's logistics costs take up about 25–30% of its annual GDP, much higher than neighbouring countries such as Malaysia and Singapore.

Plans are under way to build a new integrated port and industrial estate in Surabaya, as well as a new container port in Jakarta to help ease the congestion at Tanjung Priok, the country's main port.

The new Kalibaru Port is looking to open the first of its three new terminals in mid-2015 and will offer a deeper draft. Maersk Line Indonesia President-Director Jakob Friis Sorensen said: "The new port will enable shipping lines to do direct calls at Jakarta, so customers in Indonesia can benefit from faster transit times and reduced logistics costs.

"This, however, needs to be supported by better inter-coastal connectivity, so Jakarta can act as a main transhipment port and offer more competitive costs to shipping lines."

The Indonesian government also recently announced new measures to boost investments in infrastructure, including increasing foreign ownership in ports to 95%, up from 49%, if the investments are done through the country's private-public partnership scheme.

"With better infrastructure, you will see more investments," Sorensen said. "The cycle needs to be re-ignited and the Indonesian government can focus on this to drive future trade growth."

Indonesian Trade Minister Mohamad Luthfi said at a logistics seminar in May that improving the country's infrastructure is one of the government's top priorities. He noted that the country saw a 16.7% fall in import of capital goods in 1Q14 primarily because of transport bottlenecks and a weaker



Dock workers unload containers from a ship at **Tanjung Priok Port** in Jakarta. Indonesia.

rupiah. Luthfi said: "Economic growth generated purely from consumption is not sustainable. Indonesia is part of the international community, and as such we have to comply with international challenges and trade with the world."

To boost trade, Luthfi said Indonesia needs a logistics and transportation industry that is competitive in terms of costs and supports trade, rather than act as a barrier. On its part, Maersk Line said it intends to work with local shipping lines to provide greater connectivity not only within Indonesia, but also within the region.

"The ASEAN Economic Community which starts next



year will benefit the Indonesian shipping industry and we must be ready to embrace it," said Sorensen.

To increase its network and coverage in Indonesia, Maersk Line is taking the lead by becoming the first and only international shipping line to offer a direct service from Port of Bitung in North Sulawesi to Tanjung Pelepas in Johor, Malaysia.

This will reduce the transit time by an average of five to seven days to reach major markets like Europe and the United States.

"While the areas around western Indonesia are more developed, we see opportunities in increasing exports out of the eastern part of Indonesia," said Sorensen..

We want to support the development of this area with a direct service to our main transhipment hub port in Tanjung Pelepas, connecting exporters to global markets," he added.

Intra-Asia trade growth remains strong, thanks to strong economic growth in Asia. Now, intra-regional trade accounts for 41% of global containerised ocean freight, of which intra-Asia container flows represent 79%, valued at \$2.9Tn. With healthy growth in recent years, container volumes within the region grew to 26M teu in 2012 and are projected to keep a robust annual growth for the near future. PH

MORE INFO: www.ali.web.id + www.maerskline.com

### FEATURE



## **ROPES unravels 'wake' effect**

Landmark study on wash effects is expected to enhance vessel safety while improving port planning, reports *John Gallagher* 

he long-awaited results of a three-year project to study the effects of wake on moored ships could dramatically reduce harbour accidents while breaking new ground in port expansion and project design.

> It wasn't known what the main parameters were and which were more important

> > **Marco Pluijm** Ports Sector Manager, Bechtel

Unveiled on 3 June at the World Association for Waterborne Transport Infrastructure Congress in San Francisco, the results of Research on the Passing Effects on Ships (ROPES) confirmed that wash from ships passing through restricted port areas is directly influenced by the shape of the port basin, the size of the vessel, the passing distance, and the passing speed.

The research also concluded that wash can exert significant forces not just on moored vessels but also on mooring lines and fender loads, creating dangerous conditions.

Based on its findings, the research group created a software program to improve port safety and developed guidelines for planning and designing ports.

"People more or less understood what was happening, but it wasn't known what the main parameters surrounding the problem were and which parameters were more important than others," said Marco Pluijm, the ports sector manager for engineering and construction firm Bechtel and chairman of ROPES.

"Our computer model now makes it possible to

quantify what's going on, so every port designer with access to it can quantify wash effects and adjust the design of port basins and channels," said Pluijm, who began forming the basis for the project in 2010 when he was an official at the Port of Amsterdam.

Pluijm and his counterparts at other ports, including Antwerp and Rotterdam, were doing individual research on the problem of breaking mooring lines. "So we decided to join forces," Pluijm told *P&H*. The initial group then expanded into a joint industry project of 25 participants.

Part of the problem has been that, while ships have become bigger and more powerful, port infrastructure in many places has stayed the same. Some of the issues that can result from more powerful ships – such as changes to the seabed caused by ship scour – can be overcome simply by using heavier materials at berth areas, explained Pluijm.

"But wash from passing ships is a highly dynamic process with more than one party involved, including ship captains, ship pilots, and port authorities," he said. "They all need to understand what is happening and what each has to do to make sure vessels are not exposed to unsafe situations."

A casualty of one such unsafe situation was the bulker *Yusho Regulus*, which broke her moorings as a result of the wake of a passing ship at Brazil's port of Santos in September 2012. The vessel smashed two ship loaders, hit a pier, and was itself damaged. While this accident caused no environmental damage, there is always the added risk of a bunker fuel leak if a ship's hull is breached.

"Vessels that drift out of control from a quay could hit a tanker or a cruise ship. Ports usually have a whole mix of sizes and types of vessels, so the impact of a ship coming loose can be massive," warned Pluijm.

ROPES is already proving its value for port authorities. The design of an entrance channel to the new Maasvlakte extension at the Port of Rotterdam follows



a mathematical model designed with ROPES, which led the port authority to move an embankment 50m landward to make mooring more stable.

At the Port of Amsterdam, additional tugs are required to help stabilise the effects of wash at one of the basin areas, raising costs for shipowners. In addition, because the channel cannot be widened, an old unloading facility will be moved to a nearby basin at an investment of more than \$130M. "We're talking big impacts, big money," said Pluijm.

He also confirmed that discussions are ongoing with US ports on "all sorts of issues" related to port planning. American port authorities "saw what we unveiled in San Francisco and they're looking to see how they can benefit", asserted Pluijm. "They're all looking to mitigate the problems caused by wash, and they may look to be getting those solutions from us." PH

### right) The tanker *TI Europe* undergoing mooring line testing at the Port of Rotterdam

(Left and above

### ROPES' model software

ROPES software was developed during the project to predict the effect that 'wash loads' generated by passing vessels will have on moored vessels for arbitrary port and waterway configurations. Special attention was paid to user-friendliness and the required computational time on a PC.

The program aims "to deliver accurate results in a short time and in a format suitable for further application in mooring analysis programmes".

The software is restricted for use by the project group for three years from the conclusion of the project in November 2013, after which it will be commercially available. However, anyone looking to benefit from the program can make consulting arrangements with individual participants.

Programme features include:

- Multiple types of moored commercial or sailing vessels
- Arbitrary water depth
- Vessels with arbitrary heading relative to each other
- Vessel models in database: tanker, container, LNG, inland barge, rectangular barge
- Vessel models can be adjusted to required dimensions and displacement
- Vessel draught, heel, and trim can be adjusted
- Simple modeller for the port geometry (sloping banks, local water depth, etc.)
- Batch processing of runs
- Runs on PC (Windows, 64-bit)



# Smoothing out peaks and troughs

A software upgrade allows Virginia's largest container terminal to efficiently handle its uneven box flow, reports **John Gallagher** 

Virginia Port Authority saw faster crane moves following its IT upgrade t took two years to plan and execute the overhaul of Norfolk International Terminal's (NIT) nerve centre, but the results were nearly immediate. A month after the 20 June launch of NIT's software system upgrade, the Port of Virginia's largest container facility had improved gantry crane moves by two boxes per hour.

"We think we can improve on that, and we might also be able to turn our vessels faster by knowing we have the right amount of cranes, shuttle carriers, and people on the deck to handle the volume," Virginia Port Authority (VPA) spokesman Joe Harris told *P&H*.

A more detailed picture of the assets at work was the reason for jettisoning a 25-year-old legacy computer operating system and replacing it with one that integrates all facets of container handling at NIT. This, in turn, allows the port to more accurately plan for the short and long terms.

"All operations are proceeding as planned," said VPA CEO John Reinhart on the day of the rollout. "Our work on this project allowed us to launch two weeks ahead of our originally announced schedule. At NIT, we now have the technology infrastructure in place for a twenty-first century terminal operating system."

Based on current growth in the US Mid-Atlantic region, VPA is going to need container terminal operations built for the future.

Approximately 1.2M m<sup>2</sup> of new warehousing space and more than 30 new distribution centers have recently been built around the state, according to VPA. Over the last several years, more than 20 major companies have announced that they would locate their operations in Virginia – in part due to the proximity of a major container port.

By 2040, demand for terminal capacity at VPA is forecast to be 7.2M teu/year. Therefore, existing capacity of 3.4M/year must more than double to meet predicted demand.

According to VPA, expanding into the full space available at NIT and the port's other major container facility in Portsmouth will get to roughly 4.6M teu/ year. To make up the shortfall, however, growth must come from building new terminals or redesigning existing terminals.

With a current capacity of 2.2M teu, NIT is the largest of VPA's two container terminals, but it faces several expansion challenges. It is bounded by US Navy facilities as well as by established residential neighbourhoods and major transportation corridors, making outward First Technology infrastructure ... for a 21st century terminal operating system

John Reinhart

Virginia Port Authority CEO



development of the port unlikely.

Upgrading technology will allow NIT to get more out of its existing operations space, explained Harris. Hence California-based information technology company Navis installing Navis' latest generation terminal operating system, which integrates operating data from landside and the berths.

"In the past, we had some capability of doing that, but it was very limited," Harris said. "Now, we can look at all the data collectively and understand, for example, how the truck gate flow is going to affect our rail operations immediately, just through manipulating the data. It will allow us to better plan our days, based on the number of moves at the berth, and the moves at berth will dictate the amount of equipment and manpower we'll need at our rail operations."

One of the biggest headaches for the port has been its gate system and congestion problems associated with queues of port truckers hauling intermodal loads. Separate and apart from N4, VPA began rolling out a new motor-carrier appointment system in May, which requires that drivers make an appointment prior to showing up at the gate.

The flexibility of N4 should allow VPA to seamlessly integrate that new appointment system into Navis' terminal operating system by late August.

"We'll be able to better regulate on an hourly basis the number of trucks coming in, as opposed to having this rush-hour effect at the beginning and end of the day," Harris explained.

This underscores one of the biggest benefits expected from installing N4: the ability to smooth out peaks and troughs so that the port and its customers can more accurately deploy their assets.

"This is a growing port, and we have to have tools in place to manage and sustain that growth," said Harris. "You can't have this 'drinking from a fire hose' mentality, because at some point you're going to choke."PH

MORE INFO: http://navis.com/ + www.portofvirginia.com

### N4's efficiency drivers

Navis contends that container terminals can increase efficiency with four terminal-operating tools:

**N4 PrimeRoute** – Pools container handling equipment across cranes, while combining yard and equipment constraints with operating business rules to optimise work assignments in real time for efficient use of equipment, shorter travel distances, fewer unladen moves, and lower fuel, labor, and maintenance costs.

**N4 Expert Decking** – Helps space-constrained terminals increase utilisation of yard space to handle growth without adding new land. Yard assignments typically are made manually and are subject to the limits of human judgment. This can lead to underutilised yard space, inefficient decking and higher operating costs. Expert Decking assigns to each container its optimal position in the yard based on terminal constraints, reducing container re-handling by up to 90%, according to Navis.

**N4 AutoStow** – Combines stowage factors such as type and weight with yard constraints and operating strategy to select the best container to load in real time. This results in improved vessel stow plans, up to 70% reduction in planning time, Navis claims, as well as higher yard productivity and increased responsiveness to operational challenges.

**N4 Quay Commander** – Provides real-time monitoring of crane schedules, vessel container moves, vessel activities, and vessel labor assignments enabling dynamic adjustments to predicted load, discharge times, and crane sequences. Vessel planners can attain more accurate predictions of container move and completion times, increased labour productivity, and more tightly integrated equipment control.





## Strait talking

The latest test project under IMO's pioneering E-navigation initiative, designed to drastically improve vessel congestion, safety, and pollution in the Straits of Malacca and Singapore could have major implications for the global maritime community, writes **Stephen Cousins** 

The Singapore Port Operation Control Centre uses KNI's C-Scope technology ground-breaking \$3.72M digital navigation pilot project to improve the safety and efficiency of vessel movements on the Straits of Malacca and Singapore was officially launched in April and will run for the next three years.

The SESAME Straits project (Secure, Efficient, and Safe maritime traffic Management in the Straits of Malacca and Singapore), is an important test-bed for IMO's E-navigation strategy, with its objective being to develop and trial a next-generation ship traffic management system (STMS) along this strategically important route. It is hoped the new technology on trial will radically reduce the number of ships forced to weigh anchor due to congestion in the Port of Singapore, improve safety as well as speed up vessel transiting times.

The project is the result of a unique cross-national collaboration between the Research Council of Norway, which provided all the funding; the Norwegian Coastal Administration; the Maritime and Port Authority of Singapore; and technology provider Kongsberg Norcontrol IT (KNI), whose VTS system C-Scope (the latest generation maritime surveillance solution developed by KNI) is installed at the Port of Singapore and will be utilised as part of the trial.

This alliance will receive input and guidance from an overarching advisory board, which includes governmental members from Singapore, Norway, Malaysia, and Indonesia and experts from major maritime organisations including IMO, the International Hydrographic Organisation, the International Association of Lighthouse Authorities, the International Chamber of Shipping, and the Baltic and International Maritime Council.

The concept of E-navigation was developed by IMO to bring about increased safety and security in commercial shipping by researching new digital methods of organising data on board ships and on shore, and the better data exchange and communication between the two. Although most research and development under the initiative has so far focused on Europe, SESAME Straits represents an important departure. Steve Guest, KNI's business and marketing manager, explained: "This project is about making people realise that E-navigation is a global initiative with work going on internationally. A specific aim, voiced by the Maritime and Port Authority





How the system should work (above right) of Singapore, is to find ways to utilise data exchange to best effect in this geographical region."

SESAME Straits will build upon the earlier four-year IMO Marine Electronic Highway demonstration project, launched in 2006 to develop new methods to link shore-based marine information and communication infrastructure with the corresponding navigational and communication facilities aboard transiting ships. It will also include lessons learned during the European project *MONA LISA Motorways of the Sea*, which ran from 2010-13, which developed prototypes for route exchange from ship-to-ship and ship-to-shore, together with optimisation based on inputs such as under-keel clearance and traffic density.

# E-navigation is a global initiative with work going on internationally

**Steve Guest:** KNI business and marketing manager

The project is still in its early stages, but a key objective is to create a new digital communication infrastructure for exchanging information between ship and shore. This will harness the possibilities of the VHF digital exchange system (VDES) over terrestrial, and potentially satellite, links and employ the E-navigation S-100 framework for data exchange, which is considered critical to enabling the IMO's E-navigation concept.

"The plan is to detect vessels when they are still several days away from Singapore using satellite-based AIS. When we have enough data we will run a model on C-Scope that will enable us to consistently predict the different volumes and densities of traffic going through the straits at different times," said Guest. "The model will run on VTS workstations on land and we will communicate suggested routes to bridge teams so that everyone concerned has a shared situational awareness. We hope to use VDES technology to communicate with vessels, although a fair amount of research has to go into this before anything is implemented."

The model will identify areas and times where vessel movements are less than optimal, provide ships with advice on speed and direction alterations, then run the model again and hopefully show that congestion has been reduced. The project represents an attempt to revolutionise traditional VTS systems that currently only provide information, organisation, and assistance services locally.

SESAME Straits will rely on a shared situation awareness and co-operative decision making between ships' bridge teams and shore personnel to achieve justin-time arrivals and minimised vessel traffic hot spots. In practical terms this is expected to deliver a range if benefits, such as reduced ship bunkers, efficient traffic flow through narrow and restricted waterways, reduced navigation risk, reduced fuel consumption, reduced carbon dioxide emissions, and better utilisation of port resources such as anchorages, berths, and pilots.

"One target is that calling vessels don't have to go to anchor, as they do at present, sometimes for several days, they simply arrive and are taken alongside," said Guest. "We will also reduce congestion to improve the situation for vessels transiting, although the Norwegian Coastal Administration must still develop targets around this aspect."

John Murray, director of marine at ICS, added: "The Strait is one of the busiest waterways in the world and our members have for many years been keen to see improvements such as those that SESAME Straits has the potential to provide. We look forward to participating with the project team as it seeks to further improve navigational safety and protection of the environment."

Apart from C-Scope, KNI will leverage other technologies from within the Kongsberg group of companies during the trials, including the ship's integrated bridge system, ship-to-shore data communications, and satellite-based sensors and services. The project team expects live trials to start in 2016.

"Above all, this project is the result of a unique alliance involving Norway, Singapore, and Malaysia, which is expected to lead to the development of other test beds for E-navigation technologies going forward," concluded Guest. **PH** 

**MORE INFO:** www.kongsberg.com/en/kds/kncit

## Designing small and medium container terminals

The latest report from PIANC, the World Association for Waterborne Transport Infrastructure, is a comprehensive study of the design principles ports should bear in mind when building new terminals.

Tilbury container operations

R eport n° 135–2014 was produced by an international working group (WG 135) convened by the Maritime Navigation Commission (MarCom), chaired by George Steele and set up in 2009.

"A number of earlier publications have addressed similar issues of general port planning in the past," Steele said, "the 1978 UNCTAD 'Guidelines for Port Development', for example, and more recently the 2001 IAPH 'Guidelines for Port Planning and Design'. These reports, however, did not fully address the specific issues related to the detailed design of container terminals – and with the advancement of container handling equipment, it was considered appropriate to provide an up-to-date report."

As per its title, the report concentrates specifically on small and medium size container terminals handling between 250,00teu and 750,000teu annually and "attempts to introduce current best practices and recommendations for ports and terminal operators setting up and developing new, modern container handling facilities", including:

■ Latest design criteria for quay construction infrastructure and container yard pavements, which *P&H* will feature in this article

Current terminal layout planning

Adaptability of terminals to service larger container vessels

■ Difficulties faced in changing operational technology to facilitate growing traffic levels and improve performance

Environmental issues related to terminal construction and operations

Land shortage due to environmental or urban constraints

The increasing tendency to use new transhipment operational technologies and equipment with a resulting higher level and intensity of maintenance

Development of information technology

■ New trends in the use of door-to-door logistics and intermodal transport

■ Increased need for container terminal security, such as ISPS Code compliance.

Steele added: "It's hoped it will be of use to developing countries and that the report will prove to be of benefit to engineers, operators, terminal management and port authorities alike. The working group's composition drew from a wide range of experience and was balanced between consultants, port engineers with operational experience, academics and information technology practitioners from a range of countries."

He concluded with a word of caution: "Detailed design and implementation of container terminal facilities and infrastructure is significantly more complex than stated in this report. It's highly recommended that experienced engineering professionals should undertake such work."

Generally speaking planned preventive maintenance of terminal equipment is taken for granted, the report states, adding: "This is generally not the case for the maintenance of the container terminal infrastructure itself".

The quay structure, with the exception of fenders and such furniture as bollards, ladders, etc, will often be assumed to perform throughout its design life with little or no maintenance – it's often a case of 'out of sight, out of mind'. But to ensure infrastructure achieves its design life, "it is essential that inspection and maintenance is carried out on a pre-determined regular basis".

In the case of quays, pavements and buildings, maintenance work is usually carried out during the normal working week, the report continues. It's likely that most of this work will be carried out by outside contractors although it's generally more cost-effective to have a dedicated in-house team retained for minor or emergency repairs.

"The engineer and/or facilities manager who will be responsible for maintenance of all container terminal infrastructure will have to consider preventative maintenance strategies," the report adds, "as well as having to react to emergencies and replacement of facility elements. Records of previous maintenance work carried out, including the frequency and nature of the work together with the commensurate level of expenditure, will be helpful".

In keeping with the principles of 'Life Cycle Management', the report explains, "it will be important to give consideration to the optimisation of designs to ensure that future maintenance costs are kept to a minimum. It is recommended that 'Whole of Life Costing' is considered as an effective tool to evaluate important alternatives for major elements of the infrastructure that will not only affect the capital cost of the project but can also help to reduce future maintenance costs".

Container yard pavements are subjected to high loading due to container stacking as well as high wheel loads from heavy container handling equipment, the report points out.

Pavement design considerations noted in the report include subsoil conditions, allowable settlements, operational constraints, local material availability and national rules and regulations – "the latter sometimes predetermines only special types of pavement."

Common pavement types noted in the report include:

The report will benefit engineers, operators, terminal management and authorities

**George Steele** WG 135 chairman



concrete block; asphalt; concrete slab (either cast in-situ or precast slabs); and roller-compacted concrete.

"Depending on the operational system of the terminal and the drainage properties of the ground, gravel beds – with or without ground beams – can also be considered for container stack areas," the report notes, adding that many terminals are designed with concrete ground beams or pads to support container corners, so that areas between them can be surfaced with a light-duty pavement or gravel.

Turning to terminal equipment, the report states that RTG runways may be designed as pavement, but more commonly take the form of separate concrete beams. And while RMG rails may be supported on a concrete beam or sleepers, "the latter may require the track to be lifted and/or realigned periodically to restore line and level. The use of 16-wheel RTGs can obviate the need for reinforced concrete beams," says the report.

Design life will be dependent on the design loads as well as the maintenance frequency of the pavement, the report states: "Design of all heavy-duty pavements, including concrete block, should consider the rules and recommendations of 'Interpave – The Structural Design of Heavy-Duty Pavements for Ports and Other Industries', Edition 4, December 2007. Relevant information can be found on www.paving.org.uk".

The serviceability level of pavement is defined by the operator and is impacted by the level of maintenance that will be performed over its life, the report states.

"Assuming the number and severity of load cycles can be calculated, the pavement design can be defined from the outset," it adds, offering the following conclusions:

■ Temporary pavements can be employed which have a lower installation cost, but will require heavy maintenance. The ultimate choice of a short- versus long-term solution must not only include allowances for changes in area use, but also an estimate of the total cost of the pavement over the total life of the facility

■ Though gates which only handle highway traffic experience lighter loads over their life, the number of load cycles in these areas will be significantly higher as all highway traffic must pass through them. Likewise, aisles and frequently travelled routes will generally require a more durable pavement than parking areas

■ The use of rigid pavements under stacked containers is cautioned as the concentrated loads can result in fracture of the pavement rather than just deformation. Flexible pavements with indentations caused by container corner castings can be repaired without replacement. Typical container stack and corner casting loads can be found in 'Interpave – Design Manual 2007'.

Most pavement design models incorporate soil condition, environment, design loads and pavement life/ serviceability, the report concludes. "Of these, the first two are site dependent with in-situ mitigation measures the only means to change these parameters". **PH** 

MORE INFO: www.pianc.org



## Inland economic impact

The new \$50M million South Carolina Inland Port is a trailblazer in providing dry port infrastructure. **Scott Berman** visited the facility for P&H

> he new South Carolina Inland Port (SCIP) at Greer is a modern-day intermodal container terminal going about its business with a key difference: at SCIP they roll containers, not float them, in and out.

> The facility sits on a 19-hectare rectangular concrete slab abutted along a long side by a Norfolk Southern rail line and a rail spur. A chassis pool sits beside a high block of empty containers that, in turn, is next to a line of loaded containers in stacks of varying heights. Empty handlers move quickly back and forth among the stacks as trucks pull in for loading from rail cars by rubber-tyred gantry (RTG) cranes.

> A redefined near-port, a second spoke, relay facility, satellite terminal, a hectic logistics park, another sign of ports' hinterland development – the dry port could be considered as another container terminal – except that boxes are rolled, instead of floated, in and out.

SCIP is a sign of assertive change in the region: officials are eyeing a 50-foot (15.2 metres) deepening project and the Port of Charleston is constructing a new container terminal to boost throughput by 50%, points out Jack Ellenberg, senior vice-president, economic development and projects for the South Carolina Ports Authority (SCSPA), which owns and operates SCIP, a \$51M facility mostly funded by SCSPA, with Norfolk Southern providing \$7.5M.

Rail already accounts for about 20% of the traffic at

the Port of Charleston, and the Greer facility adds another dimension to that by piggybacking onto a long-standing Charleston-Atlanta train service – an overnight service with daily trains arriving, and the dry port is a strategic mechanism to add on to the end of the overnight train that runs between the cities. For example, the train from Charleston pulls into the dry port, leaves containers and continues to Atlanta. The process is reversed with the train from Atlanta depositing empty containers and picking up export containers for Charleston and the world.

Around the world, various entities internationally have established inland ports in greatly diverse contexts, settings and logistical landscapes. The facilities include the Lat Krabang Inland container Terminal in Bangkok; Port of Madrid's Coslada; Tanzania's Isaka; Skaraborg in Falköping, east of Gothenburg in central Sweden; as well as CenterPoint Intermodal Center in Joliet, Illinois; one in San Antonio, Texas; the Virginia Inland Port; and an inland port now being constructed in Prichard, West Virginia.

There is some disagreement about what exactly constitutes a dry port, according to writings in recent years by experts such as Jean-Paul Rodrigue of Hofstra University in the United States, Theo Notteboom of the University of Antwerp, and Violeta Roso, a senior lecturer at Chalmers University in Sweden. Yet, as Roso has pointed out, dry ports are intermodal with direct rail connectivity to their seaports.

There are many impeti driving such developments. A key driver of the Lat Krabang facility, for example, was intense regional congestion, according to Rodrigue and Notteboom, while at the West Virginia facility now being built, it is creating jobs in a region hard hit by the economic downturn, as well as

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A port with no water... containers arrive and leave on wheels

> The port can handle 40,000 containers a year



Proponents of dry ports point out that while trucks are faster, the facilities are competitive with large volumes. Indeed, the Greer facility is predicated on enough volumes and potential customers to compete for shorter haul, which is not traditional for dry ports. Dry port supporters see other advantages, such as reducing not only the numbers of trucks on roadways, but also the resulting wear and tear on such infrastructure, and the carbon footprint of such transport.

Dry ports can also boost ports' profiles and reach via their hinterland and bring jobs to new areas. At Greer, which opened in November 2013, a number of factors came together to make the dry port happen. Those factors include a proactive port authority, a supportive state and local government, important stakeholders such as Norfolk Southern, and most of all: the presence of BMW, which announced this year a \$1Bn local expansion to its already enormous local presence. Its plant produced roughly 300,000 vehicles in 2013 and with the expansion expects to churn out 450,000 annually.

The automaker, the biggest customer of the dry port, also has a warehouse just yards away from the port, which moves 40 to 50 import and export containers for BMW daily and may soon grow to 70 – the dry port can handle 150 containers in total each day. BMW's containers for export hold semi-knocked down kits for assembly in markets including China, India and Russia.

Domestically, SCIP has also targeted regional

### South Carolina Inland Port (SCIP) profile

- \$51M facility, including \$43.5M from SCSPA, and \$7.5M from Norfolk Southern.
- Broke ground in March 2013; opened the following November despite losing about 100 days to rain during construction, which included covering 19ha of land under a concrete slab.
- Handles 40,000 containers annually, with expansion to 100,000 possible.
- Features two working tracks, each 2,600ft (792m) long and three storage tracks of the same length.



customers – including John Deere, which reportedly has come aboard – shipping goods out of Charleston, an aspect that speaks to the dry port's convenience for truck traffic. Trucking to Greer instead of Charleston cuts hours from a round-trip, an important factor given legal limits on truck drivers' hours on the road. Local access at Greer is relatively easy, and the turn-time averages about 15 minutes. The dry port is also open for containers 24 hours a day, seven days a week, spreading out road congestion and giving customers more flexibility. It's all part of a growing distribution centre on area land: there are air cargo facilities used by FedEx and UPS at nearby Greenville-Spartanburg International Airport, Amazon has a facility, and other developments are being eyed.

In a scenario shared by other dry port proponents, officials see a synergistic situation in which the Greer facility is a strategic fit extending the capabilities, reach and markets of the port. The Port of Charleston remains the hub, of course, with the Greer facility as one of its terminals. In another sense, SCSPA officials see Greer as a logistics bull's eye 212 miles (341km) northwest from Charleston – to a location 500 miles (804km) from more than 90M consumers.

Port officials are clearly enthusiastic about the strategy and potential of the facility and its role regionally. And those 90M consumers are reached from an area that Ellenberg points out is itself a fast-growing region of the United States, and an export leader with a manufacturing and cargo base already in position. As Ellenberg adds, "We're touching pretty much everyone." **PH** 

### FEATURE



## Adriatic aims high

The dynamic East European cargo market has prompted two Italian ports to invest heavily in capacity-expanding projects, writes *Jem Newton* 

Trucks leave the ro-ro terminal at the port of Trieste, Italy he expansion of container and ro-ro capacity at Trieste and Venice ports is a key element in the strategy of the North Adriatic Ports Association to wrest back some of the east-west cargo trade currently handled at northern range ports. By right, much of that traffic should use Mediterranean ports, which are up to 2,000nm (3,704km) closer to Asian markets.

North Adriatic ports hope to change the current economies-of-scale dynamic that favours the bigger northern ports by offering them a multiport strategy to serve the growing markets of Eastern and Central Europe. "With calls at Trieste and Koper in the eastern Adriatic and Ravenna and Venice in the west, you can cover a market that goes from Rome to Hungary and the Balkans down to Montenegro," Paolo Costa, the president of Venice Port Authority, told *P&H*. "The north Adriatic is accessible to a huge market that you cannot serve with a single ship call, so we are offering a multiport gateway."

While Trieste is planning to expand into its harbour area by extending existing terminals (see sidebar), the special status of Venice under Italian law has led its port authority to propose a revolutionary offshore solution.

The proposed offshore platform, which will take an estimated 10 to 15 years to build, will be located about 8nm from the lagoon, where the natural depth is at least 20m. The structure will be protected by a 4.2km breakwater. The offshore concept is a compromise reached by Venice Port Authority to balance the protection of the city's fragile lagoon with the sustainable economic development of its port activities.

Since 2000, cargo vessels to and from the industrial port of Marghera have used a dredged channel skirting the southern edge of the lagoon, well away from the city itself. This channel enters the lagoon at the Malamocco inlet and the offshore platform will be



built in the open sea adjacent to this entrance.

As well as an unloading terminal for oil tankers, the platform will support an offshore container terminal able to accommodate up to three of the largest container ships currently operating.

Instead of a conventional stacking yard, containers will be transferred directly cross-dock onto floating 'boxes' containing up to 380teu that will be conveyed to land on the loading platforms of custom-built semisubmersible shuttle carriers, dubbed 'mama vessels'.

Oil tankers will dock at an adjacent unloading platform, from where oil would be pumped to the mainland storage facility through a 27km steel pipeline, meeting the legal requirement for oil tankers not to enter Venice's lagoon.

Finally, the port authority has recently completed the construction of one of the Med's biggest ro-ro terminals at Fusina, just south of Marghera, able to accommodate four ro-ro or ro-pax vessels simultaneously. The terminal is another element of Venice's strategy to divert larger vessels away from their traditional route through the centre of the historic city. **PH** 

Artist's impression showing the crossdock container operation

**MORE INFO:** www.portsofnapa.com



### The sea's the limit

Trieste was the premier port for the Austro-Hungarian Empire at its peak in the late 19th century and, while it cannot currently match the northern range ports for capacity, it is still an important energy port for Central Europe and can play an important role as an alternative to congested northern ports.

Granted a unique free port status by post-war treaty, the port has a natural draught of up to 18m and proximity to excellent rail links with the emerging markets of East Europe. Trieste is still vital to Central European economies, hosting the SIOT terminal that channels all of Austria's oil imports and supplies the Czech Republic and southern Germany with much of their energy imports.

But despite Trieste's potential as a value-adding processing centre, room for inland expansion is restricted. Some space is being made available in the old port, where Austro-Hungarian-era warehouses and wharves are being refurbished. "We could have small-scale processing there, but there is not much space for activities like a car terminal or heavy industry. For this reason the port authority has recently bought an area of about 3ha [30,000m<sup>2</sup>] inland [in the Prosecco district] as a dry port facility," Dr Francesca Trampus, the authority's director of port estate management, told *P&H*.

But changes on a macro-European level in the next decade could revive interest from investors and cargo operators, and bring a major seaward expansion in Trieste's cargo capacity. The EU has identified Trieste as a major Adriatic gateway port that will connect its proposed trans-European cargo routes – called TEN-T corridors – with the main sea lanes passing through the Mediterranean.

Maersk is already a core client of Trieste's largest container facility, the Marine Terminal, which handled 460,000teu in 2013. However, the Danish box ship operator and other lines are keen to expand operations at Trieste, not least because of the anticipated surge in Central and Eastern European cargo when the two corridors are completed in the next decade.

The Marine Terminal must build seawards to expand its capacity. "Our capacity today is almost 700,000 teu, so we have an expansion potential of about 40%," Marine Terminal spokesman Marco Zollia told *P&H*. The terminal's current maximum capacity is about 1.2M teu. "As well as a major length extension to the terminal, we would like to have a small width extension to allow for a berth on the northern side of the terminal for feeder traffic," said Zollia.

South of the Marine Terminal the port has plans for a major multipurpose logistics terminal on a large site now occupied by general cargo and timber terminals and a partly decommissioned metals terminal owned by Servola Spa. Trieste Port Authority had approved the money and the tender for phase 1 of this logistics platform, which at its greatest extent will total 247,000m<sup>2</sup>, of which about 140,000m<sup>2</sup> will need to be built out into the sea.

"Whichever bidder secures the tender will win because it offers the best solution, but a multipurpose terminal is highly probable since the site is suitable for containers, ro-ro, and general cargo," said Trampus, adding that the second phase of the project would be to repurpose the old metals terminal.

Trieste is next to Italy's border with Slovenia so the environmental impacts and approvals process has been protracted, as any seaward expansion must also be endorsed by the Slovenian authorities. **PH**  FEATURE

# Predicting the supply chain

Demand sensing is a forecasting method that helps eliminate uncertainty in the logistics and supply chain, writes *Dr Fortune U Laurence* 

he growing complexity in ports and maritime trade driven by ongoing world maritime economic reform has exerted much pressure on the sector to minimise costs while increasing efficiency and customer satisfaction in return.

Demand sensing is the surest way to guarantee efficiency improvement, lower costs, and boost customer satisfaction in port logistics, maritime administration, and supply chain management in an increasingly challenging global business environment. Uncertainty is an enemy of business; therefore, uncertainty of demand in international shipping can impact negatively on port logistics efficiency with resultant low customer service level if demand for port services is not monitored and balanced with supply. The ability of ports to foresee changes in demand for facilities sooner can boost port efficiency by prediction and reduction of costs.

The essence of demand sensing in port logistics is to improve deployment and utilisation of port facilities and logistics plans. To achieve these objectives, there has to be an analysis of internal and downstream demand signals such as shipping patterns. In this perspective, tapping into insights by improved collaboration with partners through embedded analytics and collaboration tools would improve consensus forecast. A move beyond simple micro-forecasting with enterprise-scale predictive analytics to a more fundamental macroforecasting within world-scale predictive analytics would create a clear view of customers' demand.

Being able to more accurately sense and respond to customers' demand is the most effective way to improve port management, cargo handling, customer satisfaction, and profitability. The main issue here is how ready is the port to deploy demand sensing within the framework of port logistics and supply chain management. That means delivering the right cargoes to the right customer at the right time at the right cost.

Demand sensing would help ready ports to satisfy customer demand while optimising warehousing and inventories cognisance of certain dependent variables. Deploying demand sensing in ports and supply chain management would not only determine daily demand for port facilities, location, and customer segment but also predict critical situations so minimising expediting and logistics costs.

Ports are an important link in global supply chain management so urgent efficiency improvement are crucial given the 'derived demand' inclination of ports and maritime industry in international trade. Forward thinking ports are embracing demand sensing to meet customers' demand uncertainty while minimising costs and reducing strain on port infrastructural capacity in today's volatile world maritime trade.

Globalisation, competition, faster production development, increasingly flexible manufacturing systems, and an unprecedented number and variety of products are competing in world markets today. Quick response programmes, just-in-time inventory systems, management resource planning, and the like are no longer sufficient to meet the growing uncertainty of customers' demand without deploying innovative demand sensing strategy.

Today, international trade is based on low transport costs. The difference in production costs between country of origin and destination is a function of port logistics given that reduced costs achieved at an efficient port of origin could be negated by high costs incurred at an inefficient port of destination. A lot of maritime transport costs result from missing resources in most countries' port of destination. It is no longer an understatement that cargo flows are induced by cheaper production costs in the country of origin than in the country of destination.

Demand sensing based on demand-driven forecasting has the capability to create an accurate prediction of demand. That accuracy can help ports manage the effects of market volatility and gain the benefits of demand-driven port operations, more efficient port operations, increased level of services, and a range of financial benefits.

The principles of demand sensing cut across the ports and maritime industry and, to a larger extent, the entire supply chain spectrum. Ports that deploy demand sensing in their logistics planning, embedded in global supply chains tend to benefit from reduced constraints on port infrastructural capacity.

The infusion of demand sensing in port management processes impacts port logistics key performance indicators (KPI), namely;

Sensing and reacting to upswings in port demand with a view to capturing marginal revenue and increase in profit margins by avoiding costly port logistics and supply chain inefficiencies resulting from demand uncertainty;

 Improving customer services through efficient port logistics matched to actual customers' demand;

Stabilising port logistics to meet customer's uncertain demand;

Reducing port logistics costs by avoiding unnecessary transhipment and unplanned shipments; and

Reducing warehouse costs with lower inventory costs in port logistics.

I work with TTPM International Consultants, which has designed the first ever comprehensive port demand sensing deployment, operations, and management programme to enable ports all over the world meet the challenges of demand uncertainty and increasing logistics costs in ports and maritime trade.

### What the delegates say...

Delegates who attended the course noted the following: "Attending the Demand Sensing Application in Port Logistics programme broadened my knowledge of how to improve port logistics efficiency while reducing costs in meeting port users' demand uncertainty. It certainly improved my consultancy services to our client ports in India." *Principal consultant, Sutra Consulting Pvt. Ltd, India.* 

"Demand Sensing Application in Port logistics has opened a new chapter in our effort in my port on how to improve efficiency and our response to customers' demand in our port. [It] is knowledge worth acquiring in a competitive environment. It surely will be very useful to my port." Deputy director for Traffic Operations, the Gambia

"Participating in Demand Sensing Application Program in Port Logistics is very beneficial to Panama Canal operations. The the reason why I chose to attend the programme is because the Panama Canal needs strategic knowledge of how to meet customers' demand uncertainty while minimising costs in ports." *Executive vice-president for Planning & Business Development, Panama* 

"Transnet National Ports South Africa will benefit immensely from attending the Demand Sensing Application in Port Logistics Program organised by TTPM International Consultants especially in our transit-transport and transhipment logistics to the landlocked countries of Zimbabwe, Lesotho, Malawi, Botswana, and so on." *Transnet National Ports* 

Ports that are deploying and operating demand sensing strategy are experiencing minimal constraints in meeting customers' demand uncertainty. The main objectives of the programme are:

1. to introduce programme participants to demand sensing as an innovative management strategy in port logistics and enable them to become highly skilled in demand sensing to achieve efficiency and costs reduction;

2. to assist programme participants in acquiring modern techniques to demand forecasting and planning to overcome errors entailed in traditional forecasting; and

3. to enable programme participants to acquire monitoring and evaluation skills required to measure port logistics efficiency performance.

The fundamental aspect of the demand sensing programme is the case study where participants practise the deployment, operations, and management of demand sensing aided with technological software that simulates customers' demand uncertainty with outcomes of meeting demand uncertainty and cutting port logistics costs. **PH** 

MORE INFO: The next course will be held in London from 3-21 November 2014. Go to www.ttpminternational.co.uk or email: f.laurence@ttpminternational.co.uk

## WPCI launches LNG website



LNG carrier Coral Energy at Rotterdam's Gate Terminal

WPCI's LNG Fuelled Vessels Working Group has launched the website www.lngbunkering.org to encourage the wider adoption of LNG as a shipping fuel. The site provides a detailed overview of LNG as ship fuel and illustrates the technical requirements for ships, bunkering infrastructure, vessels under development, as well as the business case for choosing LNG.

"Representatives from some of the world's largest and most progressive ports developed this site for the benefit of all interested industry parties, including port authorities, fuel suppliers and shipping companies," said IAPH president Grant Gilfillan, CEO / director Port Authority of New South Wales, Australia.

IAPH's LNG working group has developed harmonised LNG bunker checklists for various bunkering scenarios: ship-to-ship, shore-to-ship and truck-to-ship, reflecting the extra requirements of ports considering LNG bunkering operations in or near their port environment. Harmonised bunker checklists reduce the potential for confusion caused by having to comply with different rules and regulations at different ports.

The Working Group consists of three sub-Working Groups:

- NG Bunkering Checklist and Accreditation
- LNG Bunkering Risk Perimeters

LNG Awareness Parallel to this, leading class society Bureau Veritas (BV) has published a comprehensive set of guidelines on LNG bunkering to help speed up the adoption of LNG. BV's Guidance on LNG Bunkering NI 618 provides recommendations on LNG bunkering, outlining the

### ICS wants better emission controls

The International Chamber of Shipping (ICS) has called for a harmonised approach to Port State Control inspections in European ports in advance of next January's deadline for the implementation of the 0.1% sulphur Emission Control Areas (ECAs), established in accordance with MARPOL Annex VI.

ICS has underlined the shipping industry's commitment to full compliance with the IMO's sulphur ECA requirements from January 2015, but is concerned that information collected by its member national shipowners' associations indicates that many governments are not yet prepared to implement the requirements in a uniform manner to ensure the prevention of market distortions.

ICS secretary general Peter Hinchliffe said: "The shipping industry is investing billions of dollars in order to ensure compliance with this major regulatory change, and the huge costs involved could have a profound impact on the future structure of the entire shipping industry. We therefore think it is vital that governments get the details of any PSC intervention right as we enter a new world in which fuel costs for many ships will increase overnight by 50% or more."



framework to be established with port authorities and bunkering organisations before any commercial operation is launched, the conditions to be strictly observed during bunkering operations, management of emergency situations and the training of staff involved in bunkering operations.

Meanwhile, leading European ports are ramping up their LNG bunkering options. Rotterdam's bunkering operations for LNG barges have been extended to seagoing vessels from July onwards. At the same time, Gasunie and Royal Vopak announced that the Gate Terminal, the LNG facility they have built jointly on Rotterdam's Maasvlakte, will add an additional harbour basin for small-scale distribution of LNG via bunkering vessels and barges.

Likewise, Rotterdam's nearby rival Antwerp has also announced plans to create an LNG barge bunkering station. The port of Antwerp already had a LNG bunker-truck operation but the creation of a dedicated loading station will make LNG available on demand. The Swedish port of Gothenburg is also offering a discount on port tariffs for LNGfuelled ships. The new tariff will come into effect in 2015 and is aimed at encouraging the take-up of LNG fuel by the port's shipping users.

## Notable numbers

delivery date of the 'world's first' LNG bunkering vessel ordered



estimated number of cranes in the fourth phase of Yangshan Deepwater Port

### MARITIME UPDATE

## DNV GL announces new LNG RP in Qatar

Classification society DNV GL has emphasised the centrality of Qatar to the global LNG industry with its new recommended practice (RP) on LNG bunkering in the Middle East and South Asia, which has coincided with the unveiling of Qatar's strategy to supply LNG as a marine fuel in the Gulf Cooperation Council countries.

Shahrin Osman, DNV GL regional manager, Maritime Advisory, Middle East and India, said: "Qatar's entry as a provider of LNG for the marine industry will be a game changer given that it is the largest single exporter of LNG globally. Concurrently launching the RP will ensure bunkering operations are predictable, safe and compatible in Qatar, across the Middle East and the rest of the world."

The development of international standards has lagged behind the market. The first step addressing the gap was publication of the ISO



Machinery and LNG fuel tank layout of the Trialty tanker... the class society DNV GL has launched its recommended practice on LNG bunkering in the Middle East and South Asia

Committee's draft guideline on LNG Bunkering in June 2013. DNV GL said that on the basis of the ISO principles it had prepared an RP for LNG Bunkering in order to "establish the guidelines and recommendations required to protect people and the environment during the development and operation of LNG bunker facilities".

The number of LNG-fuelled vessels around the world either operating or confirmed newbuilds recently passed the 100 mark.The shipping industry's attitude to



LNG as a marine fuel is changing fast, in no small part due to developments in the Middle East and increasingly stringent environmental regulation. Kuwait's United Arab Shipping Company awaits delivery in 2014 and 2015 of 17 vessels of 18,000teu and 14,000teu capacity from Korean yards, capable of being retrofitted with LNG fuel tanks. Qatar and Dubai are both racing to become the first player in the region to construct an LNGfuelled harbour tug.

Qatar Petroleum is building the first such vessel for Ras Laffan Port. In May, Dubai also announced plans to construct a harbour LNG tugboat through Drydocks World Dubai, in a strategic alliance with Finnish engine manufacturer, Wartsila.

## Togo pilots single window for foreign trade

In a bid to enhance the competitiveness of the Togolese economy, SEGUCE Togo (the Société d'Exploitation du Guichet Unique pour le Commerce Extérieur au Togo) launched the pilot phase for a single window for foreign trade in Togo on 30 June. This structural reform aims to also help the country benefit from its strategic geographical location.

The first stage of the project is being rolled out for maritime imports and will be extended to all import functionality, export, transhipment and transit for freight traffic. In 2015, the single window will be extended to land borders and Lomé airport.

"This innovative solution meets the requirements of trade facilitation. It reduces the time and costs of commercial transactions and related logistical operations, simplifies procedures for import, export and transit, and improves transparency in relations between the business community and the authorities," said Olivier Lederer, CEO of SEGUCE Togo.

In the pilot phase, the single window will manage the different stages of maritime import, from the announcement of the ship arrival to the release

- of the goods, including:
- Prediction of call
- Ships manifestVessel arrival
- vessei arriva
- Discharge
- Delivery order
- Customs declaration

- Issue of invoices
- Payment of Fees
- DFU
- Transporter identification
- Release note and release of goods

This first step will be followed by extension to all import functionality, export, transhipment and transit for freight traffic, and in 2015, the single window will be extended to land borders and Lomé airport, said Soget and BV in a joint statement.



the EU subsidy awarded to promote LNG use in shipping



the increase y/y in numbers of sea-robbery and piracy incidents in 1H14



"There would be a responsibility on port states to manage the situation..."

Following on from the Ebola-hits on Guinea, Liberia, Nigeria and Sierra Leone, the Ivory Coast blocked access to ships arriving from countries affected by Ebola for two days last month.

Abidjan Port Authorities issued an official circular to all owners and agents advising that from 12 August vessels arriving from one of the contaminated countries would not be allowed to call at the Port of Abidjan, but the block was lifted on 14 August.

Meanwhile, according to a Chinese news source, a vessel from Sierra Leone was put in quarantine in Sao Vicente, Cape Verde.

The International Chamber of Shipping (ICS) has provided a protocol for commercial ships encountering boatloads of migrants from parts of Africa affected by the Ebola virus.

Depending on the area, preventive measures might differ, however, "in places like Liberia, which have recently identified a national emergency, our advice [to the ship] would be not to get involved as you would be putting the crew at risk in a confined place", ICS told IHS Maritime.

"There would be a responsibility on port states to manage the situation, so it would be more for national navies and resources. Should the crew identify such vessels they should contact the navy in the area to seek advice and get them airlifted if necessary," said ICS. International ship suppliers such as Hutton's Group also assist by highlighting a range of medical protective equipment available for use in pandemic situations and advising ship operators on what measures to take to prioritise the health of their crew.

"We have noticed a greater awareness about illness control and prevention on board vessels since the outbreak. Protective measures are very necessary. Vessels calling at a country affected should have strict protocols in place before arrival on how they intend to protect themselves," John MacDonald, general manager of Hutton's Medical, told P&H.

Marine insurers have also advised clients to ensure their

crews take every precaution against the ebola virus and that they should be made fully aware of the risks the virus poses.

Richard Stevens, claims executive at Standard Club, told P&H that it continued to monitor the outbreak of Ebola in West Africa and was aware that the World Health Organization (WHO) had reported a further increase of cases in the region. "The club is guided by the views and recommendations issued by the World Health Organization and our network of local correspondents. We would advise all our members who trade in West Africa to be well aware of the current guidance issued by WHO," Stevens added.

The club noted that although WHO had not recommended any trade or travel restrictions to Guinea, Sierra Leone or Liberia (as of 27 July) it was "clearly of utmost importance for members to monitor the health and wellbeing of their crews and take all necessary precautions to prevent infection". With this in mind, Stevens said it was "prudent" to advise crews to remain aboard vessels while in port in those countries to reduce the risk of coming into contact with individuals carrying the virus.

## Hamburg Süd gets connected

Seven Hamburg Süd-chartered container ships that regularly call at the US west coast ports of Long Beach, Los Angeles, Port Hueneme and Oakland, California, were equipped with L-3 SAM Electronics SAMCon high-voltage onshore power connection facilities, said SAM Eletronics in a press release. This equipment will enable the vessels to meet California's clean air regulations.

The SAMCon system installed on the Hamburg Süd vessels consists of a 40-foot container incorporating a range of electrical components that can accept up to 3.5 MVA transferrable power at 6,600 volts, together with a medium-voltage switchboard and a water-cooled step-down transformer, said SAM ELetronics. Each system also includes control and monitoring facilities and an



IEC 80005-1-compliant interface between ship and shore.

72km the length of the Suez Canal's extra 'lane'



of claims costs result from operational incidents within a port or terminal

## Pirates attack in open ocean

Open-ocean attacks could be a 'game-changer' in Gulf of Guinea piracy, according to a recent Dryad Maritime report.

In the early hours of 9 August, a product tanker transiting immediately beyond Nigeria's territorial waters was heavily fired upon by up to three smaller vessels. The pirates then attempted unsuccessfully to board the vessel.

Dryad Maritime COO Ian Millen warned that the attack could signal a change in pirates' tactics.

"It is feasible that an intelligenceled operation was mounted

against this vessel," he said. "It would be easy to characterise this event as just another statistic in the story of Gulf of Guinea maritime crime, but to do so would be missing one very significant point: the

Inspection of weapons that pirates may use

## AnchorageNet

Inshore patrol vessels and aircraft are difficult to provide to vessels at anchor, considering the large sums of money required for this type of security. Yet the level of robberies on board vessels at anchor in places such as Indonesia and Bangladesh remain problematic.

While the economic impact of these attacks is virtually insignificant with robbers tending to loot the valuables, the potential for serious violence against the crew or kidnapping people to be held for ransom is always lurking in the background.

Data from the International Maritime Bureau show there were 65 attempts to rob a vessel at anchor or while in a berth up to June 2014. Only two of these attacks occurred during daylight. Of the 65 attempts, 26 were abandoned due to the crews' alertness. These figures provide

open-ocean nature. The attempted boarding of a vessel at night and this far out in open seas is a tactic more usually associated with highly motivated Somali pirates – and only then on a small number of occasions."

Drvad Maritime, which has issued an advisory to ship operators transiting the area, said the incident could herald a change in pirate capability that

important insights because on a small number of the occasions that the robbers did succeed in stealing ships' stores they also threatened the crew with knives.

"These figures show that the point at which vessels at anchor are most vulnerable is during the night. While preventing stores and engine room parts being stolen is not necessarily a high priority, the protection of the crew from the threat of violence is an obligation on all masters," said security expert Dr Dave Sloggett. Creating a secure WiFi network that enables information and imagery collected from cameras on vessels to be shared in real-time between vessels in an anchorage could be a cheaper viable solution in protecting crew, he argues. "It would also share the picture it generates with the port and harbour authorities," Sloggett told P&H.

He dubs the network AnchorageNet, and each vessel would be a node in the network while they were either in the anchorage or berthed alongside. would be difficult for regional forces to handle.

"This could be a real gamechanger for this specific type of crime if repeated, one that would match the strategic shock earlier in the year when the tanker MT Kerala was snatched from an anchorage off Angola," said Millen.

While there have been similar attacks on vessels off the Niger Delta up to 160nm out, these have largely been crew kidnap incidents.

Further details of the attack are vet to be analysed.

"That would enable their position at anchorage or in port to be exchanged with other vessels. The situation of all the vessels would then be displayed on a computer screen with information on recent robberies (such as the time they occurred) in the area provided to all crews," he added.

A decision support system run on each vessel would then work out the best way to use any on-board camera systems to provide the widest possible coverage of the anchorage and harbour as is possible. The aim would be to use past knowledge of typical approach routes that might be used by pirates and robbers and ensure they were covered day and night using infrared cameras. The duty watch officer on each vessel in the network would be able to switch between the various cameras to provide an alert to all vessels in the anchorage or harbour of a possible suspicious approach. Once a threat was detected a general alert to all crews to muster would be sounded.









Hamburg's dinner evening at the previous conference in Los Angeles

## 29th World Ports conference

Hosted by Hamburg Port Authority (HPA), the IAPH Hamburg 2015 29th World Ports conference will take place at the Congress Center Hamburg (CCH) from 1-5 June 2015.

Next year the Port of Hamburg will be the venue for the premier event of the port community. Under the banner theme of "City of Hamburg - Calling at the smartPORT" some1,000 quests from all over the world will gather in Hamburg to debate the importance of sustainability in the maritime industry. On the example of the Port of Hamburg the HPA will demonstrate how intelligent port management helps to strike a balance between the needs of business and the environment. For more information about the conference and how to register, please go to www.iaph2015.org. If you secure your place at the conference now, you will benefit from the early bird offer.

During the five-day conference of the IAPH (International Association of Ports and Harbors) ir: Hamburg international representatives from business, politics and science will address the challenges confronting us all in times of globalisation and climate change and discuss alternative actions to ensure sustainable economic growth with as little impact on the environment as possible. The biennial conference will be held at the Congress Center Hamburg (CCH).

Apart from sharing knowledge and experiences during the conference days, the event also is about networking. An exhibitor and trade show area as well as a diverse supporting programme will provide delegates with excellent networking opportunities. A range of sponsorship packages are available for companies to present their products and services, maximise brand awareness and build contacts. In the evening conference attendees can look forward to visits and gala events at Hamburg's city hall, the Chamber of Commerce or the Fischauktionshalle [fish auction hall] as well as sightseeing tours in the Port of Hamburg.

At the IAPH conference in Los Angeles (LA) last year, the Hamburg Port Authority introduced itself as an attractive future host: the HPA's Managing Director, Jens Meier, gave the international audience from the maritime industry a first idea of the concept called smartPORT Hamburg. Initial concrete measures of the concept have already been put in place. On top, the HPA claimed the audience's attention with its TV format "Hafen TV". The clips about the Port of Hamburg were awarded with the IAPH Port Communications Award 2013 which a delighted Jens Meier accepted at the conference in Los Angeles. The "Hamburg Night" in LA gave a taste of what quests can expect in 2015: the HPA staged a gala dinner accompanied by live music and dancing under the wings of the awe-inspiring space shuttle Endeavour which provided for a stunning backdrop. Jens Meier, Managing Director of the Hamburg Port Authority: "We are delighted to host the next IAPH World Ports Conference in Hamburg and make the Port of Hamburg "the window to the world" for businesses. At the same time the exchange with other port representatives is a perfect opportunity for participants to think outside the box and learn from each other."

You can find more detailed information about the 29th IAPH World Ports Conference at www. iaph2015.org. The website also features all "Hafen TV" video clips aired so far as well as a new TV format called "smartPORT TV" that updates viewers on what's happening at smartPORT Hamburg on a fortnightly basis. For more details, contact: Britta Watterodt, IAPH 2015, info@ iaph2015.org, www.iaph2015.org





## Executive committee members

As a result of the elections held in two regions of Africa/Europe and Asia/Oceania to fill vacancies on the IAPH Executive Committee (Exco), the following IAPH members were elected as new Exco members by IAPH Board of Directors on 8 July.

Africa/Europe region – Richard Anamoo, director general, Ghana Ports and Harbours Authority, Ghana, has 25 years of extensive experience in the inception, management, control, and implementation of various port development projects in Ghanaian ports including the fishing harbours.

Asia/Oceania region – Jun-Kwon Park, director general, Ports and Harbors Bureau, Ministry of Oceans and Fisheries, Korea, formerly with Masan Regional Maritime Affairs & Port Administration, the Ministry of Maritime Affairs & Fisheries, UN ESCAP, and Korea Maritime & Port Administration.

Congratulations to the newly elected Exco members!



Richard Anamoo



Jun-Kwon Park

Women's forum

## How Port Fit came to be

*Diane Edwards* looks at the new perspective women can bring to long-lived problems

We have talked a great deal about the importance of having more women enter our industry, but this is not a token gesture. In an industry such as ours, progress relies on fresh thinking and innovation by ensuring a diverse workforce where people can offer new perspectives. This is why women are so valuable. They may bring the same skills as their male colleagues, but also bring different range of life experience that means they can often offer alternative analysis and problem-solving techniques to bear on issues that the industry may have been facing for many years.

An example where I have seen this in action is in our Health and Safety area. In an industry with so many inherent dangers, such as working with heavy machinery, dealing with hazardous cargo, working with high-voltage cabling, the dangers of working in and around water, etc, the need for vigilance is ever present. Yet all too often, preventative initiatives in health and safety centre focus almost entirely on process and compliance, forever making and amending rules and increasing training so that people understand and follow the rules.

Sheri Suckling, health and safety advisor at Ports of Auckland, decided to look at

safety from a different perspective. While pondering why so many staff were straining muscles and tearing ligaments despite training, it occurred to her that training and rules would never be enough if people did not have the core fitness needed for the job. Linking this insight to her own knowledge of exercise programmes, Port Fit began to take shape.

Using a collaborative approach Sheri drew in other areas of the business and externally helped to put together an exercise programme designed and run by fully qualified fitness instructors. It seeks to



Thinking laterally - Sheri Suckling

improve core fitness by targeting strength, agility, and aerobic capacity. In particular it teaches the right way to lift, turn and stretch, and provides exercises to strengthen the shoulder, back, abdominal, arm, and leg muscles.

Classes are paid for by the Port, which has also equipped a room. Timed to coincide with stevedoring shift changes, with early morning, afternoon, and evening timeslots available, attendance is initially expected for one hour a day, five times a week for 12 weeks. Thereafter, they move to a maintenance cycle where attendance drops to three times a week, sufficient to sustain the level of fitness attained.

Sounds gruelling? Those attending say it has been fun. Set to music and the atmosphere is fun and the camaraderie that has developed has brought together people who might never have mixed before. Also the group set up means that people support (and compete with) each other, so it does not feel like work.

So far, more than 50 staff members, male and female, have participated in the programme with some amazing results. Some have lost weight, all have increased their personal bests and of course, overall health and strength has increased to level where it is clear there are benefits to individuals and the company in reduced injuries. It is all because someone started to think about the problem from a different perspective.



## New chair of IAPH committee

On 10 July 2014, President Gilfillan appointed Capt K Subramaniam – assistant general manager (regulatory and operations) at Port Klang Authority, Malaysia - as the new chair of IAPH's Port Safety and Security Committee. Since former chairman Shane Hobday left the position in early 2013, Capt Subramaniam, who has been vice chairman since February 2011, has served as vice chairman and acting chairman for the committee meetings at Los Angeles in 2013 and Sydney in 2014.

## Hail, farewell at IAPH Europe

Dutch national Evert Wildeveld who has worked in the maritime field in the Netherlands has succeeded Fer van de Laar, who has stepped down as managing director, IAPH Europe as of 1 July 2014.

For the past 24 years, Wijdeveld has been the policy advisor for safety and environment at the port and industries' association Deltalings, advising members on labour safety, external safety, environmental affairs, transport of dangerous goods (in bulk and containers), negotiations with local, regional and national government on all of those topics, and co-ordination with college associations and the Confederation of Netherlands



Evert J Wijdeveld

Industry and Employers (known as VNO-NCW).

However, van de Laar will stay on as administrator of the Environmental Ship Index (ESI) programme of the World Ports

Climate Initiative (WPCI) for the time being; his official farewell will be at the 29th IAPH World Port Conference in Hamburg in June 2015.

Since 2006, van de Laar has represented IAPH at numerous meetings and conferences of IMO, ILO, ECOSOC, UNEP, UNCTAD, and WCO and numerous other organisations with whom IAPH enjoys a friendly tie of co-operation, such as PIANC, ICHCA, INTERTANKO, ICS, OCIMF, ISO, etc, contributing to promoting IAPH in the world maritime community.

As he took up the reins, new MD Wijdeveld commented: "I am sure I will enjoy working for and with our IAPH members!"

## Membership notes

The IAPH Secretariat is pleased to announce the following new members of the Association:

### **Regular members**

GIE	HAROPA	(Harbours	of L	.e ŀ	lavre	e, Rouen	and Paris)

	Address:	34 Boulevard de Bolsgullbert 76022 Rouen Cedex–BP
		4075, FRANCE
Q	Telephone:	+33 1 40 58 29 05 (France-Paris)
0	E-mail:	antoine.berbain@haropaports.com
	Website:	http://www.haropaports.com
	Representativ	e: Antoine Berbain, group chief executive officer
Ροι	rt of Palm Bea	ach
	Address:	One East 11th Street Suite 600 Riviera Beach,
		FL33404, U.S.A.
Q	Telephone:	+1-561-842-4201
	Fax:	+1-561-842-4240

almira@portofpalmbeach.com http://www.portofpalmbeach.com Manuel Almira, executive director

### **Associate Members**

### Dewberry

🚹 E-mail:

Website:

Representative:

Demberry	
Address:	8401 Arlington Blvd. Fairfax, VA, 22031, USA
🔇 Telephone:	+1-703-849-0192
🖪 Fax:	+1-703-849-0267
👩 E-mail:	dstone@dewberry.com

### Website:

http://www.dewberry.com Representative: Donald E Stone, Jr, CEO Nature of Business Activities: Architecture, engineering consultant.

### **ARK Technology ehf**

🖪 Address: Austurstraeti 17 101 Reykjavik, ICELAND C Telephone: +354-519-3800 🕐 E-mail: ark@arktech.net Website: http://www.arktech.net Representative: Dr Jon Agust Thorsteinsson, CEO Nature of Business Activities: A research company founded in 2013 in Reykjavik, Iceland, that uses advanced technologies to study the environmental impact of vessels sailing to and from ports in the Nordic region.

### **INPLAN GmbH**

	Address:	Grat-Zeppelin-S	trasse 10-11, 46149 Obernausen,
			GERMANY
Q	Telephone:		+49-208-6591-950
8	Fax:		+49-208-6591-980
0	E-mail:		p.stratmann@inplan.de
	Website:		http://www.inplan.de
0	Representative:		Mohamad Itani, CEO
0	Nature of Business	Activities:	Software manufacturer for port
	manage	ement, terminal o	operations, and maritime traffics.

IAPH INFO

## Obituary

IAPH Honorary Member and the first IAPH Europe Office Representative Alex J Smith passed away on 13 June in Findochty, Scotland, at the age of 87. He had reportedly been ill for over a year.

When Smith was executive secretary of the British Ports Association, he became the first IAPH liaison officer with the International Maritime Organization (IMO) in 1974 and the first IAPH European representative in 1981.

During those years, IAPH was growing rapidly and needed to lobby international organisations located in Europe including IMO to promote its cause and protect interests of world ports.



Alex J Smith at the 16th Conference in 1989 hosted by Port of Miami

Until being succeeded by Peter van der Kluit in 1999, Smith represented IAPH at numerous meetings of IMO and other relevant UN agencies. For all contributions he made to the association, he was named IAPH Honorary Member at the 18th IAPH Conference in Sydney in 1993.

## IAPH Awards 2015

Entry to five IAPH awards is still open. All have submission dates of 31 December 2014 and are open to paid-up members of the Association.

There are two individual awards – the Akiyama and the Hamburg Open – and three organisational ones – port communications, port environment, and information technology. While more than one employee of a member organisation may enter, only one entry per person is allowed.

Please note: For a list of eligible countries, and a full list of the rules/ guidelines for drafting and submitting a successful entry – please go to www.iaphworldports.org/awards2015.aspx

MORE INFO: www.iaphworldports.org/awards2015.aspx

## Visitors to IAPH head office

IAPH member port from Spain, Autoridad Portuaria de Bahia de Algeciras (Port of Algeciras) visited the IAPH Head Office on 20 June. After making a presentation on the port, they talked about their first promotional activities planned in Tokyo.



(L to R) Hiro Nagai of IAPH Secretariat; Nicolás Martínez, Head of Development Division, Port of Algeciras; Secretary General Naruse; Gerardo Landaluce, Development & Commercial Director, Port of Algeciras; Mizuko Uchida, Spanish Embassy in Tokyo; and Hisayoshi Tokui of IAPH Secretariat

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2016

## Dates for your diary

A selection of forthcoming maritime courses and conferences

### **October**

- 1-3: TRANSTEC 2014, St. Petersburg, Russia http://transtec.transtec-neva.com
- 6-24: Strategic Port Pricing & Commercial Billings Management, London, UK www.ttpminternational.co.uk
- 7-10: Asia PORTS, Jakarta, Indonesia *www.asia-ports.com*
- 8-10: The 34th WISTA International AGM & Conference, Limassol, Cyprus www.wistacyprus2014.com
- **13-17** Safety Management in the Port, Singapore *https://www.psa-institute.com*
- **13-24:** Port Environment Policy & Technology, Antwerp, Belgium www.portofantwerp.com/apec
- Starts from
   Fundamentals of Maritime Trade & Transport

   13:
   (distance learning)

   www.ibc-academy.com
- **14-16:** TOC Americas, Cartagena, Colombia http://tocevents-americas.com
- **15-17:** 2014 GreenPort Congress, Barcelona, Spain *www.greenport.com/congress*
- **14-17:** SIBCON 2014, Singapore *www.sibconsingapore.com*
- **16-17:** The PortExecutives Seminar, Naples, Italy *www.porteconomics.eu/portexecutive.html*
- starts from Fundamentals of Container Terminal Operation and
- 21: Management (distance learning) www.ibc-academy.com
- **23-24:** 12th Intermodal Africa South 2014, Durban, South Africa *www.transportevents.com*
- **27-07** Port Management and Operations Course, Singapore *November: https://www.psa-institute.com*



Port of Marseille Fos

Geography has granted Marseilles Fos a unique gift, combining exceptional maritime accessibility with naturally deep-drafted terminals

## Marseilles on the move...

The newly-elected CEO of one of the biggest ports in France, *Christine Cabau Woehrel*, highlights Marseilles Fos' plans for cooperation with Europe and beyond

As long as Marseilles has existed – and that's now more than 26 centuries – its destiny has evolved around and been driven by its port.

Its history is built around the Mediterranean trade and flows. However, globalisation, multimodalism and containerisation are now paving the way towards a new future for Marseilles Fos, and drawing a new era in its development, in an enlarged environment. Its new challenge is called Europe.

Geography has granted Marseilles Fos a unique gift, combining exceptional maritime accessibility with naturally deepdrafted terminals, and a privileged position where Mediterranean countries meet Europe's hinterland, where South meets North, where Africa, the Americas and Asia meet Europe at the same crossroads.

The synergies of our two complementary sites – Marseilles and Fos – give our clients the best and most flexible options to handle massive and dedicated flows, as they can shelter the smallest warehouse to the most developed industrial complex, all within a dynamic and professional environment where shipping experts are eager to meet you.

This privileged situation imposes on us essential obligations to fulfill: to organise economic and industrial growth within a framework aimed at environmental sustainability and preservation of biodiversity

to harmonise the port's growth within the city and within its neighbouring territory
 to implant port development within the scheme of global industrial innovation, especially in the field of energy

to place Marseilles Fos on the world scene as a decisive partner to transoceanic maritime solutions as well as a powerful regional actor in the intra-Med and intra-European maritime future.

The programme is vast but simple: multimodal and logistic infrastructures, improved and congestion-free container facilities, land availability for new developments, industrial platforms providing collective energy resources or mutually shared functional solutions, improved passenger and cruise facilities, technical and commercial support, expert training.

Yet success depends only on the ability to join forces. We are therefore advocating for the creation of a MedPort forum where West Med, North Africa, Central and East Med ports can meet and share combined solutions, exchange examples of best practice, create a joint environment to boost trade flows and make ports the best place for economic growth.

We are ready to meet those challenges. Marseilles Fos is on the move and we invite you to come and see for yourself. RH



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The International Association of Ports and Harbors (IAPH) is a global alliance representing over 190 ports in 85 countries. Together, IAPH member ports handle over 60% of the world's sea-borne trade and nearly 80% of the world's container traffic. It is a non-profit-making and non- governmental organisation headquartered in Tokyo, Japan.

IAPH provides a platform to develop and foster good relations and co-operation among the world's ports and harbors through forums where opinions and experiences can be exchanged. It promotes the role ports play in waterborne transportation and in today's global economy.

### Benefits of membership include:

- Free copies of IAPH publications including Ports&Harbors, Membership Directory, newsletter and full access to IAPH website
- A voice for your port via IAPH representatives within organisations such as IMO, UNC TAD and WCO
- A chance to influence decisions at IAPH's technical committee meetings
- Networking opportunities at IAPH's meetings and conferences, plus reduced registration fees for these events



To apply for membership please email info@iaphworldports.org or visit www.iaphworldports.org





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