



PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

Revving up

Prince Rupert's expansion project

Trade wave

Cuba on the cusp

Upgrading ports

Brazil's modernisation 2.0 programme

Focus on the Americas

East and West coasts compete



CONTAINER TRADE EUROPE CONFERENCE

SEPTEMBER 23 - 24, 2015
HAMBURG, GERMANY

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CONFERENCE THEME

NAVIGATING A CHALLENGED SYSTEM

KEYNOTE SPEAKER

Rolf Habben Jansen, *CEO, Hapag-Lloyd, AG*

FEATURED SPEAKERS

Fabian Wendenburg *of the German Federation of Industries*
Victor Helmond, *Container Lead, EMEA, Cargill*

CONTAINER SHIPPING OUTLOOK — CARRIERS PLOT A NEW COURSE: Is container shipping supply and demand heading in a favorable direction for carriers and shipowners?

SEAPORTS — THE NEXT GREAT BOTTLENECK IN INTERNATIONAL SHIPPING: Some technology is improving the flow of containers in and out of large European ports, but analysts increasingly believe a quantum leap in port productivity is needed or efficiency will deteriorate at ports, leading to further delays for containerized cargo.

SHIPPER PERSPECTIVES: What are shippers' viewpoints on the major challenges and risks across the container supply chain, including issues such as big ships, carrier alliances, port congestion, sustainable/green shipping, inland/hinterland connections and contracting? A panel of importers and exporters will answer these questions and more in a roundtable discussion.

DOWNSIDE OF MEGA-SHIPS — HIGHER RISKS FOR SHIPPERS AND FORWARDERS: The larger the ship becomes, the greater the liability. But who is liable for loss or damage? Do smaller forwarders have to reach NVOCC status to be able to advertise all-inclusive pricing? Should shippers avoid placing too much cargo on a single ship given the possibility of a casualty?

EUROPEAN RAIL — COMPETITION CRANKS UP: Private competition to established state-owned European rail operators is transforming the landscape for shippers, who now have more options for reliable and environmentally friendly inland container rail to and from major European ports. For shippers seeking to reduce cost and reduce CO2 emissions of their supply chains, what are the current realities of utilizing rail for all or part of inland moves?



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From Canada down to Brazil – routes and resources are the focus of fierce competition

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Publisher:
Susumu Naruse, Secretary General of IAPH
info@iaphworldports.org

EDITORIAL & PRODUCTION

IHS Maritime
Sentinel House, 163 Brighton Road,
Coudsdon, Surrey CR5 2YH, UK
Tel +44 (0)203 253 2100

PUBLICATIONS

Head of Publications: Nick Blackmore
Email: nick.blackmore@ihs.com

Publications Editors:
Mike Brock, Richard Halfhide, Lisa Maher

CONTENT

Head of content: Neil Wiese
EMEA managing editor: Penny Thomas
APAC managing editor: Crystal Chan
Americas editor: Greg Miller

DIGITAL

Digital Editor: Yannick Guerry

CHIEF MARITIME ANALYST
Richard Clayton

COPY EDITING

Director, EMEA editing & design:
Jonathan Maynard
Chief sub-editor: Thomas Brown
Deputy chief sub-editor: Terry Gault

DESIGN

Senior Manager: Carol Kidd
Manager, Design: Hannah Kidd
Designers: Mark Newton, Carolina Lorenzo

PRODUCTION

Director EMEA, Production Services:
David Ward
Production Controller: Martyn Buchanan
Image Services Manager: Jo Agius

GENERAL

Senior director, Insight
IHS Maritime & Trade: Louisa Swaden
Senior director, global editing,
design and production: Sara Morgan

ADVERTISING SALES

Advertising and Subscription Sales:
Group sales manager: Natasha Bailey
Tel: +44 (0)203 532 2142
Email: natasha.bailey@ihs.com

SUBSCRIPTIONS

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the IAPH at:
7th Floor, South Tower,
New Pier Takeshiba
1-16-1 Kaigan, Minato-ku
Tokyo 105-0022, Japan
Tel: +81-3-5403-2770
Fax: +81-3-5403-7651
Email: ph@iaphworldports.org
Web: www.iaphworldports.org

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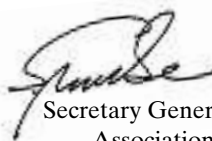
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Dawei reawakens

SG Naruse looks at a much-discussed project
that could catalyse shipping changes



Susumu Naruse

Secretary General – The International
Association of Ports and Harbors



Inited by the governments concerned, I visited Bangkok in July to have discussions with stakeholders and give some advice to the Dawei Port Project that is planned in southern Myanmar.

This is one of countless infrastructure projects in Asia that, according to estimates by the Asian Development Bank (ADB), require USD8 trillion to be invested between 2010 and 2020. As readers may know, to meet such investment requirements in the region, China proposed a new international organization, the AIIB (Asia Infrastructure Investment Bank), which has caused some arguments between the countries concerned.

Located about 300 km west of Bangkok, Dawei Port could become a new gateway to Europe, the Middle East and India, not only from Thailand but also some Indochinese countries (such as Vietnam and Cambodia) that are to be connected to the port via the under-construction ASEAN (Association of South-East Asian Nations) Southern Highway.

The rationale behind the project is: first, the export of goods to Europe from the region (typically manufacturing factories in the Bangkok area). These currently take a sea route via the

Malacca Singapore Strait from Laem Chabang Port. Using Dawei Port and the highway could shorten the route by some 3,000 km. Second, businesses in advanced ASEAN economies can tap relatively inexpensive labour if they relocate to industrial areas in Myanmar that are planned adjacent to the port. Third, the ASEAN region

can acquire an alternative export route to western countries that bypasses the piracy-plagued Malacca Singapore Strait.

The project used to be managed on a build-own-operate basis by a private company, but was suspended three years ago due to huge financial problems. After lengthy discussions among the stakeholders it was agreed that the project would be handled by the governments of Myanmar, Thailand, and Japan.

I am not 100% sure whether the project is viable. It is obvious that it could improve the transport structure in Indochina, but, at the same time, there are many difficulties to overcome: customs transactions in different countries, technical challenges of infrastructure construction and, above all, the huge resources (some estimates exceed USD10 billion) necessary. Like many other greenfield projects in the region, it will need more technical studies, economic analyses and discussions. I'll report to IAPH members once substantive progress has been made on this project. **PH**

“It is obvious it could
improve the transport
structure in Indochina”

Port updates

► CLEANER SHIPPING

A study by the DCMR Rotterdam Environmental Protection Agency shows that the air in the western part of Rotterdam's port area contains about 20% less sulphur dioxide (SO₂) than in 2014. This improvement reflects the requirement on shipping from the start of the year to use cleaner fuel in the North Sea and when entering the port.

► DAVIE LNG FERRIES

The first of two LNG-powered ferries under construction at Davie has been launched from one of its construction berths using pneumatic lift bags. Hull 723 is the first ship built in full using Davie's new integrated ERP and 3-D ship design suite and the first LNG-powered ferry built in North America.

► LOAD MEASUREMENT

Strainstall, part of James Fisher and Sons, has designed and delivered a load-monitoring system for the Dampier Floating Deck – the world's largest floating wharf – at the port of Dampier, Western Australia. The system monitors the load between the floating deck and the main cargo jetty piles during mooring operations. It "offers reassurance during critical operations" by providing detailed data on and analysis of the structure's performance and also indicates when load thresholds have been exceeded.

► CONTAINER TERMINAL

DP World has begun work on a new USD1.6 billion container terminal at Jebel Ali port. Phase 1 of Terminal 4 will add 3.1 million teu, bringing the port's capacity to 22.1 million teu by 2018. The port complex will be equipped with at least 110 cranes with a total quay length of about 11,000 m. A 3,000 m causeway and bridge is being constructed to provide land access by the end of this year.



Busan Port Authority

South Korea is aiming for greater integration between Busan New Port and Busan North Port

Busan seeks more transshipment

The South Korean government has plans to further develop Busan port to secure more transhipped containers. Firstly, the port's container terminal functions will be integrated so that container handling at Busan New Port and Busan North Port will be seamless.

Even as Phase 2 of upgrading works are under way – scheduled for completion by 2020 – the Ministry of Oceans and Fisheries (MOF) plans to conduct a feasibility study on Phase 3 of the development to develop the northern area of Busan New Port.

The ministry has also accepted a request for berths at the New Port from Intra-Asia shipping lines, which mainly uses the North Port. MOF will initially use

the Phase 2-5 Project area's small and medium docks for handling volumes from intra-Asia shipping lines, then review whether to allow shipping lines' equity participation in operating rights for the New Port's terminals.

MOF plans to improve access for larger container ships by dredging the New Port from 15-16 m to an increased depth of 17 m.

Tohdo, an island situated at the entrance of Busan New Port, will be demolished to make it easier for ships to enter the port. The seaway will also be expanded.

Container-handling systems will also be improved to maximise port operation efficiencies and make it easier for containers to be transferred between terminals. To realise this, a multipurpose dock at

the meeting point between northern and southern container docks will be used as a driveway for yard tractors and as a joint container yard. Boxes will therefore not need to travel on exterior roads and the costs of operating empty vehicles will be reduced.

Also, unloading equipment, such as container cranes, will be improved. Busan Port Authority plans to accelerate integration of the existing North Port operators to stabilise the container stevedoring market and the employment situation.

In line with Busan's green port goals, yard tractor operators will be encouraged to switch fuel from diesel to LNG.

As containers are increasingly diverted to the new port, Busan North Port's operations are being gradually phased out. When that is done, the site will be redeveloped into an offshore and maritime cluster consisting of a yacht academy, marina, and fishery processing facilities.

Port of Sines breaks cargo-handling record

Port of Sines broke its cargo-handling records in the first half of 2015 with its highest volume for both cargo and containers since the Portuguese port began operating in 1978.

With a first-half throughput of

21.7 million tonnes, Sines achieved growth of more than 25%. All types of cargo contributed to this surge, since all five of the port's specialised terminals grew during the period.

Containerised cargo climbed

13% year on year to 676,898 teu, with June posting an overall tally of 140,970 teu.

Bunkers supply increased by 30%, while gross tonnage gained 11%, and the total of vessels handled was up by 8%.

Port of Savannah to receive more intermodal support

The Port of Savannah is expected to see a rise in container volume thanks to a planned USD24 million rail intermodal facility.

The Appalachian Regional Port, to be located in Chatsworth, Georgia, will be a public-private partnership between Georgia Ports Authority (GPA), the state of Georgia, Murray County, and rail operator CSX.

The project aims to provide an intermodal rail alternative to highway truck volume and making US exports more competitive – both goals that could help the Port of Savannah increase its container business.

"This new inland terminal will open the door for economic opportunity and job creation for Northwest Georgia and the region," commented Georgia governor Nathan Deal, when signing a memorandum of agreement establishing plans for the inland port in July. "By providing a direct link to the Port of Savannah, the Appalachian Regional Port will create and expand international markets for businesses, and further the economic success of the southeastern US."

Located on 17 ha in Murray County in Northwest Georgia, with a service area to include North Georgia, Alabama, Tennessee, and parts of Kentucky, the intermodal facility will have on-terminal rail adjacent to US Highway 411, with access to Interstate Highway 75.

The facility is scheduled to open by 2018 with an annual capacity of 50,000 containers, according to GPA, which will be its operator. The authority expects capacity to double over the span of a 10-year development plan.

GPA also pointed out that the inland port's location is within an industrial manufacturing belt that includes the production and export of carpet and flooring, automobiles and tyres.

"The Appalachian Regional Port will make those commodities more competitive in the global market by saving port customers money on inland transit costs," said GPA executive director Curtis Foltz. "Moving more containers to rail will also reduce carbon emissions."

The port estimates the CSX rail route will reduce Atlanta truck traffic by 40,000 moves annually,

creating a new intermodal option to and from Savannah. Each container moved by rail to or from the inland facility will offset 570 truck km on Georgia highways.

The Appalachian Regional Port's business model resembles that of the Virginia Inland Port (VIP), located in the Virginia hinterlands and operated by the Virginia Port Authority (VPA). An intermodal container facility with access to CSX railroad rival Norfolk Southern, VIP is 350 km from the port's US east coast waterfront in Norfolk, Virginia.

The Georgia facility builds on a plan by the state and GPA to create what it calls the largest inland intermodal complex in the eastern third of the US. In 2013 GPA established the Cordele Inland Port, in the southwest of the state, which handles clay, cotton, lumber, and other agribusiness exports for customers in Alabama, Florida, and Georgia.

GPA board chairman James Walters said, "We intend to collaborate with communities and transportation partners for the development of future sites."



The inland Appalachian Regional Port is expected to make US exports more competitive

Port updates

► FUEL COMPLIANCE HIGH

Use of non-compliant fuel in European Union sulphur emission control areas (SECAs) has been "rather limited", according to data supplied to P&H by the European Commission. Following the introduction of a 0.1% limit on the sulphur content of marine fuel in the SECAs on January 1, 4,000 inspections recorded under Thetis-S voluntary reporting system have reported 231 cases of non-compliance. The commission told P&H that cases of non-compliance generally involved incorrect or missing data in ship logbooks and other documents.

► MIGRANT RESCUE GUIDE

The global shipping industry, represented by a wide cross section of international shipowners' associations and seafarers' unions, has collectively updated the 2014 International Chamber of Shipping's *Guidelines on Large Scale Rescue Operations at Sea*, available free of charge.

► BANGLADESH PIRACY

In the first six months of 2015, the EMEA region posted fewer piracy/armed robbery incidents, although statistics from the International Maritime Bureau show greater violence in Bangladesh, up from 10 incidents in 2014 to 11 this year.

► TCEECE MODERNISES

Grup TCB has modernised its Nemrut Bay terminal in Izmir, Turkey, with eight new machines. The USD850,000 investment includes a reach stacker, an empty container handler, and six platforms. The equipment allows TCB to optimise fuel consumption and meet stringent emissions standards.

► SHORE LEAVE

The Seamen's Church Institute's 2015 Seafarer Shore Leave Survey report is available from <http://smschur.ch/shoreleave2015>

Port updates

► LNG-EQUIPPED

In response to “high customer demand”, Crowley Maritime Corp has acquired for its Carib Energy group 16 additional ISO tanks, which will be used to supply, transport, and distribute US-sourced liquefied natural gas (LNG) to customers in Central America, Puerto Rico, and the Caribbean.

► LIVERPOOL AUTOMATION

Navis N4 Terminal Operating System (TOS) and AutoGates are now live and fully operational following a construction and commissioning programmes at the Port of Liverpool, owned and operated by Peel Ports.

► SEA AMBULANCE

D'Amico Group has donated USD100,000 for constructing patrol boats/sea ambulances for the municipality of Iloilo, an area of the Philippines devastated by a typhoon in November 2013 and home to many of the company's seafarers and employees.

► AFRICA'S 1H15 REPORT

Port Overview Africa's inaugural report covers a new approach to the West African trade, the impact on more reliable scheduling from infrastructure gaps in African hinterland connections, limited improvements in vessel waiting times, and an overall increase in average vessel size calling at African ports.



Suez terminal channel key to industrial development

Egypt has complemented the launch of a two-way traffic system through the Suez Canal in August with infrastructure plans to support a proposed economic zone along the canal.

While announcing the official launch of the expanded canal, the Suez Canal Authority has finally agreed to create a channel giving APMT's Suez Canal Container Terminal (SCCT) direct access to the main canal, after balking for years at the cost.

The cornerstone of government plans is SCZone, an economic zone that Egypt proposes to build beside the canal to take advantage of its vital location for world trade. Within this project a main focus area is East Port Said, a development to which SCCT is key.

“The side canal entry to East Port Said is required to allow more ships to call at the East Port and will make the entrance to the Mediterranean independent of the Suez Canal convoy patterns, hence reducing port stay in the East Port as well as increasing capacity,” SCCT boss Klaus Holm Laursen told *P&H*.

The access channel will be dredged by the consortium of seven companies currently completing expansion of the main canal, enabling daily traffic to double from a current 49 ships to an estimated 97 ships. Vessels



leaving SCCT currently have to wait several hours before being allowed to enter the canal.

Before this announcement, further expansion of SCCT had been limited by the terminal's location on the canal's eastern approach route, used by larger ships and those carrying dangerous cargo to avoid the main channel, which passes the urban and industrial developments of West Port Said.

While SCCT's potential capacity is 70 vessels a day, the traditional convoy system has restricted terminal ship movements, since vessel convoys are either moving south or north. Bidirectional main canal traffic enables a two-way

channel to the terminal, however, thus allowing more ships to leave and access SCCT via the canal each day.

SCA boss Muhab Mamish said the SCCT channel project had been revived at the instigation of Egyptian President Abdul Fatah al-Sisi. In 2007, SCCT had agreed the digging of the access channel by 2011 with the then minister of transport.

The project was later shelved, partly due to disagreements about the government's share of the cost and partly because of upheavals that followed the Arab Spring, including the toppling of two Egyptian presidents in the past four years.

Mdawe appointed to lead PMAESA

The Port Management Association for Eastern and Southern Africa (PMAESA) has its first female secretary-general.

In July it appointed South Africa's Nozipho Mdawe to lead the Mombasa-based secretariat.

She comes to PMAESA with a wealth of experience from Transnet Freight Rail.

As secretary-general she succeeded Franklin Mziray of Tanzania, who held the position since March 2013.

Prior to her appointment Nozipho was general manager of the Mineral Mining and Chrome Business Unit at Transnet Freight Rail. She has held other Transnet roles in operations, human resource, and port terminals.



PARTNERS IN PRODUCTIVITY

Rock solid performance in Vancouver

An inukshuk is a stone landmark built by humans, used by the peoples of the Arctic region of North America. The inukshuk was typically used for navigation, as a point of reference or a marker for travel routes. The often big and man-shaped structures are solid and seem unaffected despite centuries of varying and rough weather conditions.

The English Bay inukshuk located on the seawall in Vancouver welcomes people and container vessels to the city. DP World Vancouver is a rock solid performer in the container handling industry. High productivity is a constant focus while always monitoring and adhering to the industry leading safety and environmental standards.

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A Tradition of Innovation

BROMMA

All five terminal operators need more land within or close by the port



Ken Gungwani

Mahjong in Hong Kong

Jessie Chung, chairwoman of the Hong Kong Container Terminal Operators Association (HKCTOA), gives her view on the congestion haunting the Port of Hong Kong.

Land is scarce in Hong Kong and because of that, the government has been struggling to satisfy various industry demands, including the port in Hong Kong. More than a decade ago, the government provided vast tracts of land for building container terminals and, as China became the factory of the world, Hong Kong grew to become the number one container port in the world.

But in the past few years Hong Kong has lost its top position and, with the mushrooming of new ports across the border, has moved down the ladder.

After more than 25 years in the port business, I realise the main reason for this is congestion. Shippers and lines do not like to go to a congested port as the delays seriously affect their bottom lines.

There are two main causes of congestion and I have been conferring with the parties involved to resolve this situation. The first problem is the demand of the alliances' members, which can be a nightmare for the five container terminal operators in Hong Kong – Hongkong International Terminals Ltd (HIT), Modern Terminals Ltd (MTL), CSX World Terminals HK

Ltd, COSCO-Hit, and Asia Container Terminals Ltd (ACT) – that operate nine terminals with 24 berths in the Kwai Tsing-Kwai Chung Basin.

We could cope with the alliances before because they each had only two or three member lines, but now there are up to as many as six member lines in an alliance, with increasing demands that are all very different.

For example, a vessel may commit to go to the HIT terminal and then the next day may ask to move to MTL or ACT because certain alliance members want their boxes to be offloaded there. This results in a lot of reshuffling and only adds to the congestion. It is like playing mahjong – you shuffle, reshuffle, and shuffle again to meet the various demands of the alliances' member lines.

I have recommended a community approach to deal with the problem; I feel the only way is to get the alliances' member lines to set some standards and help ease the situation. My colleagues at the container terminals and I are discussing this and other issues with the Hong Kong Liner Shipping Association, which



comprises most of the shipping lines that are members of the alliances. The talks are still at an early stage but, with time, we should be able to come up with some sort of standard to ease the congestion. It would not only improve port efficiency but also liner efficiency.

The other cause of congestion is the increase in the number of barges carrying containers. Before, there were no rules on the number of containers a barge could carry and so some carried two and others 10, but we found that whether it was two or 10, it took the same time for a barge to offload a container, resulting in congestion. We then made it a rule that a barge must carry a minimum of 15 containers and are now considering increasing that number because container truck transport has been decreasing while the barge traffic has been increasing.

Resolving the alliances and barge issues will not end the port congestion, however. We need more land for storing containers and easing the barge traffic to the berths.

Being well aware of the problems for both



‘It is like mahjong – you shuffle, reshuffle, and shuffle again to meet the demands of the alliances’ member lines’

Jessie Chung

Chairwoman of the Hong Kong Container Terminal Operators Association (HKCTOA)

shippers and lines, I have been urging the government to free up more port area land to ease congestion since I was appointed chair of the HKCTOA in December 2013. But the government has been slow to act.

The HKCTOA submitted a White Paper to the government at the end of 2013 for improving the port’s competitiveness. It recommended several sites that, with barge water frontage and totalling 70 ha of land, should be integrated into the container terminals.

After two years of discussions, in June the government proposed freeing up 18.5 ha of land for container terminals’ use. This is good news and a step in the right direction, but it is not enough and it will take a long time for it to be implemented, so we will continue to struggle with congestion for several years.

According to the government’s proposal, four sites will be disposed of to the terminals in phases from 2016–2017 to increase the terminal yard area; plus two more sites of 3.34 ha on a long-term basis in 2017–2018 for barge berthing use.

Consolidation of the port area land could free up some 100 ha and I believe this could go a long way to easing the Hong Kong’s congestion. I admit it is unlikely that the government will hand over all the 100 ha to the terminal operators but I hope to get as much as possible and that would help to increase terminal capacity by 3–4 million teu and free up 3–4 berths.

We are not the only ones seeking more land from the government. Logistics companies have also been crying out for more land near the port to set up logistics parks. It would be good if the logistics companies were near the port but adjacent land is scarce, so the government is trying to find every usable piece of land for logistics companies to use.

Recently, the government recommended a site in Tuen Mun for building a logistics cluster,

but the companies complained it was too far away from the port. I believe a logistics park does not need to be really close to the port, whereas the terminals do, and their need for land is greater than the logistics companies’.

With the port congestion last year, many shipping lines skipped Hong Kong in the first half of this year and that is why we saw a fall in throughput. We are talking with the lines to return to Hong Kong but it will take time for them to change their port of call and so we expect congestion to be with us again this year and the tonnage situation may be the same as last year.

Due to the congestion, I believe we will slip further down the ladder of the world’s top 10 ports, with Ningbo displacing Hong Kong from its current fourth position. Shanghai currently leads, followed by Singapore and Shenzhen.

My goal is to resolve the port’s congestion. Only when we do this can we become more competitive and move up the ladder again. Building another terminal would help but where to build it? There is no space at the current port.

Suggestions to build it in Lantau, which has natural deep water, are not currently feasible as it would be difficult to handle shuffling the alliance members’ containers. There is also the cost. Maybe in the long term, once all land at the port is used up, we may consider this option.

My goal is to improve the competitiveness of the port of Hong Kong and that is only possible if we have more land to cope with the congestion. My colleagues and I at the container terminals are continuing to urge the government to free up more land – and at a much faster pace. Unless we get more land, the congestion is here to stay for a long time and that would be detrimental to the industry. **PH**

Continental divide



Port of New Orleans

Bigger ships and wider canals are heating up the competition between America's West and East coasts while forcing the ports that serve them to adjust to new markets, reports **John Gallagher**

When the Panama Canal's newer, wider locks open in April 2016, it will be one of several major events that are driving changes at America's largest ports.

The opening of the wider locks – which will increase the capacity of containerships able to transit the canal from roughly 5,000 teu to 13,000 teu – will occur just as box terminals adjust to shifts in market share caused by major congestion problems on the

US West Coast earlier this year.

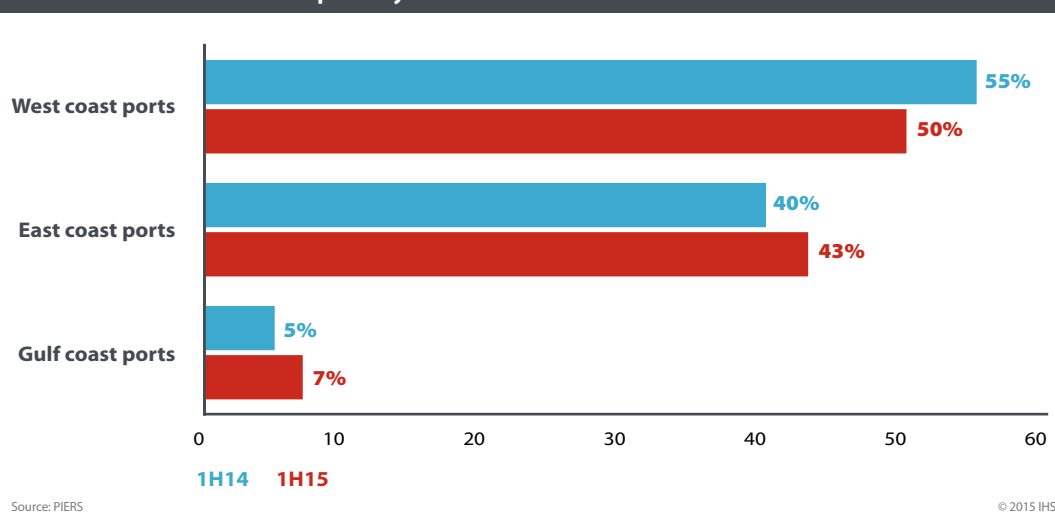
And the Panama Canal isn't the only canal that's getting bigger: the Suez Canal is finishing a widening project of its own that could further alter vessel routings to the US West, East and Gulf coasts.

While it is still not known exactly how much business could move between America's ports, some have estimated that the widening the Panama Canal alone could shift as much as 10% of trans-Pacific container



New Orleans is anticipating more volume through the Panama Canal

Share of US containerised imports by coastline: 1H14 v 1H15



traffic from West Coast ports to East Coast ones.

"All ports will gain traffic, but market share will bounce around," the Boston Consulting Group (BCG) noted in a study published in June, conducted with logistics company CH Robinson, on the effects of the Panama Canal expansion.

The report identified the Los Angeles-Long Beach port complex as likely to grow at an average rate of 5-10% per year until the end of 2020, compared with "double-digit" growth rates at some East Coast ports.

"The question for East Coast ports is whether they will gain sufficient traffic to justify their investments" in ongoing expansion projects, the report noted.

Thanks to a congestion crisis on the US West Coast – fueled in part by contentious labour negotiations but blamed on equipment shortages and inefficient terminal operations as well – cargo has already begun to migrate to the East and Gulf coasts.

Data collected by PIERs, a sister product of JOC.com within IHS Maritime & Trade, reveals that during the first half of 2015, East Coast ports grew their share by three percentage points compared with the same period in 2014, to a 43% stake of total US container imports. The Gulf Coast carved out a one percentage point increase to give them a 6% share [see chart].

At the same time, West Coast ports saw their share of imports in the same period slip five percentage points to a 50% stake.

"Instability and congestion, and the unreliability that had occurred on the West Coast – not just labour, but a surge in larger ships and terminal discharging problems – become real focal points on factors driving port diversions," port and trade consultant John Martin, president of Martin Associates, told Ports & Harbors.

Martin contends that while cargo diversions among ports are tough to quantify, there's no doubting the contributions that US ports bring to the economic table.

A report Martin's firm released in April this year,

"2014 National Economic Impact of the US Coastal Port System," estimated that the total economic value that US coastal ports provide in terms of revenue to businesses, personal income and economic output by exporters and importers rose 43% to USD4.6 trillion between 2007 and 2014. This accounted for 26% of the nation's USD17.4 trillion economy in 2014, up from 20% of its USD16.1 trillion economy in 2007, according to the report.

According to a July 2015 port congestion study by the US Federal Commission (FMC), the top three US container ports in 2014 by volume – Los Angeles, Long Beach and New York – accounted for almost half of the nation's containerised international trade. The top eleven container ports accounted for over 85%. Furthermore, roughly 25% of maritime trade by value flows through LA and Long Beach.

"On the one hand, this concentration could help America focus resources on expanding the capacity of its most important container ports," the FMC asserts, "but on the other, it also makes the freight system more vulnerable to the sort of disruption and delays the industry experienced in the past year or so."

In anticipation of higher volume from more and bigger ships, US East and Gulf coast ports are in the midst of massive deepening and expansion projects. Savannah and Miami, for example, are investing more than USD1.4 billion and USD2 billion, respectively, in infrastructure improvements, including deepening harbour channels down to 15.2 m (50 ft).

Houston and New Orleans, the largest container ports on the Gulf Coast, are widening channels and buying larger gantry cranes to handle more anticipated container cargo once the widened Panama Canal is fully opened next year.

The Port of New York and New Jersey is spending over USD1 billion to lift the roadway of the Bayonne Bridge so that larger ships can access several container terminals. But, shifting trade routes resulting from the

strengthening economy and re-routed cargo from the West Coast led to a 10% increase in cargo volumes earlier this year, prompting the port to make more changes to improve long-term efficiency. For example, a new container chassis management system, in which all chassis that move into and out of the port will be interoperable, was expected to be installed in July.

However, West Coast ports aren't planning to give up market share without a fight, and are doing what they can to limit current and future cargo diversions. The ports of LA and Long Beach each have ongoing multi-million dollar infrastructure expansion projects meant to speed cargo flow and ease congestion.

Most recently, the Port of Los Angeles awarded a USD44.6 million contract to Seattle-based Manson Construction to expand Yusen Terminal's container operations. The project includes deepening Yusen's berths and upgrading its wharf to allow Yusen to accommodate larger post-Panamax containerships in the trans-Pacific trade lanes.

The improvements will allow Yusen to simultaneously work three containerships carrying up to 13,000 teu and ensure cargo flows during peak periods.

"This project consists of strategic improvements to make Yusen a more agile terminal and strengthen our competitive edge," commented Port of Los Angeles executive director Gene Seroka on 29 June.

In early July, the Port of Oakland announced that up to and through to the end of September, marine terminal operators will be phasing in 400 additional dockworkers to accelerate cargo operations and clear out a backlog of vessels anchored in San Francisco Bay.

Container volume in Oakland grew from the previous year's total for three straight months, the port said. It noted that the labour shortage has increased the time ships spend loading and unloading by as much as a day, lengthening container transit times. "We're not operating with the speed and efficiency our customers deserve right now," Oakland maritime director John Driscoll commented on 9 July. "Additional longshore labour is an important first step in getting back on track." **PH**

Competition stacking up at ports

While American ports figure out how to respond to trade shifts among its three coasts, they are also battling factors such as increasing competition from their rivals in both Canada and Mexico.

US Federal Maritime Commissioner Richard Lidinsky in early July released an update of a report he spearheaded in 2012 that assessed the competition among North American ports.

The results showed that despite efforts among US ports to maintain their market share, factors such as increasing congestion and container equipment shortages have helped ports in Canada and Mexico to gain increased business at the expense of those ports located on the US West Coast.

"What was most interesting to me was that the fastest growing port was Prince Rupert in Canada," Lidinsky said. "Our cargo diversions have been Canada's opportunity. And there's nothing illegal about it – they're providing shippers with additional options."

At the same time, however, he pointed out that the primary role of the Federal Maritime Commission (FMC) was to protect US foreign waterborne trade while also promoting an efficient maritime transport system.

One way that the FMC has accomplished this in the past three years has been to be open to marketing alliances among US ports as a means of growing market share.

The agency has approved two major competitive agreements so far. They are between Seattle and Tacoma and between Los Angeles and Long Beach.

Lidinsky sees more such agreements being established in the future, particularly if cargo diversions continue both north and south of the border.

"One can envision an entire US West Coast agreement someday that can deal with both the Canadian and Mexican efforts," he said.

Lidinsky added, "Our role is to keep an eye this, but we can't stop it and we can't over-regulate it. But I think it is useful to provide a snapshot of the growing cargo numbers in Canada and Mexico. It's up to US ports to do something about it." **PH**

New cranes will allow the Port of Savannah to process more volume





Prince Rupert revs up

A new expansion project and a new terminal operator are laying the foundations for volume gains in Prince Rupert on Canada's Pacific coast, reports **Alex Binkley**

With a major expansion of its container terminal underway and a new transportation and utility corridor now complete, the Prince Rupert Port Authority (PRPA) has high hopes for the future.

Prince Rupert's Fairview Container Terminal posted a 15% increase in container volume last year, the fastest growth rate among North America's ports. In May 2015, its container volumes rose 46% versus the same month the previous year, confirming that it has retained business it gained when shipments were diverted by the US West Coast labour disruption.

According to PRPA spokesperson Michael Gurney, capacity at Fairview will increase from 850,000 teu/year currently, to 1.3 million teu/year in 2017, when a USD180 million expansion is completed. The project, which is being constructed by FRPD-BEL Gateway Joint Venture, comprises a second berth with four cranes, a larger container yard and more railroad track. If additional traffic warrants, a second expansion of the terminal will be undertaken.

Shortly after the expansion project was announced in March 2015, Dubai Ports World (DPW) revealed that it had reached an agreement to purchase the Fairview facility from Deutsche Bank-owned Maher Terminals for USD457 million. The deal still requires Canadian government approval, which is expected later this year. DPW is the operator of the Centerm terminal in Port Metro Vancouver.

As the most northerly container port on the Pacific

coast of North America, Prince Rupert might appear to be at a disadvantage compared to its rivals, but it is actually one to two days' sailing time closer to most major Asian ports. Gurney also explained that "this is a small community and we can have shipments moving faster than [at] other ports. We don't have the urban congestion to get through and our railway grades through the Rocky Mountains are easier than on the lines further south. Trains can reach Chicago in 100 hours."

Unlike many ports, trucking plays a negligible role in container movement in Prince Rupert. "Everything goes straight to rail unless it has to be inspected by the Canada Border Services Agency," noted Gurney.

According to Canadian National (CN) Railways president Claude Mongeau, the growth in container traffic through Prince Rupert "is a testament to the supply chain collaboration and innovation focus" of his company, the terminal operator and the port authority. "Together we understand what it takes to foster continual improvements in port-terminal-rail efficiencies that help our customers compete more effectively in their end markets. This is a virtuous cycle, setting the stage for future growth, one container at a time," said Mongeau.

CN has undertaken a major programme to increase the number of sidings on its line from Prince Rupert to Prince George, British Columbia on the mainline between Toronto and Vancouver.

The Fairview terminal, which opened in 2007, is a main export point for forest products, particularly from northern British Columbia, destined for Shanghai, Hong Kong and South Korea. Most of the export forest products are loaded in containers at a CN facility in Prince George. Imports through Prince Rupert from Asia include apparel, consumer electronics, auto parts and building materials.

In May, the port celebrated the completion of its USD85 million road, rail and utility corridor, which provides better service to terminals on Ridley Island, said Gurney. The project included the construction of five parallel rail tracks, a two-lane roadway and a port-owned power distribution system along an 8-km corridor.

The corridor will improve access to the grain, potash and coal terminals on Ridley Island and facilitate the potential construction of two LNG terminals and other facilities, he explained.

The port's official long-term plan calls for an annual throughput capacity of 100 million tonnes of cargo "as proposed terminal developments are completed over the next decade," said PRPA. The port handled 20.7 million tonnes last year.

"Much of forecasted growth is dependent on the introduction of additional infrastructure on Ridley Island to realise its development potential, minimise use conflicts between potential terminal developments, and maximise the industrial footprint of the land under the port authority's jurisdiction," said PRPA. **PH**



Diamond Boylan/AP/Press Association Images

Unlocking Cuba's potential

The re-opening of uninhibited trade between the United States and Cuba would precipitate a wave of port projects along the island's coasts, reports

Greg Miller

New York governor Andrew Cuomo visiting the Mariel terminal during a trade mission in April

The thawing of US-Cuba relations has major implications for ports: from cruise and ferry terminals in Cuba and surrounding regions to commercial shipping facilities in Cuba that cater to both domestic and transshipment cargo.

US President Barack Obama announced a new stance towards Cuba in December 2014, ending what he called "an outdated approach that, for decades, has failed to advance our interests".

The US Treasury Department's Office of Foreign Asset Control (OFAC) implemented changes to Cuba's sanctions policy in January, New York

governor Andrew Cuomo led a US trade delegation to Cuba in April, the US removed Cuba from its state-sponsors-of-terrorism list in May, and the two countries announced embassy re-openings in July.

However, from a maritime trade perspective, "the 180-day rule is still in effect", emphasised Watson Farley & Williams senior associate and sanctions specialist Jane Freeberg Sarma. The rule stipulates that any vessel that calls in Cuba may not call in a US port for the next 180 days.

Allowances have been made for US vessels carrying certain agricultural or otherwise approved cargoes. The OFAC rule changes in January extended these same exceptions to non-US vessels. "That was a bit of a grey area. It has now been clarified that these exceptions apply to all vessels," Sarma told P&H, noting that the approved cargo list was expanded to allow more goods to be shipped to Cuban entrepreneurs.

OFAC has also granted licenses to four ferry services from the US to Cuba this year: United Caribbean Lines,



Havana Ferry Partners, America Cruise Ferries USA, and Baja Ferries USA. “That’s just the first step,” said Sarma. “Now these companies have to talk with Cuba to get everything in place.”

The more Cuba-friendly stance of the US government is also evidenced by OFAC’s recent removal of dozens of former Cuban-controlled vessels from the sanctions list. “These vessels changed hands many times [to non-Cuban owners] and OFAC has ‘cleaned up’ its list,” said Sarma. The dropping of these vessels from the sanctions list removes a complication for current operators.

Despite such positive developments, most of the upside for ports can only be unlocked by an act of US Congress, not the US president. Only Congress can end of the ban on Americans’ travel and business dealings with Cuba. “The problem with moving forward with a further relaxation of the Cuba sanctions is that the Cuban sanctions were codified by US Congress with the Helms-Burton Act [in 1996],” said Sarma.

cruise sector is expected to initially provide ‘floating hotels’. Cruise ships would sail short distances from southern Florida, lay anchor, and remain in place in the same way most New York-to-Bermuda itineraries are currently designed. For cruise lines, this would offer a price premium versus other Caribbean routes and sharply reduce fuel expenditures.

This scenario would be a negative, at least initially, for other Caribbean cruise ports, whose calls would be supplanted by Cuba. As the market evolved, Cuba calls would likely be integrated into broader itineraries that featured calls in nearby destination ports, such as Key West, the Cayman Islands, the Dominican Republic, and Jamaica. However, eastern Caribbean cruise ports, such as those in St. Thomas and St. Maarten, could face lasting pressure.

According to Carnival Corp CEO Arnold Donald, “There is no question that if the legislative embargo is lifted, Cuba is a tremendous opportunity. There is a lot of pent-up demand to visit Cuba. It would allow us some very fuel-efficient itineraries as well as new itineraries for those who love to go to the Caribbean. It would definitely create the demand that we need to have the relative scarcity to drive yields.

“There are 11 [Cuban] ports that are able today to accommodate our ships,” Donald added. “We have a variety of ships of different sizes that can go to multiple ports. There are some size restrictions, particularly in Havana itself. The Havana port has a relatively shallow draught that will only take smaller ships. [The Havana channel] can’t be dredged because there is a tunnel [underneath the channel].”

The existing cruise facility in Havana, Terminal Sierra Maestra, was built in 1996 by Silares Terminales, a

“The 180 day rule is still in effect”

Jane Freeberg Sarma

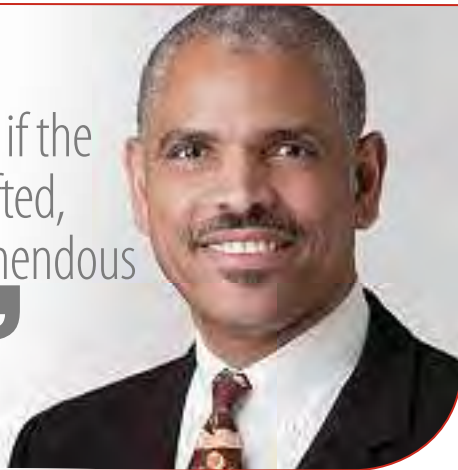
Watson Farley & Williams

Under that law, the embargo cannot be lifted until “Cuba transitions to a democratically elected government that is certified by [US] Congress – or Congress changes the law”.

The cruise industry is in a particularly strong position to benefit from an end to the embargo. Because of the limited modern hotel accommodations in Cuba, the

“There is no question that if the embargo is lifted, Cuba is a tremendous opportunity”

Arnold Donald
Carnival Corp CEO



Carnival Corp

joint venture between the Cuban government and a Monaco-based company called Milestone, which at the time was a subsidiary of Costa Crociere (Milestone was divested when Carnival Corp bought Costa). Silares Terminales lost the concession to operate Terminal Sierra Maestra in 2005.

“There will be investment in ports and other infrastructure required over time, should the legislative embargo be lifted,” affirmed Donald.

According to UBS cruise analyst Robin Farley, “Royal Caribbean has already sketched out development plans for several ports in Cuba to be able to move quickly if that market is opened.” However, she pointed out that “even with port development, Royal Caribbean would have to use ships smaller than the Freedom class to navigate the depth in Havana harbour”.

According to Wells Fargo analyst Tim Conder, “Cruise industry executives estimate that, once restrictions are lifted, it would take 6-12 months to initiate calls via tendering to as many as 11 Cuban ports, and 18-24 months, following Cuban government approval, to construct the permanent port facilities required to handle most cruise ships.”

Beyond ferry and cruise, the other major port prospects in Cuba involve domestic and transshipment cargo. A major new domestic cargo facility has already been established in Mariel and the question is whether this site will also serve as a transshipment hub in the future, or whether such a hub would be built elsewhere in Cuba.

According to an economist, who wished to remain anonymous, “If you look at the existing transshipment ports in the Caribbean, the big unknown is Cuba. Geographically, it is an ideal place for transshipment to the US.”

He pointed out that prime real estate for a transshipment hub is located on the southern coast of the island, on the eastern side, where water depths drop off quickly, implying little or no need for dredging to accommodate the world’s largest vessels.

One property on the southeastern shore is the US-controlled and highly controversial Guantanamo naval base. “Perhaps when the politics are finally cleaned up, the US will get out of Guantanamo and it is converted to a transshipment terminal,” the economist said.

Currently, the commercial shipping focus is squarely on Mariel. The USD957 million facility, known as Container Terminal SA Mariel (TC Mariel), opened in January 2014 and was built by Brazil’s Odebrecht and operated by Singapore’s PSA International.

According to Drewry Maritime Research, the access channel is being dredged to 18 m to allow passage by the ‘new Panamax’ ships that will transit the expanded Panama Canal in 2016. TC Mariel handled around 230,000 teu last year and should handle around 260,000 teu this year, according to Drewry.

French liner CMA CGM signalled a major commitment to the Mariel facility in May. An agreement was signed between CMA CGM Log and Almacenes Universales SA (the Cuban owners of TC Mariel) for the operation and development of a 17 ha logistics platform at the port.

According to Drewry, “Cuba does have the potential to act as a transshipment hub for US cargo, in a similar way to how Freeport in the Bahamas does now.” Mariel has the deep water and modern facilities, added Drewry, noting that “there is potential to extend the quay length to 2,400 m and increase the annual lifting capacity to over three million teu”.

However, according to a report by IHS Maritime, regional shipping and port sector interests believe Mariel’s location on the northwest shore of Cuba would require too great a route diversion for transshipment, and that a more ideal Cuban box hub would be on the southeast shore, adjacent to the shipping lanes that link the US east coast and the Panama Canal. Sceptics of the Mariel site have hypothesised that the PSA concession was an opening gambit for a company to enter the Cuban market, develop relationships, and be in position for a future transshipment hub located elsewhere. **PH**

The historic handshake between Cuban President Raul Castro (left) and US President Barack Obama (right) at the Summit of the Americas in Panama City in April



Pablo Martinez Monreal/AP/Press Association Images

Brazil port modernisation 2.0

Both the public and private sectors are refocusing on upgrading the Brazilian network, reports

RT Watson

Three years after Brazil launched a USD26 billion port modernisation programme, the country's government has unveiled a new scheme designed to tackle the logistics challenge. At the same time, private developments in key gateways such as Rio de Janeiro are moving forward.

Brazilian president Dilma Rousseff announced a USD64 billion infrastructure programme including USD12 billion for ports on 9 June this year. The government is hoping that lower interest rates available from the country's development bank and a reduction in state intervention will allow the new policy to succeed.

The announcement followed a March unveiling by Rousseff of a USD467 million expansion plan in Rio and a USD66 million dredging contract for that port.

The new federal port programme involves two separate auction phases. In the first, a block of public terminals concentrated in Santos and the state of Para will be auctioned in hopes of attracting USD1.5 billion in investments. Altogether, 29 terminal leases are expected to be auctioned in the first phase, scheduled for the second half of 2015.

In the second phase, scheduled for next year, Brazil would auction terminal leases valued at USD2.3 billion in the ports of Aratu, Paranagua, Suape, Rio de Janeiro, Sao Sebastiao, Santos, Santana, Sao Francisco do Sul, and Itaquai. "The business sector likes the new programme, but obviously it is going to wait for the implementation, including the publication of bidding options and what kind of terms the contracts have," said Wilen Manteli, president of the Brazilian Association of Port Terminals (ABTP).

The government also plans to streamline the process of analysing potential lease agreements. Under the previous port modernisation plan, which was implemented in August 2012, none of the 160 terminals put up for bid resulted in a final contract. The new plan aims to streamline the approval process for 24 terminal lease extensions and 63 bids for new private terminals that remain in limbo under the old plan.

"If the government wants to see results by the end of 2017, the appropriate course of action is to accelerate the process for bidding and securing lease extensions," Manteli told P&H. "It is absolutely vital that the conditions of future contracts have stable terms so that owners can rely on there not being sudden changes or breach of contract."

Meanwhile, expansion work continues in Rio. "Despite its small volume, Rio de Janeiro is a very important and strategic port," noted Manteli.

Dredging by the winning consortium of Van Oord and Boskalis will allow the port to handle ships with draughts of 14 m and dimensions of up to 345 m by 48 m. The Brazil port ministry also contracted the Van Oord-Boskalis consortium to expand the turning basin from a 400 m diameter to an elliptical basin measuring 963 m by 600 m. The width of the port's access channel will be widened to 264 m from its present 120 m.

The dredging will allow 9,600 teu container ships to access the port by mid-2016. Currently, Rio can only handle 6,000 teu vessels. "The dredging is without a shadow of a doubt an enormous operational gain," affirmed Andre de Seixas, director-president of the Port Users of Rio de Janeiro.

The largest supporters of the dredging work are Multiterminais Group and Libra Group, whose adjacent terminals in Rio combine to form Latin America's longest continuous dock. Both Multiterminais and Libra are in the middle of major expansions at their Rio container facilities to allow for the handling of larger vessels.

"Ports that do not adapt to the new ship size standards will be excluded from rotations and will only be able to receive the smaller ships," said Luiz Carneiro, president of MultiRio, part of the Multiterminais Group.

Multiterminais is adding 16 new rubber-tired gantry (RTG) cranes, three container cranes, and 20,000 m² of new space. It is also expanding its vehicle terminal capacity to 326,000 vehicles/year from 243,000/year.

Neighbouring Libra is increasing its dock length by 170 m to a total of 715 m (to allow simultaneous berthing of two post-Panamax vessels) and expanding its container yard by 40,000 m². It has recently acquired two new ship-to-shore cranes and 12 new RTGs. **PH**





Indonesia hopes to rejuvenate ports

President Widodo is moving to fulfil his election promise of a maritime nation, reports **George Joseph**

Indonesia's new political leadership is moving quickly with its ambitious plans to revamp and turn around the country's weak sea transport infrastructure. The commitment of the government to finally overhaul old crumbling facilities, especially in the maritime sector, can be sensed from President Joko Widodo's low tolerance for the slow response and tardy performance of government officials and bureaucrats involved in the huge redevelopment project.

The president's frustration with officials who miss performance targets has led him to warn that he might not hesitate to fire some of them. He delivered this ultimatum soon after discovering significant problems while inspecting Tanjung Priok, Jakarta's main port, in June 2015.

Although elected with the hope of hastening infrastructure development across the maritime, roads, and logistics sectors, the president has brought little progress.

Enabling Indonesia to be a 'maritime axis' is high on his agenda. By laying infrastructure to link Indonesia's 17,400 islands through the Pendulum Nusantara sea-freight transport programme, the president aims to cut logistics costs by improving the movement of goods

along the country's waterways.

Six ports at Belawan, Batam, Tanjung Priok, Tanjung Perak, Makassar and Sorong have been designated main gateways for shipping activity and will be part of a multi-billion-dollar scheme to upgrade and build 24 ports within five years, under the president's Port Development Master Plan. At the heart of the massive development plan is the USD4.66 billion re-development and expansion of Tanjung Priok port.

Tanjung Priok is already Indonesia's main port of entry with a container-handling capacity of 4 million teu per year. However, it managed to handle 6.6 million teu in 2014, an indication of the country's urgent need to speedily build capacity to meet the demands of strong economic growth.

The World Bank has projected that the Indonesian economy will grow 4.7% this year, while its government forecasts 5.4%. Trade figures, however, have begun to show a dip in both imports and exports. Imports plunged by 21.4% from last year in a sign of weakening consumer demand, while exports fell 15.2% year on year to USD12.56 billion, according to data from state agencies.

Nevertheless, Indonesia is seen as the biggest growth



**Great hopes rest on
Tanjung Priok
meeting expectations**

story in Southeast Asia for the rest of the decade. To achieve that, the government – with private-sector participation – must raise cargo-handling capacity and upgrade or construct ports to facilitate economic growth.

Indonesia's current small, low-draught domestic terminals are inefficient and ineffective in handling both international and domestic throughput. Container growth rates have averaged 15% over the past 10 years. The port expansion programme is ongoing and making progress anyway, according to the builders and consultants involved.

The New Priok project is being spearheaded by Indonesian Ports Corporation (IPC) and the Indonesian Port Authority through a public and private sector participation model. The concession period is 70 years with a provision for another 25 years. The New Priok Terminal project will be able to handle large vessels up to a capacity of 18,000 teu and its Container Terminal 1 is about to be completed.

"IPC is leading the development of New Priok, a USD2.5 billion development," said David Wignall, chairman of Seaports Consultants Asia. "The first terminal at New Priok will be in trial operation this year while the other terminals will follow in sequence. From the initial concept in 2010 to operations in 2015, is port development at world class speed."

Wignall told P&H that work at New Priok is well under way, with the first phase – involving two new container and product terminals and access roads – "well in progress".

New Priok will largely be financed by IPC and asset-based financiers with involvement from stakeholders such as toll road operators, power suppliers, and industrial park and terminal operators.

State-owned IPC, which provides both logistics and port services, manages 12 ports and handles more than 50% of the country's container flow. Private sector operators have also been moving quickly into the expansion spree, enticed by the prospects of increasing business opportunities stemming from the new government's resolve and commitment to drive the Indonesian economy.

Meanwhile, other sectors of the Indonesian maritime industry are awaiting a boost from the new government, which is expected to help them remain competitive and even prod them forward – a plan to exempt shipyard companies from value and import taxes is awaiting the president's approval.

Sea transport's crucial importance for Indonesia's economic integration and its domestic and foreign trade is the mantra of both local and international shipping players.

For big regional shipping players such as Samudera Shipping Line, more deep water ports in Indonesia will attract bigger ships to service the Indonesia routes. Samudera's executive-director, Lim Kee Hee, told P&H that Panamax ships may be deployed to the region once they are displaced by the opening of new gates at the Panama Canal,

"Economic development can only take place seamlessly in a politically stable and peaceful region. Better infrastructure, ports with deep draught, [these] make it possible for bigger ships to call, driving economic growth," he added.

"For Indonesia with its long coastlines and 250 million plus population, re-focusing on maritime infrastructure improvement to tap the potential for maritime connectivity with the Pacific and Indian oceans is the right move that will provide much impetus for growth and development. This is the same route China is taking with its '21st Century Maritime Silk Road' concept to traverse the South China Sea and the Indian Ocean, and the 'Silk Road Economic Belt'. This re-awakening to the benefits of maritime connectivity, will only add more opportunities for all in the maritime industry."

Major ports in Indonesia include Cilacap, Cirebon, Jakarta, Kupang, Makassar, Palembang, Semarang, and Surabaya. Ports are managed by the four Indonesia Port Corporations, numbered I through IV, each with a specific regional jurisdiction.

"Indonesia's major ports are playing in the international shipping market, while its eastern ports are playing in the domestic market," said Drewry senior consultant Tina Qianwen Liu.

"The eastern ports are not known for efficiency. Operators have been capitalising on the inefficient port operations to charge high fees. So there must also be the push to make the eastern ports efficient and run professionally. There is a balance to strike between creating efficiency and introducing too much development in a short period of time, and this is always a tricky issue."

Meanwhile, several private investors have shown interest in New Priok. Japanese trading house Mitsui & Co is heavily involved and companies such as APMT, China Merchants, and COSCO are expanding their participation, added Seaports' Wignall. He added that he is "confident" Indonesia can raise the necessary capital to complete the Master Plan.

"Funding is not a major issue. There are several ways by which ports could be funded in Indonesia. The focus is on the most effective and quickest way to put funding to work effectively. IPC has recently raised USD1.6 billion on the bond market," he noted.

Indonesia's huge infrastructure projects have created investment opportunities in the port sector. The many investment opportunities include Kijing, a USD500 million project, and Tanjung Carat, a USD1 billion initiative. Upgrading and building 42 other ports across eastern Indonesia will involve about USD2.5 billion.

The region's maritime industry generally welcomes the prospects of an economically growing Indonesia, edging closer to its dream of being a 'maritime axis' of the world. And the Indonesian government's commitment to drive this historic port development in a short time can only be commended. **PH**



Busy – Riverside Quay

The Port of Tyne in the United Kingdom is investing GBP25 million (USD39 million) to extend its Riverside Quay by nearly 20% from 750m to 890m.

"Enabling works started in June this year," Tyne's project director Paul Foster told *P&H*, "to create site access by building internal roads to carry the construction traffic

and thus keep disruption to the rest of the port's operation to a minimum. There has also been some initial dredging and preparation for the main

underwater engineering work, which includes the need to hammer 240 30m-long steel piles into the bedrock to support the extension and its equipment.

"The project main contractor will be appointed soon, with works getting under way shortly after and expected to last just over a year.

"Once Riverside Quay is extended, we'll be able to accommodate up to four large vessels at a time," Foster explained. "Having the capacity to cater for multiple bulk cargo and container ships simultaneously will significantly increase the volumes we'll be able to handle."

The investment is part of a programme at the port which, over the past five years, has bought new cargo handling equipment, including a GBP6 million gantry crane and GBP3.8 million spent on specialised hoppers to offload wood pellet cargoes.

MORE INFO:
www.portoftyne.co.uk

Increase capacity, cut carbon emissions

The European Union-funded EcoHubs (environmentally coherent measures and interventions to debottleneck hubs) project supports Resource Efficient Europe, the flagship initiative of the EU's Europe 2020 growth strategy.

Co-ordinated by the BMT Group, EcoHubs is a consortium of 13 partners from seven European countries: Consorzio IB Innovation; KombiConsult; HaCon Ingenieurgesellschaft; INLECOM; MARLO Norway; Deutsche GVZ-Gesellschaft; SINTEF; UIRR; Jernhusen; Adria Kombi; Lindholmen Science Park; Thinkstep; and Interferryboats.

"For the past 30 months, EcoHubs has researched and developed the tools required for sustainable freight transport and

logistics networks as part of a smart, safe, environmentally friendly and inclusive economy," a project representative said. "The aim is a 20% increase in terminal capacity and a 50% reduction in carbon footprints.

"Slovenian combined transport operator Adria Kombi, for example, is deploying the Container Interfacing and Consolidation System (CCIS) tool in conjunction with EcoHubs' truck appointment and unit reporting status services system at the Port of Koper.

"It estimates that when fully implemented, CCIS will lead to a 20% increase in capacity, without the need for additional physical infrastructure investments, and a throughput improvement of 15%, equating to EUR1.6–2.3 million [USD1.8–2.55 million] in turnover".

As part of its efforts to provide a complete carbon dioxide (CO₂) footprint measuring system that can calculate and declare transport services' energy consumption and greenhouse gas emissions, EcoHubs has also developed the Intermodal Terminal Eco-Efficiency Calculator (ITEC) tool.

"ITEC bridges the knowledge gap of other CO₂ calculators, such as EcoTransIT, and standards including CEN16258, that do not consider the warehousing and transshipment facilities," the project representative continued.

"EcoHubs partner Jernhusen in Stockholm demonstrated ITEC's robustness and effectiveness by obtaining a CO₂ footprint measurement of Stockholm Årsta Kombiterminal – the Green Urban Hub project –

before and after the terminal's transformation. The data highlighted that Jernhusen had reduced the footprint by 56%".

EcoHubs has also developed the following tools:

- Transport & Terminal Services Publisher – "for the dynamic and unified publishing/discovery/updating of detailed terminal services"
- Proximity Network Management – "which enables collaboration among terminals and is being deployed at Interporto Bologna"
- Repair Services Publisher – "to share equipment for improved wagon repair services"; and
- MetricHub – "a system for capturing, calculating and sharing metrics that allows customers to drive constant improvement among collaborative networks".

MORE INFO: www.ecohubs.eu



Peter Luehr, Port of Kiel

Kiel expands forest products handling

Ostuferhafen – new business coming soon

The German port of Kiel is now included in the logistics network of Swedish concerns Svenska Cellulosa Aktiebolaget and Iggesund Paperboard.

The two companies signed long-term contracts with Kiel in June this year and, from the middle of 2016, their vessels will call regularly at the port's Ostuferhafen terminal, which will handle up to 1 million tonnes of forest products, general

cargoes, and raw materials annually for German as well as for central and east European markets.

Infrastructure investments at Ostuferhafen will include more warehouse capacity, but it already has two cranes and a heavy-duty ro-ro ramp as well as the 400-m-long Berth 1, with an alongside depth of 10 m. It will be operated by Seehafen Kiel Stevedoring, which will bring in

additional equipment and hire an estimated 50 employees.

Port of Kiel managing director Dirk Claus commented, "It represents an enormous growth spurt for our port. What clinched it for us was our location right at the exit of the Kiel Canal, as well as the good all-round package we were able to offer."

MORE INFO:
www.portofkiel.com

First Danish LNG terminal

Operated by cruise-ferry company Fjord Line, Denmark's first liquefied natural gas (LNG) bunker terminal has begun operations at the northern Port of Hirtshals.

Built for Fjord Line by the Liquiline Group, the facility has a 500 m³ storage tank and will initially only bunker Fjord Line's two LNG-powered cruise ferries, Bergensfjord and Stavangerfjord. But plans are already under way to offer general LNG bunkering.

"We wish to expand the terminal so that we can also offer bunkering to other ships running on LNG," said Fjord Line CEO Morten Larsen. "With this, we are expanding the commercial foundation to develop LNG supply for ships on one of the world's most trafficked sailing routes."

Fjord Line calls at Hirtshals

from Norwegian ports on a daily basis. Its two Group Fosen-built, 170 m-long cruise ferries each have 300 cabins and can accommodate 1,500 passengers and 600 cars. The first launched vessel, Stavangerfjord, won the IMO award for energy efficiency in 2013.

Port of Hirtshals chairman Anker Laden-Andersen noted, "Over the next few years, the network of LNG terminals in northern Europe will be developed. Fjord Line's investment in Denmark's first LNG terminal has established Hirtshals' position in the market."

The port also has plans to become a focal point for cargo transport in Scandinavia and evolve into a Scandinavian logistics centre.

Central to that is the current 250,000 m² expansion, costing DKK110 million (USD16.4 million), that Danish prime minister Helle Thorning-Smith inaugurated in February this year. The land is being reclaimed from the sea – about 700,000 m³ of sand will be used by contractor MJ Eriksson – to benefit the Østhavnen and Nordsø Terminal.

The project is the focal point of an array of infrastructure investments at Hirtshals costing about DKK180 million in total. They include a major road connecting with Denmark's motorway network and a rail cargo terminal, the latter a joint effort by the Danish state, Hjørring Municipality, and the port.

MORE INFO:
www.portofhirtshals.com
+ www.fjordline.com

Bronka invests in RTGs

The first three of 10 Konecranes rubber-tyred gantry cranes (RTGs) have been delivered by the freighter *Meri* from Hanko in Finland to the new Russian Baltic port of Bronka.

It was the first merchant ship to transit a new canal that provides access to the port and its arrival in late June constituted a vessel clearance dress rehearsal in advance of the official start of operations at Bronka in September.

Being built on the southern coast of the Gulf of Finland, near St Petersburg, Bronka will comprise a logistics centre and two terminals.

Delivered in a state of operational readiness, the RTGs will be deployed at the port's 107 ha container terminal, which will eventually offer five berths along a 1,176 m quay.

A second batch of three RTGs should have arrived as you read this.

"We are convinced that with these Konecranes RTGs we will achieve high operating reliability and productivity at our new multipurpose port," said Bronka CEO Alexei Shukletsov.

MORE INFO:
www.port-bronka.ru



Port of Bronka

First three RTGs arrive



Inside and out

DNV GL is taking a holistic approach to software product development, looking to link all of the various stakeholders in the logistics chain together and reduce inefficiencies. Here, Jason Barnes talks to the society's **Kay Dausendschön**

Starting from its vessel-based expertise and working into the hinterland via ports and terminals, DNV GL is working on a suite of software products and advisory services intended to remove inefficiencies from the logistics chain. According to managing consultant Kay Dausendschön, from the Technology, Knowledge & Governance unit of the class society's maritime advisory division, DNV GL is pushing its development in three ways to serve vessel, port and terminal operators and authorities and government institutions.

In December 2014, DNV GL launched ECO Insight, a business intelligence and reporting system for vessels, intended to act as a community to aggregate and present data to vessel operators. Pooled information such as vessel speed and fuel consumption is combined with port-related information, such as load and unload times, loading rates and anchorage times, to enable vessel operators to benchmark their performance against competitors.

"This is our first step towards the creation of a 'value network,'" says Dausendschön, "and the key is getting more operators on board because the more there are, the better the benchmarking capability gets."

Although there are similar products on the market, he says that a distinguishing feature of ECO Insight is its incorporation of data from external sources — principally AIS, but also ship technical data, weather reports and forecasts and fuel consumption models.

"Obviously, the AIS-derived data isn't as granular as that from customers who've signed up to use ECO Insight," he continues. "It doesn't, for example, tell us how much cargo a vessel is carrying but it does give us information such as waiting and berthing times. The overall effect," he believes, "is a much richer set of data."

Initial customer impressions are positive, he said. From a slow start, take-up has "exploded" and there are now 300 vessels using it. The society has given itself a target of 10% of the global fleet — around 5,000-6,000 vessels — as a market share within three years. "Development started in a stripped down fashion with limited features being offered," Dausendschön said. "But the product is continually being improved...adding more data sources such as weather data. This is all being done with the significant involvement of customers."

He added, "Ports and terminals have not been a traditional area of focus for DNV GL but are increasingly coming into its remit. "As things become increasingly interconnected, [the society has] been looking more at the value chain and bringing hinterland logistics through ports and onto vessels."

"There are a lot of inefficiencies in the chain [for adding] value. The agency knows vessels well, so can



DNV GL's recently introduced ECO Insight combines data from a cohort of users with that from external sources to give a more accurate picture of vessels' performance.

expand into port operations and help ship operators to reduce waiting times. Vessels [can] change their speeds in order to avoid port congestion."

A work-in-progress is the new Estimated Time of Arrival (ETA) and congestion forecasting tool – he said the market could expect to see a commercial product by the start of 2016. The ETA tool will use pattern recognition, combining vessel features such as speed with information on whether it or similar vessels have used a particular port, to give a more accurate idea of arrivals. This he suggests will benefit land-side logistical concerns for which vessels' arrival times are a constant source of pain: "We have a running prototype and intend to take in selected customers to use as pilot candidates. At the moment, [it is] a minimally viable product for testing but we'll most likely offer the finished product through a digital portal," Dausendschön adds.

While ETA is useful to logistics operators, congestion prediction is more relevant to port operators.

"So, a port operator can see that congestion occurs when a particular pattern of operations occurs. It can predict when congestion is about to happen, or make adjustments within operations to prevent or reduce it.

Another area still being researched by DNV GL is exactly how such a solution will be used and by whom — hence the use of a prototype with selected customers. Local authorities and agencies may have less interest in commercial activities than in environment and safety, so the agency has been using a combination of AIS and ships' technical data to calculate emissions in ports and territorial waters. This can be used to generate risk data which can then be passed on to local authorities. As with the congestion prediction tool, this can be used to help adjust operations to counter any issues.

"This hasn't been a product, more a consultancy service provided by us," says Dausendschön. "However, some authorities have asked for a tool which will allow them to access our information." DNV GL has prototypes but has not yet marketed it although he predicts a marketable offering within the next 12-18 months.

In many sectors of international and cross-border transport there is a push towards open standards, as part of efforts to ease information flows and improve efficiencies. With ECO Insight, DNV GL is pushing to get as many partners involved as it can in order to improve the value of the offer. Dausendschön gives as an example the inclusion within its cohort of coatings manufacturers, noting that their ability to gain an improved understanding of vessel operations allows them to develop better, more suitable coatings.

He acknowledges the existence of information exchange initiatives in the wider sense, such as the European Union's MONALISA connected ports project.

"But a challenge," he says, "is their sheer size and complexity. That means progress can be slow. What we're trying to do is to get something out there which works and which all manner of stakeholders can get on and use." **PH**

The 10-year outlook

Looking at software developments a decade out, higher automation is a clear and continuing trend, according to Volker Bertram, project manager at DNV GL.

"We'll digitise whatever we can digitise. That'll extend from the mundane, such as ships' manifests which can be sent on ahead to future ports of call, to concepts which are currently highly innovative. 3-D printing of spare parts is an example, although there are at present size and materials limitations which place constraints on the types of components which can be manufactured and their strength.

Bertram added, "On the port side, traffic control [will continue] to be a major beneficiary. We're already seeing the application of agent-based systems to simulate port logistics — so, for example, the speed at which a particular crane moves with a container and its effect on loading and loading rates, or the time taken to unload 400 containers at a particular quay and whether it might be better to do it at a different one.

"South Africa is currently the most advanced in terms of applying these types of simulations because all of its ports are owned by one company which is able to apply its investments universally. Elsewhere in the world, ownership is more fragmented and ports and terminals are in competition with each other. I think, though, that we'll see increased use of such solutions over the next 10 years. It's a relatively inexpensive way to expand capacity in comparison to adding new concrete and cranes."

A further innovation will be ports' use of a computational fluid dynamics-based solution to tailor speed limits for incoming ships. The Port of Hamburg authorities are discussing this option as it has particular issues relating to tides and under-keel clearances. Bertram said, "The software will enable the combination of technical, load and ambient information in order to customise speed limits to individual ships... [saving] both time and money." A similar solution is also being discussed in Australia, he noted.

Container bridge developments "will result in more automated, round-the-clock loading and unloading," perhaps eventually allied to unmanned ships, reduced numbers of crew / operatives, ICT-based skills rather than manual ones and the pervasive nature of the Internet of Things — "That involves all sorts of objects and systems being able to 'talk' with each other. That will include cranes and containers, for instance, but also individual items within a container. Not only will customers be able to track much more closely and accurately the progress of cargoes and goods but the amounts of paperwork currently generated will be dramatically reduced," he concluded.



DNV GL

In years to come, there will be a migration on the quayside from manual skills to greater application of ICT



Bruce McAdam

Paperless progress challenges smaller ports

Smaller ports in the European Union now have to think about how to adapt to paperless reporting of customs entries and inventories, says Pentant's **Mark Phippen**; otherwise, they risk losing port approval

Smaller European ports, such as Aberdeen in Scotland, need to be addressing the move to electronic customs entries and inventories, or else face the risk of losing port approval once new legislation is enacted in 2016

In the UK, a soon-to-be-published HM Revenue & Customs (HMRC) consultation document will likely drive significant changes for smaller ports. From May 2016, they will have to come into line with what major ports already practice in terms of electronic reporting of customs entries and inventories.

HMRC provides a free platform which can be used to access CHIEF (Customs Handling of Import & Export Freight), the computer system which it uses to manage both the declaration and movement of goods into and out of the country. An issue is volume, and this has given rise to Community Systems Providers (CSPs), of which there are five in the UK. CSPs sit between ports and CHIEF, and provide an accredited, managed, volume service.

Although larger ports have used CSPs for some years now, electronic inventory remains a daunting prospect for smaller ones, says Mark Phippen, general manager of Pentant, which is a part of the Descartes group and is the CSP for Dover as well as several smaller ports.

"It's a problem that's going to affect ports of all sizes

right across Europe, as the driver for the HMRC's moves is the Union Customs Code which is expected to be fully defined by the end of this year.

"An additional factor for UK ports, however, is that HMRC is for inventory and not just Customs entries. There are analogies elsewhere — some German ports, for instance, already have a form of electronic inventory, albeit that it isn't yet mandatory there."

HMRC has in fact been promoting the use of electronic inventory for some years, ahead of European regulation. They have proven their worth, he continues, providing a readily viewable information layer of goods, both cleared and uncleared, which are held in a port. For the smallest of ports, however, failure to implement could result in the loss of port approval from next year.

"The issue is that it's more than just the cost and effort of getting a system in place. It's about getting approval and getting it integrated into CHIEF. Small ports need to understand that there's a ready solution in the form of CSPs. They have fully developed and evolved software solutions. They'll also assist with the approval process which will gain ports the unique badges they need to integrate with HMRC.

"From the moment of switch-on, a port can be fully compliant, therefore. But port owners and operators need to be engaging with CSPs now if they want to meet the HMRC's deadline." **PH**

MORE INFO: www.pentant.co.uk

Catching the wave

Here, BMT Group's **Phil Thompson** discusses Smart City concepts which are introducing wider society to the idea that data fusion can have profound, positive effects on operations and budgets...

BMT Group is no stranger to the software environment. It has provided simulation tools for all manner of port, terminal and vessel operations for upwards of three decades. Software for the ports and terminals sector covers all aspects of conceptualisation, through planning and feasibility, to development and operational support. At the upgrades stage, it provides solutions which will simulate how ships will behave throughout the construction phases, enabling the various autonomous agents within a port and close-to-shore environment to optimise and maintain a co-existence whilst work is underway.

Phil Thompson, transport sector director, sees three principal trend areas in software: developments in anchorage management and simulation; increased simulation of port and terminal operations; and more advanced vessel traffic management systems.

The common driver is ports and terminals getting busier and busier — and in many respects the developments within these areas are not entirely new. Anchorage management and simulation solutions, for instance, are already in common use and the limitations of current offerings are often very port-specific in nature. Thompson expects capabilities and accuracies to continue to grow, but it is developments in simulated port and terminal operations, in combination with vessel traffic management, in which he is especially interested. This is in line with developments in the wider information and communications technology (ICT) world.

Various major ICT specialists' such as Smart City concepts for instance, look to work across many of the silos (such as energy, transport, healthcare, education,

policing and so on) within which towns' and cities' authorities and jurisdictions have traditionally operated and, by linking data from those previously discrete entities, recognise patterns and symbioses which might otherwise have gone unnoticed. The ambition is to significantly improve settlements of all sizes' performance for a given price and without an overly intrusive or needlessly complicated re-engineering of existing infrastructure. It is an ambition which translates readily into the littoral and port areas, and underpinning this are previously unconsidered levels of data warehousing and mining — what has become known as 'the Big Data concept'.

"By comparison with recent and current solutions, we're going to see more intelligent software products which are able to simulate an increasing level of human factors right across the whole spectrum of ports and terminals operations," says Thompson. "A greater range of 'what ifs' will be brought to bear, which [will] influence design and optimise tonnages, storage and links to the hinterland."

"Far more advanced vessel traffic management systems will provide solutions for port, terminal and close-to-shore operations. That will improve capacity planning and risk management. Human decisions and collision lengths can be simulated over 25 years'-worth of data, and very quickly. We're beginning to use the whole spectrum of marine risks in our calculations."

In a resolutely conservative sector, it is the busiest ports which are blazing a trail in terms of new software systems' use, he notes. Ports such as Singapore and Hong Kong have to find ways of maintaining their productivity levels in the face of very high volumes of traffic but what these early adopters are doing now will become increasingly commonplace.

Although still very much in the foothills of using Big Data in a ports and terminals context, BMT Group is already looking at whom to partner with from an R&D perspective. Thompson suggests more sophisticated data mining techniques will be in use within just 3-4 years, "It's very serendipitous — in that the more you find out, the more there is to find out. It's all about a move from a rather superficial level of data use to something far richer. We're already demonstrating the concept to customers now, extracting lots of data on vessels' routes, speeds, optimum trim levels and so on.

In his opinion, "Ports and harbours is a very conservative sector, and it's often hard to make a business case for something such as data mining because owners and operators have few references against which to judge the investment. It will take a leap of faith by some of the bigger, busier ports. "ICT opens up some very real opportunities; but there have been too many false promises in the past. There's an expectation that it will deliver short. If properly scoped and supported, the reality can be very different," he concluded. **PH**

Increasingly, simulation of port and terminals' operations will be linked to vessel traffic management systems to realise some of the Big Data-type benefits starting to make themselves felt in wider society



BMT Group

MORE INFO: www.bmt.org

Comparisons can be instructive



Cargotec

In this second of two articles, **Bill Mongelluzzo** of IHS JOC continues his report on APMT's automated Maasvlakte II terminals in Rotterdam and the lessons that can be carried over to US port operations

Possibly the most impressive benefit of the automated terminal is the improvement it brings to gate operations.

At Maasvlakte II the container stacks are positioned perpendicular to the vessel and gate, so the trucker

need drive only a short distance from the in-gate to the stack. The automated stacking crane lifts the requested container from the stack on to the truck chassis. Numerous moves during the testing phase that has been under way since December have recorded



Kalmar automatic stacking cranes for TraPac Los Angeles

an average gate-in to gate-out time of less than 30 minutes for a single transaction, Henk De Groot, APM's chief operating officer, told *P&H*. At many US ports, in-terminal times of 45 minutes to an hour are common.

To make the terminal-to-truck interchange as efficient as possible, APM enforces two requirements upon truckers. Motor carriers must file their documentation through a single electronic portal, and all truckers must make an appointment. A trucker missing the two-hour window of the appointment must proceed to a holding area and make a new appointment.

Harbor truckers in the United States have a variety of opinions about appointment systems. Most are negative because of the difficulties incurred in keeping to the windows because of terminal congestion, weather, or road traffic. De Groot said APM had succeeded in maintaining almost 100% compliance among truckers, who are rewarded with rapid turnaround times.

Safety is the key feature of an automated terminal. People are not hurt because people are not allowed in the cargo-handling section of the terminal. "It separates the man from the machine," De Groot said. Cargo-handling that requires human involvement is handled remotely from the tower.

Maasvlakte II also is intended to be the greenest container terminal in the world. The quay and yard cranes are electric, which means zero emissions and no noise. The electricity is generated locally by wind. The cranes also generate power on the downward cycle of the crane movement. Forklifts are electric, and employees move to and from the terminal in electric vans.

The ports of Los Angeles and Long Beach have similar goals for their terminals as they strive for a zero, or at least near-zero, emissions operation.

Automation is dreadfully expensive. APM said Maasvlakte II cost USD535 million. To justify such an investment, container throughput is key.

De Groot said it was difficult to estimate how much volume was needed to achieve an adequate return on investment for automated terminals around the world because operating conditions and labour costs vary, but in countries with higher labour costs such as in Europe and the US, at least 1 million teu/year throughput is probably needed.

Furthermore, automation can be introduced in phases and terminals can choose light, moderate, or complete automation depending upon their needs and throughput. Labour savings cannot be denied, as a number of longshore jobs are eliminated because of automation. The Port of Los Angeles last year released a study that said automation at the TraPac terminal would eventually reduce job numbers by 40–50%.

Terminals that invest in automation will experience a significant increase in capacity. At full build-out, TraPac will have an annual throughput capacity of more than 2 million teu. The Middle Harbor terminal in Long Beach is being automated and will have an annual capacity of more than 3 million teu at full build-out. The 13 terminals in the Los Angeles-Long Beach port complex last year handled about 15 million teu.

The automated terminals will use their lower operating costs to lure business away from other terminals, which in the short- to medium-term should increase volumes. That will force competitors to either lower their operating costs too by adopting automation or, if they cannot afford that, to sell out to terminal operators with deeper pockets that are able to make the costly up-front investment in automation. **PH**



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Chinese make Sri Lanka another port offer

Despite setbacks and slow-downs on other projects, the Chinese are still keen to invest in this strategically positioned country, **Rohan Gunasekera** reports

East Terminal - about 600 m of the quay wall has been built along with part of the container yard

Sri Lanka is considering a proposal by China Harbour Engineering Company, a unit of China Communications Construction Company, to build, manage and operate a dockyard at Hambantota Port on the south coast of the island for shipbuilding and repair.

"The cabinet had approved a proposal for CHEC to do a feasibility study on the project," health minister Rajitha Senaratne, speaking on behalf of the government, told reporters. Meanwhile, ports and shipping minister Arjuna Ranatunga sought cabinet approval to negotiate with CHEC on the dockyard proposal.

CHEC had requested that Sri Lanka grant them an exclusivity period of 12 months to prepare a detailed plan and do a feasibility study on the project, according to ports ministry officials.

Hambantota Port, just off the main east-west shipping route across the Indian Ocean, was built by CHEC with a Chinese loan. CHEC is also building a USD1.4 billion 233 ha reclamation project off Colombo port.

China's maritime expansion plans were jolted earlier this year when Sri Lanka's new government suspended this Port City project, which was intended to cement the Chinese presence on the island. It follows the Colombo International Container Terminals (CICT) project, built and operated by China Merchants Holdings International (CMHI), the first container facility in the new deepwater Colombo South Harbour.

The Port City envisages the creation of a new city with proper planning. Colombo's existing central

business district, next to the port, has grown organically since British colonial times and suffers from crowding and traffic congestion. The Port City will have a marina, with investors expected to build high-rise office and apartment blocks, shopping centres, and hotels.

While in opposition, the new government had threatened to cancel the Port City project outright. That stance has since mellowed: the government now says it will allow the project to go ahead, after the imposition of tougher environmental safeguards and renegotiation of aspects of the deal seen as potentially harmful to both Sri Lanka's sovereignty and India's interests.

Situated off Colombo's Galle Face seafront and protected by a 3.3 km breakwater, the Port City project is billed as Sri Lanka's largest single foreign private sector investment and is funded entirely by the Chinese. The government has agreed to allow maintenance work, in order to protect existing reclamation work. Some 200 m of breakwater had been damaged following the March suspension.

According to the original agreement, of the 233 ha to be reclaimed, CCCC will get 88 ha on a 99-year lease and 20 ha on a freehold basis as a return on its investment. It can lease this area to investors. The remaining 125 ha will belong to the Sri Lankan government. However, a number of barriers remain. They include: the new government is against selling land to foreigners and believes there could be 'sovereignty' issues; Sri Lanka's deputy minister of investment promotion, Eran Wickramaratne, has said environmental approvals were incomplete and not enough attention had been paid to its social impact, especially regarding transport, water and sewerage; tax concessions for the project lapsed after parliament failed to approve them within the stipulated three months and need to be renegotiated; and a team of government experts has deemed its environmental impact assessment (EIA) inadequate. The Central Environmental Authority is doing a fresh EIA.

Other proposed or stalled projects include:

- CICT – the USD550m, 35-year build, operate, and transfer project (owned 85%/15% by CMHI/SLPA) has three berths with a total length of 1,200 m and 2.4 million teu capacity;
- East Terminal – being built by the SLPA, this is the second container facility in the South Harbour, with two more planned, of equal capacity;
- Bandaranaike Quay – currently a breakbulk terminal, SLPA wants to convert the Colombo Port quay into a fully-fledged cruise terminal to cater for the growing number of cruise ship calls, its chairman Lakdas Panagoda has said;
- Hambantota container terminal – CMHI, China Communications Construction Company and SLPA struck a supply, operate and transfer deal in September 2014 to build a USD601 million container terminal with four container berths on a 1,298 m shoreline and an estimated annual capacity of two million teu. This project is also under government review. **PH**

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'The Global Ports' Forum for Industry Collaboration and Excellence'

Singapore goes green

Singapore's efforts to encourage green shipping are paying off, thanks to its maritime and port authority, reports **Crystal Chan**



In 2011, the Maritime and Port Authority of Singapore (MPA) pledged to invest up to SGD100 million (USD75 million) over five years in the Maritime Singapore Green Initiative.

The scheme comprises three programmes: the Green Ship Programme, the Green Port Programme, and the Green Technology Programme. These are voluntary initiatives to recognise and provide incentives to companies that adopt clean and green shipping practices over and above the minimum required by International Maritime Organization (IMO) Conventions.

The MPA recently announced that it will extend the Green Technology Programme by another five years until 2021, with an additional investment of SGD25 million, bringing total funding for the programme to SGD50 million. MPA will also raise its co-funding to 70% for the adoption of green technologies developed or test-bedded locally.

Through the programme, companies such as Mitsui O.S.K. Line (MOL), APL, and Pacific International Lines (PIL), have developed propeller boss cap fins (PBCF*), diesel-electric engines, and bulbous bow modifications to slash emissions. MOL has implemented new technologies to redesign ships while APL has developed fuel-emulsion technology to improve combustion and lower emissions. PIL has started modifying the bulbous bow on 15 ships to enable effective slow steaming. The company is working with MPA to see how the Green Technology Programme can help to develop emission-reduction technologies for its new ships.

In addition, in April 2014, the MPA launched its 'Sustainability Office' aimed at promoting good governance, resource management, and environmental sustainability in Singapore's maritime industry.

The MPA believes that by taking the lead it can test out

new concepts that can be used to develop Singapore's new container port in Tuas into an environment-friendly and resource-efficient port.

Furthermore, with the international maritime industry exploring LNG bunkering, Singapore is to start a pilot programme to establish safety and operation protocol for this. Under the scheme, MPA will provide up to SGD2 million per vessel for six LNG-fuelled ships. It will also evaluate the most cost-effective method of supplying LNG fuel to ships. As P&H went to press, MPA announced it was inviting interested parties to apply for a licence to supply LNG fuel to ships in its waters in the context of an LNG-bunkering supply proposal. Submissions should be submitted by 30 September and the shortlisted proposals would be announced by MPA by year-end.

In June this year, MPA said it achieved a first in the maritime industry and public sector with its inaugural integrated report on 2014 sustainability: *Towards a Future Ready Maritime Singapore*. The report "complies with the Global Reporting Initiative G4's guidelines as well as the International Integrated Reporting Council's framework".

For 2014, MPA has departed from its previous reporting format and adopted a more holistic approach in reporting its performance to its stakeholders and its employees.

This shift, it said, "reflects the move by MPA to adopt a more integrated approach in discharging its roles and responsibilities, whereby beyond promoting and regulating the maritime industry and ensuring the smooth operations at the port, it will also champion broader efforts with the maritime community in ensuring the maritime industry creates a positive impact on society, economy, and environment". **PH**

*'PBCF' is a registered trademark of Mitsui O.S.K. Line

The Maritime Singapore Green Initiative

Green Ship Programme

This encourages Singapore-flagged ships to lower their emissions of sulphur oxide and carbon dioxide.

As of 31 December 2014, 203 Singapore-flagged ships had been recognised as green ships under the programme.

So far, 90 companies have pledged to support green shipping in Singapore.

Green Port Programme

This encourages ocean-going ships calling at Singapore's ports to reduce their emissions of pollutants. Vessels that use approved abatement or scrubber technology, or burn clean fuels, will enjoy a 25% port dues discount if they stay in port <5 days and a 15% port dues reduction if they are berthed. Ships must use fuel oil with less than 1% sulphur content.

Green Technology Programme

This provides a grant of up to 50% to co-fund the development of green technologies and is open to Singapore-registered companies.

Grants are capped at SGD2 million or SGD3 million, depending on the level of reduction in emissions.

As of 31 December 2014, 21 projects had been approved.

Why ports need shore power



Tony Slinn

As Bergen activated shore power, **Tony Slinn** attended a seminar organised by Schneider Electric and Cavotec at the port to hear the virtues of developing such schemes and some of the constraints

Five years ago, shore power was an innovation for us," noted Schneider Electric shore connection vice-president Hervé Lours in his introduction to a seminar coinciding with activation of Bergen's first shore-power installation. "Now it's a standard solution."

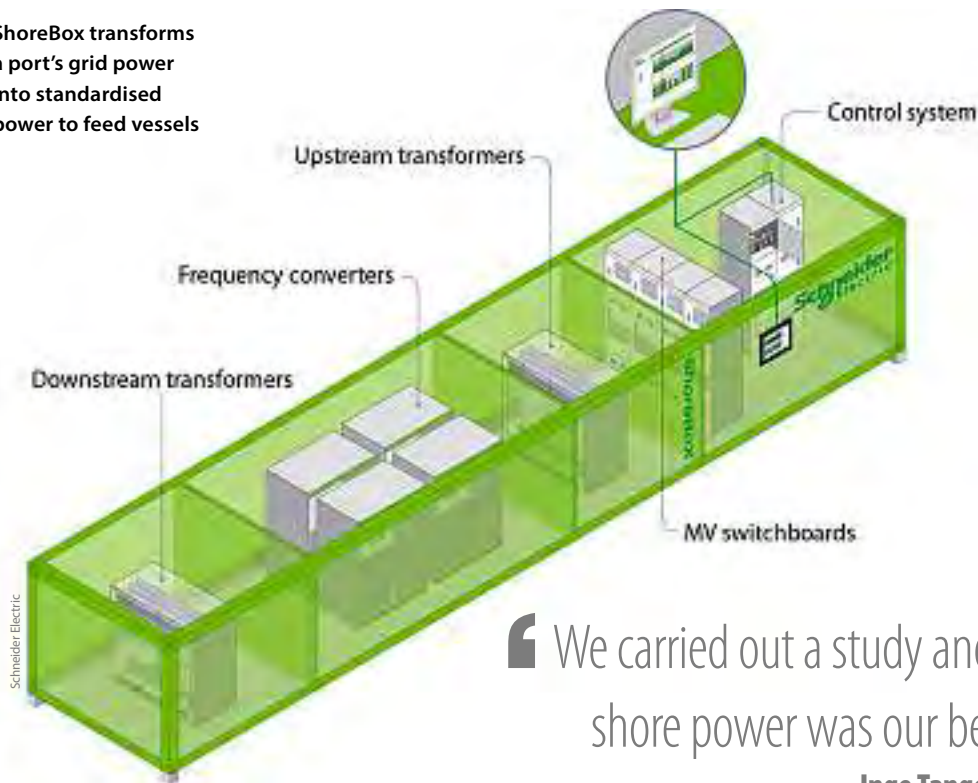
Franch company Schneider, which has 170,000 employees internationally, has major shore power projects in ports globally, including the biggest in

southeast Asia, at Kalibaru, Jakarta, in Indonesia, which will have nine berths equipped with 5 MVA installations.

Addressing what he called 'the energy dilemma' – the need to double energy supplies by 2050 yet slash CO₂ emissions – Lours continued, "Ports are at the forefront and will need to cut emissions by a factor of two, three or even four in the future."

He was joined by Cavotec group marketing manager

ShoreBox transforms a port's grid power into standardised power to feed vessels



“We carried out a study and found that shore power was our best option”

Inge Tangerås, Port of Bergen CEO

Yann Duclot, who addressed the climatic challenges ports face in installing shore power, “From the heat and humidity of the Far East, to the cold, dry and often rainy days here in Bergen, at ports, people want innovation but with reliability.”

The current status of shore power regulations, standardisation and implementation was the theme for Schneider commercial director Silvia Caballero's keynote speech. She made the point there were now 120 berths fitted with shore-power connections – 60 in North America, 50 in Europe, and 10 in the Middle East and Asia-Pacific regions.

“The installed base is growing,” she said. “Don't forget that Marpol Annex 6 is now ratified by 75 countries accounting for 95% of global shipping. In terms of emissions control areas, there are plans to extend them to the entire European coastline by 2020. The new European Union directive, DAFI [Deployment of Alternative Fuels Infrastructure], wants to see shore power throughout TEN-T ports, and others, by 2025. The EU is proposing variable port fees for environment-friendly vessels and will have guidelines ready by January 2016.

“In China,” she continued, “all new container, ro-pax, cruise and bulk terminals must have shore power in their plans. And in the USA, California is demanding that 50% of container and cruise fleets must now have shore power connections and must also cut emissions by 70% by 2017 and 80% by 2020.”

Standards, to ensure any vessel can use any shore power connection, are tricky, she said, “but Schneider

is leading standards committees: any problems, come to us.”

She concluded by looking at payback times, along with the availability of EU TEN-T grants. “Installations should last 25–30 years and in some cases payback might take only three to four years. But take into account the environmental and health benefits. It's not just profitability that should influence your decision.”

Based on comments later in the seminar made by Baltic Ports Organisation (BPO) secretary-general Bogdan Oldakowski and port of Bergen CEO Inge Tangerås disputing short-term profitability, *P&H* asked Caballero if three to four years payback was realistic.

“It's a case-by-case question,” she replied. “We have projects that have this level of payback, but by no means did I want to say it's three to four years for every port.”

Oldakowski followed and opened by looking at the challenges faced by Baltic ports, in particular the revenue implications of Russian container volumes, “dropping dramatically in the first quarter of 2015 by as much as 30%.”

Turning to emissions control, he added that the EU TEN-T LNG in Baltic Sea Ports project, which has a preliminary EUR1.5 million (USD1.6 billion) Jan 2014–Dec 2015 budget, “is not moving as fast as we expected.”

On shore power, Oldakowski said there were about 10 installations in Baltic ports, with more planned. But cost is a continuing concern. “According to the ports, and in contradiction to what we heard from

Bergen's offshore terminal





Standard solution – Hervé Lours



Reliability – Yann Duclot



Payback – Silvia Caballero

Ms Caballero, the payback time is very long. The ports would like to see public financial support and feel there is a great deal of pressure on them and that shipowners should be involved in the discussion." A chance for that, Oldakowski concluded, would be at the 2015 Baltic Ports Conference to be held in Riga, Latvia, on 3–4 September.

Cavotec sales director Luciano Corbetta turned to the practical side of installing shore power, using examples from major ports including Rotterdam, Gothenburg, Los Angeles and Long Beach.

"It's important to know where the shore power connection is located on the ship," he explained. "Unlike ro-ro ships that always berth in the same place, container vessels vary in size hugely and will have cable connections in different places relative to the quay."

Solutions include mobile shore-based installations, favoured for cruise ships especially, as well as units with up to 30 m-long cables, he noted, adding, "In the past 18 months, Cavotec has pioneered an automatic plug-in system. It can be combined with our MoorMaster system and will be pioneered in Norway."

Schneider shore connection business development director Hugues Berthet expanded on the practical theme by looking at ports' overall electrification needs. "As ports evolve, they are not just looking at shore power, but also electrification of cranes – STS, RTGs and RMGs," he said. "They also need to map shore power needs depending on the types of ship calling and number of calls. Power levels are also important: most ships will

need about 3 MVA, but for some, 9 MVA is normal.

"Further challenges arise in different countries as power frequencies differ," Berthet pointed out. "And the safety of both ship and shore installations is paramount."

The self-contained ShoreBox unit installed at Bergen by Schneider had undergone three years of tests, he said, "and is validated to IEC standards. We guarantee its safety and performance."

Berthet was joined by Ludovic Bondon of shipbuilder and offshore energy specialist STX France, which partnered with Schneider in planning shore power installations aboard vessels. "Standards are vital," he said, "and we work with classification societies under a strict process to ensure class approval. The final result must be well integrated. Schneider wants to warrant a reliable, safe, complete system, while STX wants to warrant minimised unavailability time for shipowners."

Port of Bergen CEO Inge Tangerås wrapped up the seminar, telling delegates that air quality concerns were the driving force behind the decision to install shore power. "We carried out a study and found that shore power was our best option," he told delegates. "Our first installation, which is to the ISO/IEC PAS 80005-3 standard, is low-voltage and at the offshore vessel terminal."

Noting that offshore vessels were responsible for about 35% of NO_x emissions in the port, he said, "When the weather is bad in the North Sea in the winter, up to 20 offshore vessels can be moored in Bergen. Offshore vessel operators are showing interest in shore power, although given low oil prices, it is challenging for them right now. DOF Group has invested, however, and [offshore vessel] Skandi Vega is the first to benefit."

With that, it was off to the port to inspect the new system, to which the city of Bergen has contributed NOK2.5 million (USD323,000) towards the NOK7 million+ overall cost.

As city environmental commissioner Henning Warloe commented at the switch-on ceremony, "The future is green and we have to prepare for it." **PH**

 A separate case study article that looks in depth at the Bergen shore power installation will appear in the November/December issue of *Ports&Harbors*.

ShoreBox supplies data on environmental indicators to make shore connection implementation as green and efficient as possible

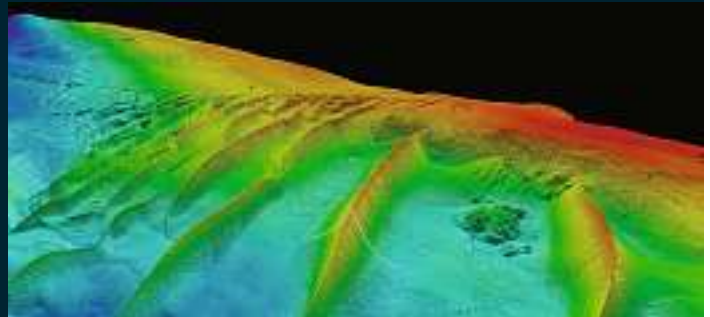
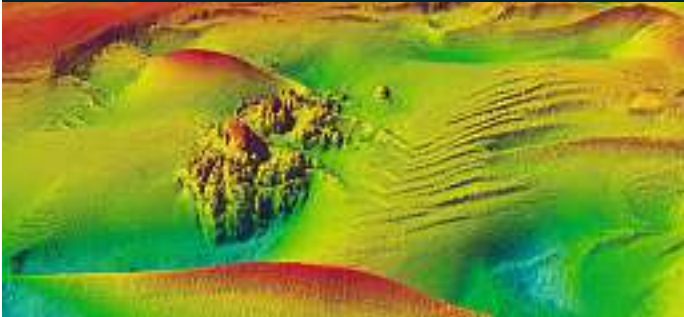


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Ust-Luga Company

Ust-Luga keeps its Baltic port lead

As shippers run the sanctions gauntlet and stakeholders set sail, Ust-Luga reaps the rewards of entrepreneurship on the Baltic seaboard,

John Helmer reports

Ust-Luga port is self-billed as the only Russian port on the Baltic Sea capable of admitting dry-cargo vessels up to 75,000 dwt and liquid cargo carriers of 120,000 dwt and more. Its multipurpose terminals and operating zones will provide transshipment and additional handling services for more than 20 categories of cargoes, including fuel oils, fertilisers, and timber.

The port, built in a just decade by express Kremlin order, has now overtaken its Baltic state rivals and is outstripping its Russian regional rivals of St Petersburg and Primorsk. According to the latest available cargo figures from Port News, Ust-Luga is not only leading the others in the eastern Baltic, it is sprinting away from the competition in volume, with a growth rate to date of almost 20% a year – and that's despite the US and the European Union sanctions on individual investors

and Russian companies at the port since March 2014.

When President Vladimir Putin inaugurated Ust-Luga's coal terminal in 2006, he put strategy and independence ahead of commercial profit in calculating payback on the multi-billion dollar investment the government was making: "The Ust-Luga port is extremely important for us. It is one of Russia's major infrastructure projects over the past few decades ... but let me point out that today approximately one-third of the [cargo] freight leaves from the ports of our competitors, our neighbours in the Baltic states and in Finland.

"We are not going to force cargo ships to come to Russia. But to attract cargo ships we must aspire, right from the outset, to the same result we achieved when working on the coal terminal. We are not going to create administrative obligations for carriers. Rather, we are going to create better working conditions [and] a more competitive environment. We are capable of doing this and we shall do it."

Putin has done it ... almost. A year ago, when *P&H* visited the port, Konstantin Khamlai, the chief executive of Ust-Luga Oil, said his terminal would be able to operate just as effectively without its principal investor, Gennady Timchenko, and the Geneva-based Gunvor trading group. Timchenko, an associate of Putin's, was



Ust-Luga port's YUG-2, the multipurpose transshipment complex built for roll on-roll off vehicle deliveries

on one of the first sanctions lists introduced after the conflict began in Ukraine.

In 2011, the first year of the terminal's operation, it loaded 6.5 million tonnes of petroleum products, mostly heavy fuel oil (mazut). In 2012, throughput doubled to 12.6 million tonnes; in 2013, 16.8 million tonnes; in 2014, 23.6 million tonnes. Before the start of sanctions, target capacity for 2015 was 30 million tonnes/year comprising two-thirds heavy fuel oil (mazut), and the remainder a mixture of gasoline, diesel, naphtha, and stable gas condensate. This year, the terminal told P&H, it is planning to ship 28 million tonnes.

"We are self-sufficient in terms of funding," said Khamlai. "The terms we planned for our refined products remain relevant. We do not know what will happen

with the sanctions, but now we are well-endowed with commitments from our investors and creditors.

The deal, which, as P&H went to press, had yet to be finalised in Moscow, preserves the strategic priority Ust-Luga port holds in government thinking. Gazprombank and state pipeline company Transneft already hold minority stakes in the terminal. No price for the sale has been disclosed. Gubernor has reported spending about USD60 million on the terminal's construction.

According to 31 May 2015 figures, Ust-Luga's coal terminal reports shipments for the five-month period running 19% ahead of last year, with almost 7 million tonnes loaded on 116 vessels.

In June, the port officially launched its newest terminal, the Smart-Bulk Terminal of Phosagro, one of Russia's leading exporters of phosphate-based mineral fertilisers. The Phosagro complex has a capacity to move more than 1.5 million tonnes of mineral fertilisers per year, and its storage facilities can hold up to 80,000 tonnes. Rail deliveries to the port are transferred into containers, which are then loaded aboard vessels by Ultramar. The special containers have been supplied by China International Marine Containers (CIMC), in a Russian market debut for Nantong CIMC, a producer of specialised and experimental containers.

Ultramar CEO Andrei Bonch-Bruevich recently noted, "This project is a breakthrough, not just for Russia but among ports worldwide in terms of the speed and quality with which cargo will be handled." According to Phosagro CEO Andrei Guriev, "by using the best available technologies and technical solutions, this project will enjoy an exceptionally high return on investment. Investments in terminals with similar capacities are often far more expensive."

Total investment in the project amounted to RUB650 million (USD10 million), contributed 70/30 by Phosagro and Ultramar in proportion to ownership.

Guriev indicated he was expecting payback within four years: "With our entry to the Leningrad region, we are actually phasing out foreign ports and reducing the company's costs. Ust-Luga is not as congested as St Petersburg. Besides, ice conditions are somewhat better in Ust-Luga, which helps our transshipment costs. The combination of these factors and the co-operation with our partner, Ultramar, have allowed the creation of a business model that satisfies all the stakeholders. We used to handle considerable volumes in Kotka [Finland] and Riga [Latvia]. Today we are leaving those ports."

Phosagro will follow up at Ust-Luga with a new sulphur terminal, intended to reach full operational capacity by the end of this year. This facility can handle up to 4.5 million tonnes of granulated and lump sulphur at berths accommodating vessels of up to 70,000 dwt. The direction of exports is being shifted, and transshipment of Russian exports at European ports eliminated, because of the US-EU economic actions against Russia. Most of the cargo volume of



“The terms we planned for our refined products remain relevant”

Konstantin Khamlai
chief executive, Ust-Luga Oil

John Heimer



the Phosagro terminal at Ust-Luga is headed for Africa and Latin America.

Independently of the sanctions, global demand effects have persuaded Eurochem, another of the Russian fertiliser majors, to postpone its plan for a 5 million-tonne potash terminal at Ust-Luga. Eurochem's initial plan had called for the plant to be constructed at a French port.

Other Ust-Luga plans for the future – confirmed in June as intentions but with timing uncertain – include a new liquefied natural gas (LNG) plant by Gazprom, with other stakeholders to include Shell and a consortium of Japanese firms. Gazprom has said it wants to build its second LNG export plant for Russia with annual capacity of 10 million tonnes. Its first plant ships from Aniva Bay, on Sakhalin island in the Sea of Japan. Ust-Luga port sources estimate that the investment for this project will run to about RUB1 trillion (USD18.50 billion).

In the Kremlin's strategy for protecting Russia's capacity to export energy products without running the gauntlet of sanctions, there is no place now for the four-year-old project supplying crude oil shipments from Primorsk to a new re-export terminal at Rotterdam. The billion-dollar brainchild of Ziyavudin Magomedov, a politically connected Russian businessman, has been rejected by Russian oil companies as making "no economic sense". Putin rejected the Dutch deal at a June meeting of officials and oil company executives.

Uncertainty in global trade demand for Russian steel exports has also caused UMC, a leading pipemaker, to postpone completion of its proposed terminal at Ust-Luga.

ICT, a diversified holding controlled by Alexander Nesis, had planned to build a shipment terminal in combination with a urea processing plant nearby.

Resident resistance to the plant contributed to ICT's reluctance to proceed.

The uncertainties in Russian government projections for export shipment volumes, and the associated reorientation in the direction of Russian exports, have caused the federal transport ministry in Moscow to rethink its budget for railway building to serve Ust-Luga's planned expansion of cargo capacity. This means a slowdown in cargo growth. The ministry and the port management had been contemplating a target of 60 million tonnes/year. On current budget spending, the port may be obliged to make do with 40 million tonnes. Construction of improved road access to the port has also slowed.

Uncertainty about the future rate of growth and revenues has also triggered a demand by state bank VTB for repayment of its loan to the Ust-Luga port development company. The money owed is modest – RUB600 million (or about USD11 million) but after trying to postpone repayment, the company, headed by Valery Izraylit, was unable to agree terms with the bank. So in January this year, VTB went to court in St Petersburg to enforce a settlement.

The government of the Leningrad region, a guarantor of the loan, is also targeted in the lawsuit. In February the region's governor and the board of the port company agreed that the company, first established in 1992, should be liquidated. Izraylit undertook to sell the remaining stakes in the terminals by the close of this year. "We believe the company has fulfilled its task. It was created for the construction of infrastructure – buildings, quay walls – and all these steps have been performed to date. The assets to be sold should be enough [to repay the debts]. All good things must come to an end." **PH**

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Polar Code to become mandatory



Fednav

31,992 dwt bulk carrier *Umiak I* in the Arctic, where weather conditions are challenging for vessels

By 2018 ships trading in the Polar regions will have to comply with strict safety and environmental provisions specific to the harsh conditions in the Arctic and Antarctic. These measures have come into force as a result of the Marine Environment Protection Committee's (MEPC's) approval of the environmental part of the international code for ships operating in polar waters (the Polar Code) and associated MARPOL amendments to be made mandatory.

MEPC met for its 68th session in May at the International Maritime Organization (IMO) headquarters.

The complete Polar Code, encompassing safety- and environment-related requirements, is expected to come into force on 1 January

2017. It will apply to new ships constructed on or after 1 January 2017, while ships constructed before that date will be required to meet the relevant requirements of the Polar Code by the first intermediate or renewal survey, whichever occurs first, after 1 January 2018.

The Polar Code covers the full range of design, construction, equipment, operational, training, search and rescue, and environmental protection matters relevant to ships operating in waters surrounding the two poles.

The newly adopted environmental provisions cover:

- Prevention of pollution by oil: discharge of oil or oily mixtures into the sea is prohibited and oil fuel tanks must be separated from outer shell

- Prevention of pollution by noxious liquid substances: discharge of noxious liquid substances or mixtures containing such substances into the sea is prohibited
- Prevention of pollution by sewage: discharge of sewage into the sea is prohibited unless performed in line with MARPOL Annex IV and requirements in the Polar Code
- Prevention of pollution by garbage: discharge of garbage into the sea is restricted and only permitted in accordance with MARPOL Annex V and requirements in the Polar Code.

The adoption of the environmental provisions follows the adoption by the Maritime Safety Committee (MSC), in December 2014, of the safety-

related requirements of the Polar Code and related amendments to make it mandatory under the International Convention for the Safety of Life at Sea (SOLAS).

Chapter 8 in the mandatory Part A of the draft Polar Code sets goals, functional requirements, and regulations for lifesaving appliances (LSA), arrangements to provide safe escape, evacuation, and survival on board vessels.

LSA experts say the code is a good start, but add that a good deal of interpretation lies ahead before it becomes a regulation that will save lives.

Nils-Arild Henriksen, manager for regulatory affairs at Norsafe, told *P&H* the goal-based standard only offered minimum guidance to safety equipment manufacturers.

"It is much easier to produce according to the LSA Code then it is to produce against the Polar Code," he said.

David Parslow, sales director at SurvitecZodiac, told *P&H* his company needed more data from the IMO on the temperature the equipment needed to work at.

"All they have given us is that it has to work at 10° below the average ambient temperature of the vessel's operating area," he said. SurvitecZodiac therefore "took the lowest temperature at which we believe a vessel will be operating, which is about -40°C, and did our testing at -50°C".

Another concern is the issue of icing and ice build-up, which, for instance, can prevent the launching of the lifeboat.

"You have to prepare the launching appliance and the boat to prevent that kind of icing," said Henriksen, adding that

Notable numbers



-40

Lowest temperature (°C) at which vessels are expected to operate



2019

Deadline for Antwerp's first permanent LNG bunkering terminal

housing would provide a solution, but would take up valuable deck space.

A key criterion for lifeboats under the Polar Code is that they meet its expected time of rescue limit. This limit has been stipulated as never less than five days, and this presents manufacturers with a challenge, according to Henriksen.

Personnel in survival suits, the required food and water supplies, and personal and group survival kits all occupy space and add weight, which is a critical issue for a lifeboat with the launching equipment in mind, he said.

Bigger lifeboats will be needed "so we can have the extra space and the possibility of adding extra weight", Henriksen explained.

All this, of course, will come at an increased price, which might prompt owners to comply only with the minimum requirements, and discourage product development.

Overall, however, the Polar Code is considered a huge benefit, as previously there were only a few guidelines to work with.

"We are in a situation where many countries have their own regulatory requirements, so to have a unilateral polar agreement is excellent," said Mark McLeman, product manager for the offshore segment at VIKING Life-Saving Equipment.

He conceded that the code represented a very basic foundation, but was something that could be built upon on a continuing basis.

Antwerp seeks permanent LNG station



Antwerp Port Authority has issued a tender inviting proposals to build and operate an LNG bunkering and filling facility at the Belgian port. Although truck-to-ship bunkering is already possible at the port, it aims to have a permanent LNG bunkering terminal by early 2019.

At present, LNG is brought by truck from the LNG import terminal in Zeebrugge to the quayside in Antwerp, where barges can be bunkered directly.

The announcement of the tender represents a change of policy for the port authority. Until the beginning of 2015 the plan

was for the port authority to invest in such a facility itself and then to have it operated by an independent company.

The authority will make a site of about 7,304 m² available on Quay 528. The site was chosen after extensive screening of possible locations in the port area, taking into account factors such as safety, and waterfront and road access.

On the basis of a preliminary design for a facility with a storage capacity of 450 m³, a safety study has shown that up to 45,000 m³ of LNG can be bunkered annually at a filling rate of 100 m³/hour.

With additional safety

precautions, a higher throughput, may ultimately be permitted, depending on the final detailed configuration of the facility.

The five LNG-powered barges that currently run on LNG each have a tank with a capacity of 50 m³, enough for a return trip from Antwerp to the Swiss inland port of Basel on the Rhine.

Antwerp's main rival, the Port of Rotterdam, has already started building an LNG bunkering facility at its Gate terminal in Maasvlakte, next to its LNG import terminal.

The terminal is expected to come into operation towards the middle of 2016.



LNG-powered barge *Greenstream*



50 m³

Capacity of the five LNG-powered barges currently operating in north Europe

26

Hostages seized from the fishing vessel *Naham 3* in March



A RIB from ITS *Libeccio* intercepts fishing dhow

Piracy risks of taking Somali short-cut

With the last successful hijacking off the Somali coast now a distant memory, shipping companies are resuming the use of routes closer inshore, *Dave Sloggett* reports.

Driven by a desire to operate as economically as possible, it would seem that shipping companies are prepared to take a different view on the risk of being hijacked. But just how risky is this move?

So far this year the International Maritime Bureau has not noted any piracy activity in the area off Somalia. The focus of counter-piracy work has moved to the Gulf of Guinea in west Africa and the Strait of Malacca.

The shift back to the Strait of Malacca has demonstrated

that piracy may lie dormant for a period of time, but rarely does it go away completely. The socio-economic reasons why people resort to piracy are not easily removed as a catalyst, so the threat of an attack in a piracy hotspot remains, albeit at a significantly lower level.

The risk of being hijacked must play on the minds of seafarers as they make passage in the Somalia region. Between 2005 and 2011, the threat was high, with the area 500–700 km to the east and southeast of Mogadishu being seen as particularly vulnerable. A spate of attacks occurred a long way offshore.

In this period, pirate attacks also crept south into Kenyan coastal

waters. A small number of attacks were also reported off Tanzania.

Seafarers should be made aware of the uncertain fate of the 26 hostages taken from fishing vessel *Naham 3* on 26 March 2012. In August 2013 the vessel was photographed by a Spanish aircraft apparently having been beached in the Galmudug region of Somalia.

The decision to beach the vessel, now a rusting hulk of little value, seems to show that the pirates believe value now lies in the hostages, rather than the vessel.

Vessels making this transit avoid the longer route out into the middle of the Indian Ocean that they took for the sake of prudence at the peak of the piracy problems. The pirates staged attacks using

dhows as 'mother' vessels, allowing skiffs to be used throughout the Indian Ocean to seek out vessels vulnerable to attack.

The revised journeys shave about 810 miles off the longer route, or two days off customary steaming times. The revised direct routes are about 1,350 miles long, from the start-point of Socotra Island to the end of Tanzania's coast waters.

With fuel costs representing 50–60% of the commercial cost of operating a vessel, it is not difficult to understand why shipping operators have taken this decision. It must only be hoped that it is not one they come to regret if pirates choose to return to Somali waters.

Notable numbers



60

Maximum percentage of commercial operating costs represented by fuel costs



10

Estimated number of different ECDIS systems currently installed on vessels

ECDIS compliance must be 'above the minimum'

As new navigational regulations come into force, industry specialists have warned that crews must be given strong support by their employers to boost their competence with electronic navigation systems.

In July 2015 new SOLAS requirements came into effect for existing tankers above 3,000 gt, which must be fitted with at least one electronic chart display and information system (ECDIS) on bridges that are equipped with electronic navigational charts (ENCs).

The requirements will finally cover all ships engaged on international voyages, and has been gradually brought into effect since 2012. Cargo ships other than tankers will be expected to comply over the next three years, so that all vessels are compliant by July 2018.

With more vessels going paperless, the long-debated safe navigation of mariners has come to the forefront, and training is seen as critical in this transition.

Warsash Maritime Academy's ECDIS course manager and senior lecturer in bridge simulation Chris Lowe told *P&H* that in his

experience there was "great variability in how prepared mariners are to use ECDIS safely as their primary means of navigation". He said the biggest issue for seafarers seemed to be a lack of leadership and understanding from some shore-based staff.

He said seafarers working for

organisations that dedicated a knowledgeable person to ECDIS-related issues on shore were more confident and better motivated to use the ECDIS properly and safely.

"The assessment of training needs for seafarers on board might not be adequately defined by management," said Regs4ships CEO Captain Richard Eastham, adding that although minimum standards were defined in the Standards of Training, Certification and Watchkeeping, proper training was required over and above the minimum requirements.

Management companies handling large fleets might experience greater challenges for this reason. They might have 10 different ECDIS types on board and this poses a logistical challenge, said Roger Ringstad, master mariner and managing director of mariner e-training company Seagull AS Ringstad.

As for the future, when it comes to crew training, Ringstad foresees a bigger rush, as from next year all existing dry cargo ships will gradually need to comply.



Insurers' fears of cybercrime increase

The insurance industry has increased concerns over its exposure to cybercrime.

Insurance companies say cyber risk is the biggest "banana skin" they currently face, as calls for the risk to be excluded from all but specific cyber policies increase.

Global consultancy PricewaterhouseCoopers (PwC), in partnership with the Centre for the Study of Financial Innovation (CSFI), has published its annual *Banana Skins 2015* survey, which

polled 806 insurance practitioners and industry observers from 54 countries to find out what they considered the greatest risks over the next 2-3 years.

Globally, cybercrime is now ranked fourth among the top global risks, after regulatory uncertainty, macro-economic risks, and interest rate rises.

In the marine insurance sector, cybercrime is a cause of greater uncertainty than disasters at sea.

Mark Train, PwC global

insurance risk leader, told *P&H* the growing importance of the threat of cybercrime was not a surprise because of the uncertainty surrounding the issue of cyber cover.

"First is the lack of data and understanding of the risks clients face. The threats from other risks, such as natural catastrophe, were a lot lower down on the list. Because of better modelling, underwriters clearly feel they understand their exposure to catastrophe events.



"Second, I believe there is also a fear that the insurers themselves could become victims of cybercrime and are concerned about the potential impact should they themselves be subject to hacking," Train said.



2018

Year by which all vessels operating internationally must be ECDIS compliant



4th

Ranking of cybercrime in terms of the top global risks to maritime insurance



President Milà at the IAPH Japan seminar

President Milà gives keynote speech at IAPH Japan seminar

At the invitation of the Japanese Foundation for IAPH, IAPH president Santiago Garcia-Milà, deputy managing director of Autoritat Portuària de Barcelona,

Spain, visited Tokyo to make a keynote speech at the IAPH Japan Seminar. The event, organised by the Foundation in Tokyo, Japan, was held on 7 July.

In front of some 100 representatives of Japanese government ministries and agencies, port authorities, port consultants and experts, President

Milà kicked off his speech by touching upon the recent process of reviewing the governing and leadership structure of IAPH and changing its constitution and said, "My mandate is to create more value to IAPH members and promote IAPH more in the maritime world."

He then moved on to present his port of Barcelona to the audience in terms of its current position in the European logistics system and on the world trade routes. He went on to explain about SIMPORT- a geographical information system (GIS) that his port uses to forecast the its future traffic in the entire logistics chain and analyse possible transport scenarios.

Following his presentation, Fer van de Laar of IAPH's Europe Office presented a progress report on the ESI (Environmental Ship Index) of WPCI project and five Japanese experts' reported on the outcomes of IAPH Hamburg Conference.

The Japan Seminar is held annually under the auspices of the Japanese Foundation for IAPH with the aim of promoting IAPH activities among the Japanese port and maritime community.

Technical Committee reports are available online

Based on the work programme of the last term, the following committee reports were published online. All IAPH members can read the full report online at www.iaphworldports.org

Port Safety and Security Committee

'Report on the Survey Results on Business Continuity Plan (BPC) in Ports, in the event of any Threats, Interruption or Disasters'

(Project leader: K. Subramaniam, Port Klang Authority, Malaysia)

Port Planning and Development Committee

'Effects of the Arctic Sea Routes (NSR & NWP) Navigability on Port Industry (Part 2)' (Project leader: Dr Masahiko Furuichi, vice-chair of the committee/ Kyoto University, Japan)
'Best Practices of a Simple IT Trucking System for Efficient Container Terminal Gate Control

for Small and Medium Size Container Terminal' (Project leader: Dr. Masahiko Furuichi, vice-chair of the committee/ Kyoto University, Japan)

Port Operation and Logistics Committee

'The Study on Best Practices of Container Terminal Automation in the World' (Project leader: Juan A Delgado, immediate past chair of the committee).



We value your opinions

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

Are there other industry issues you feel strongly about?

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

New IMO secretary general elected

South Korea's Ki-tack Lim, president of the Busan Port Authority, has been elected as the new secretary-general of the International Maritime Organization (IMO). He will take the helm from incumbent, Japan's Koji Sekimizu, on 1 January 2016, for an initial term of four years.

The vote took place during the 114th session of the 40-member strong IMO Council, which met from 29 June to 3 July 2015.

A graduate in nautical science, Lim worked as a naval officer and for Sanko Shipping Co before joining the Korea Maritime and Port Administration in 1985, where he served in multiple roles, including director for the Maritime Technology Division, and of the Shipping Economic Policy Division. He served as the Republic of Korea's Deputy Permanent Representative to IMO from 2006 to 2009 and was chairman of the Sub-Committee on Flag State Implementation from 2002 to 2004.

In IAPH, Lim had long served as the Korean alternate director in the IAPH board and most recently as a member of Strategic Policy Group to provide advice on the future direction of IAPH and develop new draft constitution.








IAPH

Membership notes






Welcome to new members

Temporary members

Lyttelton Port Company Ltd

 Address: Private Bag 501 Lyttelton 8841, New Zealand
 Telephone: +64 3 328 7932
 E-mail: peter.davie@lpc.co.nz
 Website: http://www.lpc.co.nz
 Representative: Peter Davie, Chief Executive

Guangzhou Port Authority

 Address: No.406 Yanjiang East Road, Port Center Yuexiu District, Guangzhou, China
 Telephone: +86-20-8305-0395
 Fax: +86-20-8305-0201
 E-mail: djq@gzport.gov.cn
 Website: http://www.gzport.gov.cn
 Representative: Chang Min, Director General

Australian visitors

The delegation from NSW Ports of Australia, headed by Stephen Cleary, CEO, visited the IAPH office on 22 July. The visit was a part of promotional activities in

the region, including China, Japan and Korea. Sec Gen Naruse introduced them to IAPH's activities and invited them to become an IAPH member.



IAPH

(L to R) Sec Gen Naruse; Jason McGregor; Stephen Cleary; Dom Figiomeni

Annual Report 2014-2015

IAPH publishes its *Annual Report 2014-2015* in digital format.

It contains the major outcomes and activities of the IAPH over the past year.

These include: the 2015 Conference in Hamburg, Germany, the IAPH technical committees, Women's Forum, World Ports Climate Initiative (WPCI), financial status of the association and more.



Step up and play your part

With the progress made on key issues over the past year, and the approval of the new scholarship, it's time for all members to promote and encourage equality of opportunity in the ports environment

Just to remind you, the IAPH Women's Forum was established at the IAPH board meeting of 22 May 2012 to aspire to advance and empower women in the maritime industry; to create a platform for discussing women's issues in the maritime industry; to look at ways to encourage women to join the industry; and to promote training programs enabling women to better compete for positions at all levels, including those previously not open to women.

The IAPH Women's Forum has been very active this year with a number of initiatives. At the recent IAPH World Ports Conference in Hamburg, members met over lunch on the Monday, and then in a full conference session the following day to discuss and report activities and progress since the Mid-term Ports Conference in Sydney (April 2014).

At the lunch meeting, IAPH honorary member Naomi Kogon-Steinberg, who has taken up the Women's Forum mantle *pro tem*, thanked previous chair Diane Edwards and all those who had actively contributed during the previous year, before turning the floor over to various members to report progress on several key initiatives:

The Mentoring Initiative (Melissa Kappely, Port Nelson, New Zealand and Rachel Vandenberg Dewberry from the USA):

Naomi Kogon-Steinberg, chair - Women's Forum

Having a good role model can make a big difference in the direction of a woman's career. Mentorship is essential for the development, success, satisfaction and retention of women in our industry. Based on feedback at the 2013 IAPH Conference in Los Angeles, mentorship was identified as an important need for IAPH women. The mentorship programme seeks to support them in their career development by providing guidance and support in defining professional development goals, gaining a broader perspective on the industry, and making available information from other, experienced sources. In addition to advancing the skills, knowledge and potential of IAPH women, the programme is expected to contribute to the retention and active engagement of IAPH members in the association's broader mission. The Mentoring Initiative is relevant for all IAPH women wanting to engage in a mentoring relationship and to all IAPH members willing to engage as mentors.

Looking to successful models of other organisations – both public and private – the Women's Forum is establishing a global mentorship programme to encourage and advise women interested in advancing their careers in the ports and harbor industry. Efforts to date have focused on defining the scope and implementation for the web-based mentoring programme.

To support effective mentoring relationships, the IAPH Women's Forum has been working to define the characteristics, boundaries, guidelines, and quality processes that are required to develop an effective professional mentorship relationship. The programme will incorporate analysis and evaluation tools to maintain and improve its benefits to IAPH members. To achieve the goals of the Mentoring Initiative, the IAPH Women's Forum committee is preparing a suite of resources to establish expectations and responsibilities for the programme and guide mentors and mentees during its implementation. The committee is currently working on guidance to screen mentors, to establish the commitment of both parties in the mentoring relationship, and to facilitate the mentoring relationship through best practices and ongoing evaluation of the program. Mentors interested in participating in the program will be asked to register their interest in being an IAPH mentor.

The exchange programme between ports (Siti Noraishah Binti Azizan, Sabah Ports Sdn Bhd, Malaysia): a full update will appear in a future edition of *Ports&Harbors*


Website and social media (Justine Camoin, MGI, France):

"When we started the Women's forum back in the IAPH conference of 2012 in Jerusalem, we wanted to create a platform to discuss women's issues in the maritime industry. We also wanted to promote the different training and mentoring programmes we are working on. But to do so, we also needed visibility of the forum on the [various] social media, as they have become a key for communicating nowadays.



► Women's forum

"Therefore, both Facebook and LinkedIn pages were created to communicate on the women's forum initiatives as well as to publish news on the development of those initiatives. The pages are updated regularly and are an open space for discussions. We encourage all men and women interested in the Women's forum join us on us:

 For Facebook : <https://www.facebook.com/groups/126585944210142/>

 For LinkedIn: <https://www.linkedin.com/grp/home?gid=5035140>

[NB A report from the last Africa/Europe regional meeting (Muthoni Gatere, Kenya Ports Authority) will be provided in a future issue of *P&H*.]

Also at the Hamburg event, Dr Geraldine Knatz, immediate past president of IAPH, made a presentation to the board of directors proposing the Women's Forum Scholarship (see Last Word, p48). A resolution was then proposed and adopted.

Resolution on Establishing the IAPH Women's Forum Scholarship Adopted on June 4, 2015 at the 29th IAPH World Ports Conference in Hamburg, Germany

WHEREAS, the International Association of Ports and Harbors (IAPH) resolved to create the IAPH Women's Forum and to create an annual scholarship intended for the training of women in ports at its Board of Directors meeting in Jerusalem, Israel, May 2012,

WHEREAS, the IAPH aspires to advance the status of women in the port industry, especially at IAPH member ports, by providing assistance for their continued education and training;

NOW, THEREFORE, the IAPH meeting at its Plenary on 4 June in Hamburg resolves that:

It will create the IAPH Women's Forum Scholarship consisting of two types of scholarship programs intended for young female staff employed at IAPH member ports to be implemented in the next term of 2015-2017:

the Women's Forum Biennial Training Scholarship to enable them to attend advanced port training program overseas; and

the Women's Forum Annual Meeting Scholarship to enable them to attend IAPH Conference and exchange information and experience at the IAPH Women's Forum.

An ad-hoc committee known as the Women's Forum Scholarship Committee will be established, including the Chair of the IAPH Women's Forum, to oversee the program and select the awardees in consultation with the Communications and Community Relations Committee administering IAPH Training Program Scholarship.

It's now up to all IAPH members – male and female – to find and support worthy candidates for these scholarships.

And Women's Forum members should seek ways to be more active within the Forum – whether participating in initiatives, or proposing suitable candidates to chair the forum. You will get much more benefit from the forum if you also contribute.

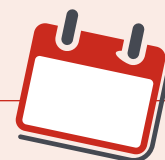
2015

2016

2017

Dates for your diary

A selection of forthcoming maritime courses and conferences



September

17-18: 10th Southern Asia Ports, Logistics and Shipping 2015, Mumbai, India
<http://www.transportevents.com>

22-25: NEVA 2015, St Petersburg, Russia
<http://neva.transtec-neva.com>

Commences 28: Diploma for Harbour Masters (*15% discount for IAPH members), Distance learning
<http://www.ibc-academy.com/FLR2577IAPH>

October

5-8: Breakbulk Americas, Houston, TX, USA.
<http://www.breakbulk.com>

6-8: Inland Distribution Conference, Memphis, TX, USA.
<http://events.joc.com/inland2015>

7-9: GreenPort Congress 2015, Copenhagen, Denmark
<http://www.greenport.com/congress>

Commences 13: Fundamentals of Container Terminal Operation and Management, Distance learning
<http://www.ibc-academy.com>

14-16: UNCTAD-Multi year Expert Meeting on Transport, Trade Logistics and Trade Facilitation, fourth session, Geneva, Switzerland
<http://unctad.org/en/pages/MeetingDetails.aspx?meetingid=687>

14-16: 8th International Conference on Maritime Law, Dalian, China
<http://www.icml2015.org.cn>

16-21: PIANC- COPEDEC Rio de Janeiro, Brazil
<http://www.pianc-copedec2016.com.br>

19-22: Dredging 2015, Savannah, Georgia, USA.
<http://pianc.sites.usa.gov>

19-23: Course on Safety Management in the Port, Singapore
<https://www.psa-institute.com>

19-30: Strategic Port Pricing & Commercial Billings Management, London, UK
<http://tppminternational.co.uk>

22-23: IADC Conference, Hong Kong, China
<http://www.iadc-dredging.com>

25-28: Breakbulk Middle East Conference & Exhibition Abu Dhabi, UAE
<http://www.breakbulk.com>

26-30: Seminar: Dredging and Reclamation, Jakarta, Indonesia
<http://www.iadc-dredging.com>



IAPH

Make a difference!

Dr Geraldine Knatz, IAPH honorary member and founding member of the IAPH Women's Forum, highlights progress made at the recent IAPH conference in Hamburg and calls on all members to play their part

Members of the IAPH Women's Forum reported significant progress in advancing a number of its initiatives at the Hamburg Conference under the leadership of previous chair Diane Edwards and current chair Naomi Kogon Steinberg.

The IAPH membership, with unanimous support from the IAPH board, adopted a proposal to create a new scholarship programme for women.

The newly created IAPH Women's Forum Scholarship Program consists of two types of scholarship awards – Women's Forum Biennial Training Scholarship and Women's Forum Annual Meeting Scholarship. An *ad-hoc* Women's Forum scholarship committee, including the chair of the IAPH Women's Forum, will oversee the programme and select awardees in consultation with the communications and community relations committee. Unlike existing training programmes, the IAPH Women's Forum scholarship will be available to women employed by any IAPH member port.

The scholarship aims to advance women's status in the port industry by providing assistance for continued education and training and to encourage more women to attend IAPH meetings.

The IAPH Biennial Training Scholarship is a \$15,000 funding awarded over a two-

year period to supplement tuition for a port or maritime-related course at a college or university. A portion of the funding will cover travel expenses for the recipient to attend and present at the IAPH Biennial World Ports Conference. The IAPH Women's Forum Annual Meeting Scholarship is a \$5,000 award that covers travel expenses to attend and present at the Women's Forum panel, either at the IAPH Midterm Conference or the Biennial World Ports Conference.

The key to making this programme successful depends on the strength of the applicants. The IAPH Women's Forum Scholarship Program has something the current IAPH Training Scholarship Program does not – the group of people that established the Women's Forum. The Women's Forum is already using social media tools like LinkedIn and Facebook, which will be used to market the scholarships. The first applications will be available this autumn/fall and notice of the application availability will be via social media and IAPH online newsletter.

Port directors, take notice! As port directors are the ones who generally receive the online newsletter, the Women's Forum will depend on *you* to ensure that your women employees are aware of the scholarships availability. **I&H**

“The scholarship aims to advance women's status in the port industry”

Geraldine Knatz

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D3408
Kalmar DRS4531-S5
Year of manufacture: 2006



D3131
Kalmar DRF450-70C5XS
Year of manufacture: 2005



D3426
Kalmar DRF420-60S5
Year of manufacture: 2012



D3415
Kalmar DRD420-65S5
Year of manufacture: 2002



DK077
Terex SC45KS
Year of manufacture: 2013



DK086
Linde C4540TL
Year of manufacture: 2013



DK085
Linde C4540TL
Year of manufacture: 2012



D3419
Linde C4535TL
Year of manufacture: 2003



D3324
CVS Ferrari F479.5-S
Year of manufacture: 2006



D3410
CVS Ferrari F478.5
Year of manufacture: 2008



D3409
CVS Ferrari F478.5S
Year of manufacture: 2007



D3384
SMV 4535TB5
Year of manufacture: 2008



D3422
SMV SC4531TB5
Year of manufacture: 2006



D3372
SMV SC4527CB5
Year of manufacture: 2005



D3383
Fantuzzi SC45KS
Year of manufacture: 2004



DK076
Fantuzzi SC45KS
Year of manufacture: 2003



DK038
Herbst - ATAIR HFH ATAIR IX D620
Year of manufacture: 2008



DK082
Kalmar DCD370-12
Year of manufacture: 2006



D3389
Kalmar DC32-1200
Year of manufacture: 1991



D3416
Svetruck 13,6-60-45
Year of manufacture: 2006



D3390
Svetruck 1612035
Year of manufacture: 2003



D3328
CVS Ferrari F16
Year of manufacture: 2003



D3395
Hyster H16.00XM-12
Year of manufacture: 1999



D3407
Kalmar DCD150-12
Year of manufacture: 2003



D3397
Svetruck 13,6-120-32
Year of manufacture: 2008



D3255
Svetruck 13,6-60-30
Year of manufacture: 1996



EL4620
Hubtex EK5110
Year of manufacture: 2000



D3393
Hyster H22.00XM-12EC
Year of manufacture: 2009



G0848
Hyster H9.00XMG
Year of manufacture: 2002



D3388
Kalmar DCE80-6HE
Year of manufacture: 2007



D3417
Linde H80D900-03
Year of manufacture: 2005



D3371
Manitou MRT3050
Year of manufacture: 2010



D3313
Manitou MRT1850
Year of manufacture: 2001



D3421
Linde H45D-04-600
Year of manufacture: 2004



DIV1160
Svetruck 320
Year of manufacture: 2008



DIV1169
Terberg TT20
Year of manufacture: 1995

Pics, details and video: www.hinrichs-forklifts.com



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