

ports & harbors

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Providing thought leadership on the role of ports in a connected world



Cutting the congestion knot

Gene Seroka of the Port of Los Angeles sees digitalization and collaboration as vital tools to untangle inefficient maritime supply chains



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Ports' share of infrastructure spending

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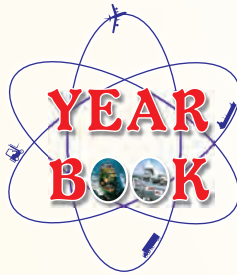
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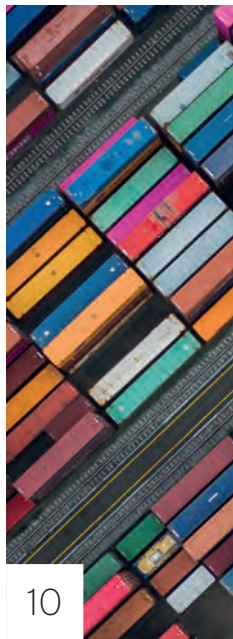
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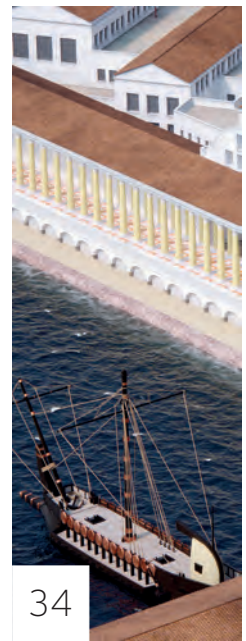
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EDITOR'S COMMENT



INES NASTALI

Editor

Future gazing

Something that has struck me when working on this edition is the magical power that we think digitalization seems to possess.

I fully agree that in daily port operations, the amount of print outs and manual systems used, for example, for communication of such things as the bill of lading should be minimized and then phased out in future.

However, upgrading the digital infrastructure should only be secondary to ensuring that basic physical infrastructure is in place.

While, at the height of the COVID-19 pandemic and throughout 2020, ports polled by the IAPH COVID-19 Barometer were confident that their warehousing space was sufficient and that operations would continue unhindered, the situation is now a completely different one.

A continued buying surge in the US and the *Ever Given* blocking the Suez Canal for several days, are only two factors that have added to the pandemic-induced container shortages globally, and resulting in soaring freight rates, and overfilled warehouses.

It seems that the feeling of relief that operations have continued the past year has left ports short-sighted to prepare for potential ramifications, which now wreaks havoc on the industry and causes congestion outside ports worldwide.

While admittedly, the latter can be better coordinated with just-in-time arrival aided by digitalized navigation and real-time traffic updates, it is having the appropriate physical infrastructure in ports to enable efficient vessel calls that would really make the difference here.



FRANK MILLARD
Freelance journalist

What has struck me from my research and discussions is the consistency of the message that maritime trade is expanding, and port infrastructure is just reflecting that as operational environment effectively gets smaller, increasingly developed, and populated. Understanding what is driving investment could be key to our comprehension of the future of ports and their place in international trade, prosperity, and the wellbeing of the planet. Ports drive their own investment just by being on this speeding train. ■



NICCI BOTHA
Freelance journalist

The state of health of South Africa's ports is directly linked to the state of health of the country's economy. And, right now, neither are in great shape. The recent civil unrest and cyberattack on the port authority, which didn't only affect the terminals but all communications, made it very difficult to get in touch with anyone at TNPA to comment on these issues. ■

As reported in our May/July data investigation on port infrastructure updates however, not many new or upgrade contracts have been made over the past year. Most upgrades that are underway now were agreed upon years before, in reaction to a different trade forecast scenario than we work with now. For example, when the dredging contract for the first phase of Singapore's ultra-modern Tuas port was agreed in 2015, trade growth was forecasted to be 2.8%, while for 2021, when the first part of the port comes online, it is 6%, according to the IHS Markit Global Trade Atlas.

On a related note, many ports in the US are currently being upgraded to receive ships with a draft of 15 m, while a port needs at least 20 m to allow ultra large container ships to call. Following the trend of ever-growing TEU capacities, this could result in ports having to react with another upgrade in a few years.

This is one of the issues we face, many ports only react to market developments when it comes to deciding on infrastructure upgrades, and with these deals often running for 30 years, not much flexibility is woven into contracts. Careful wording is essential.

Unfortunately, the magic power of crystal balls is equally disputed as that of digitalization, so nobody can be expected to know what the future holds. However, the past year has shown that preparation is key to dealing with the unexpected – and that consequences can become apparent a year on.

This might include developing innovative strategies on how to cope with potential congestion issues ahead of time, for example by strengthening the short-sea shipping sector. This is something that port authorities have the potential to influence and push for.

On this note, I would like to introduce you to someone – although I expect many of you know him already – Paddy Rodgers. The former Euronav tanker CEO now heads up the National Maritime Museum in Greenwich, UK. With decades-long experience of working in the maritime industry but now sitting somewhat removed from the day-to-day business, we think he is the perfect candidate to share insight knowledge from an outside perspective. Navigate to page 15 for his first column that looks at why thinking small can also be good and how short-sea shipping can also help with the switch to alternative fuels.

A reminder to be vigilant when drafting a contract comes via the lessons learned of the court case we feature in the first edition of our new *P&H* in court section. To put this case into context, we spoke to an arbitration expert on what other than the often costly and time-consuming court route ports can take when being faced with legal conundrums. Join the court session on page 32. ■

Stirring the melting pot

Discussions around the cause of congestion in the maritime industry are heating up fast. For Gene Seroka, digitalization and collaboration within the supply chain are two key tools to tackle this. The executive director of the Port of Los Angeles and managing director of the IAPH, Patrick Verhoeven, discussed the way forward

INES NASTALI

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ow the shipping industry works with the cargo side and ports is something Gene Seroka, executive director at the Port of Los Angeles, thinks about a lot — especially amid the waterways congestion issues some parts of

the world currently face.

“What we’re witnessing here in the US is a pandemic-induced buying surge by the US consumer that we’ve never seen before,” Seroka told *P&H* in a conversation with the managing director of the IAPH, Patrick Verhoeven.

While people followed stay-at-home orders in the US, commerce plummeted in mid-2020. In Los Angeles, businesses dropped by about 19% in the first five months of 2020, and then started to surge. “We started to see the American consumer buying more than ever before and even online retail sales doubled. Now online retail is about 20% of total sales in the United States and that doubled in a period of 12 months. We also saw that when people were working from home, they had more time. There were no longer commuting et cetera and many of us decided that we could update our homes, buy new furniture, purchase new appliances.”

So, when the world stopped going to events, movies, and on holidays, discretionary income was moved from services directly to the retail sector. “That buying power induced a tremendous amount of imports,” said Gene.

It is all connected

The pandemic was just another stressor on the supply chain, Gene added. “Because of ill-advised trade policy in Washington from the previous administration, our exports continued

to plummet. At the Port of Los Angeles, our exports have been down 29 out of the last 33 months.”

Consequently, despite very high output, factories in Asia, cannot keep up with the purchase orders and there is not enough vessel space in shipping. People look at ports because it is the confluence of all these activities.

However, the unprecedented volumes coming in challenged the prepared west coast. “Here’s an interesting note. In Southern California, we have more than 2 billion ft² of warehousing space from the shores of the Pacific Ocean to the Mojave Desert, and they’re all overflowing. So every piece of the supply chain is stressed because of all that we’re doing to buy goods,” Gene explained.

“The inventory-sales ratio is the lowest it’s been since pre-recessionary days some 13 years ago. So, all of the metrics that we look at are pointing in the direction of continued strength in the industry, but we have to be more nimble. We have to the ability to scale to be able to handle this. That is the challenge for the industry now,” he said.

Assessing the situation

While Gene welcomes the US government’s decision to significantly invest in infrastructure to release these pressure points, he is careful not to over-estimate the impact legislation can have. “I don’t think, as a long-time veteran in this industry, that you can legislate or regulate your way out of the strength of a market. But I’d like to hear all views and maintain our seat at the table how better we can grow, scale, and service our mutual customers and I’m optimistic today,” he said.



IN CONVERSATION WITH GENE SEROKA

Photo: Scott Varley/MediaNews Group/Daily Breeze via Getty Images





He explained, “Because in President Biden’s administration, it feels a lot like during the Obama-Biden administration. We’re working directly with cabinet members, the equivalent of a minister level,” he said.

One of the most important issues to get down to a level of granularity is that cargo is not moving as fast as it should. At the same time, in Los Angeles, vessel productivity is up 50% year over year. “We’re working 50% more vessels per day than we were during pre-pandemic times. Our exchange rate of containers loaded and unloaded from each vessel call is 11,000 TEU per ship,” Gene explained.

But that is not the case everywhere. “Yet, we still see congestion. The railroads are full. We have some 70 km of trains sitting outside of Chicago, waiting to be unloaded. Because in some cases, importers cannot pick up the cargo fast enough that 2 billion ft² of warehousing is overflowing.”

Since cargo does not move fast enough, marine terminals are showing up to 98% land utilization with containers, with a design capacity of 80%. Consequently, ships are taking a longer to call because there is no space left at the marine terminal, also in Los Angeles. “The next ship that comes in sits at anchor, the ship leaving Asia departs a little later than normal, and the factory is still trying to manage all of these purchase orders. Yet it is doing a tremendous job from a historical perspective. So, this is very different,” Gene said, putting the situation in context.

He therefore cautions against attributing the situation to having a single cause. “When folks try to categorize the industry as having problems based on port congestion, I think instead we need to look at the entire supply chain.” He added that, “I think it should be a dialogue within the industry and with elected officials and policy makers as well. There’s a lot to be excited about right now, but we’ve got to categorize this properly to make sure that our voices are heard.”

Digital way forward

One of the developments Gene is excited about is advancing the digital infrastructure of the supply chain. “Unfortunately, we are decades behind our colleagues in Europe, Asia, the Middle East,” said Gene, adding that he has worked all over the world and witnessed what digitalization means to port communities and supply chain participants. He is also aware of the hurdles in the US when it comes to sharing data.

Many believe their data is valuable, but are yet to find ways to capitalize on that. Others are fearful that digitalization will lead to competitiveness and certain companies

“Broadening knowledge is the role of the IAPH”

PATRICK VERHOEVEN
IAPH MD

do not want their competitors to improve. “So, we’ve got to cut through all these politics and improve the US’ competitiveness on the global trade platform,” he added.

For this, the executive director wants to work on a global scale and create standards of information flow to modernize the API environment that the industry works in.

“So, we need to stay very close as an international community in working on those standards. Having interoperability and shar-

ing information along those lines of standards will make our industry better and more resilient in the future,” said Gene.

“Because we have the ability as ports to affect change, we talk to so many people, we have so much access at the C-Suite level in our industry, that ports are a natural repository for all this information and have the ability to advance our industries technological capabilities,” he added.

Getting involved

“I very much subscribe to what Gene said that the port authorities are somewhere in the middle of all the action,” said IAPH managing director Patrick. Within this melting pot is a small group of trailblazers that play an important role. “Basically, when it comes to data sharing, we have ports around the world that are very advanced like LA and I would also mention ports such as Barcelona, Hamburg, Singapore among others. So, I think to broaden the knowledge from that relatively small group of leading ports and to share that with the wider communities, that’s our role as IAPH.”

Proof of this can be found via the World Bank and IAPH reports published earlier this year to strengthen digital development. “The main conclusion is exactly what Gene said, it’s not about technology, it’s about trust. It’s about people wanting to share data and making them realize that it’s in the common good in the end,” said Patrick.

Rather than worrying about competition, he wants stakeholders to see how beneficial it is for all. “I think we need to be more hands on and offer some sort of training program or something compared to what we have developed with the IMO on decarbonization,” Patrick envisioned.

The first step is to find a sponsor in terms of a government or governmental organization such as the IMO or World Bank, he added. “Of course, the leadership of ports like LA and some of the others would be invited to share the experience they have had working on this issue for many years. That’s where I see the interaction and the complementary relationship between the IAPH and leading smart port networks that we need,” said Patrick.

He is echoed by Gene, “It’s really about leadership. And whether it be former IAPH president Santiago Garcia-Milà from the Port of Barcelona, Jens Meier from the Hamburg Port Authority, Tang Chong Meng from the PSA, and Ley Hoon Quah from Singapore. These are folks that have that vision, and, for the record, we have done our level best to overcome objections in this area by creating data, sharing agreements, legal documents that permit data sharing within the confines of that mutual respect and leadership.”

Looking out for risks

Gene also values being self-sufficient over being regulated. “It’s my belief that we have advanced further in our industry with voluntary measures than with the hammer of regulation.” This includes protecting this new valuable asset. “So, when it comes to protecting that data, the Port of Los Angeles, long before I came here, was the first in the US to assemble and implement a cybersecurity operation center.”

He explained the importance of this center, “It’s protecting the Port of Los Angeles and stopping on average 40 million cyber intrusion attempts per month. That number is double what we witnessed prior to COVID-19 because of course we see more opportunists in the market with many people working from home. The security of systems, VPNs, mainframes, the cloud all look different than they did 18 months ago. So, we’ve seen a rise in those attempts and we’re stopping every single one of them.”

Backed by this program, the port worked with the FBI’s Neighborhood Cyber Watch to bring the private sector in to this dialogue under a strong direction of anonymity. “We share information on what cyber intrusion looks like across public and private center entities to make sure that if someone sees a problem in the cyberhood watch, they share it with fellow stakeholders,” said Gene. “But again, we don’t want to call out people who have been hurt by cyber intrusions. Rather, we want to learn and shut them down as quickly as possible. The bad guys are out there more than ever before and we need to stay not a step but kilometers ahead of those people,” he told *P&H*.

Patrick also sets on collaboration rather than regulation to tackle this issue. While he wants to work with the IMO and appreciates the fruitful relationship the IAPH has with the shipping regulator, he said, “It’s always a tricky one when you talk about ports and regulation because the mandate of the IMO is shipping, but of course ships come into ports and then you have this grey zone.”

Together with partners, the IAPH produced a set of port and port facilities cybersecurity guidelines targeting the strategic rather than technical level. These will be published in September (find a visualized summary on page 20). “The guidelines are meant to create awareness among the C-level management of port authorities. But on the other hand, we also wanted to bring this to the attention of the IMO, so the guidelines have been submitted to both the IMO Facilitation and Maritime Safety Committees. The latter meets in October where we will present them,” added Patrick.

While these cannot be translated into regulation because of these competence issues, the IMO can endorse and recommend them among member states. And that is really what Patrick wants to see as a first step.

The IAPH managing director has made the same observation as Gene regarding cyberattacks. “The pandemic has shown that there is a multiplication of cyberattacks also in ports, and we had the recent example in South Africa with Transnet that has been hit by a major attack,” he said. However, “there are a lot of things we don’t hear and there’s much more going on than what makes it into the media. So, I think the timing of this is right. We definitely see the IMO as an ally in raising awareness. But again, the IMO regulating ports is always tricky,” Patrick explained.

“It’s stopping 40 million intrusions”

GENE SEROKA

Executive director,
Port of Los Angeles

The way ahead

Agreeing to also continue working together, Gene said, “in closing, the IAPH gives our port authorities around the world an opportunity to create ideas that will advance our industry. We’ve got big thinkers, strong minds, and people who have a sense of public duty to advance our industry. And if our industry is strong, it creates economic value, jobs, and the ability to voice our opinions on actions needed for environmental stewardship and decarbonization. Whether it’s making ports more efficient, creating more value for our mutual customers, or the advances that we must make with respect to climate change. So, I’m proud just to be a member.” Patrick seconds this, concluding that, “the keyword is leadership, and we need to foster that. I think that’s maybe something we haven’t done enough in the past. Recognizing that role of leaders and that they need their platforms — that is our role. The other is to interact with intergovernmental organizations such as the IMO as they talk to governments directly and that combination is extremely powerful, and with digitalization, I think we’ve got a really good case here, which everybody should be interested to work in.” ■



PERSPECTIVE AMMONIA AS A FUEL

Agility today and flexibility tomorrow in the fuels transition

In order to successfully achieve shipping decarbonization by 2050, it has to start with replacing 5% of international shipping's fuel mix with zero-emission fuels by 2030.

In particular, key international routes and ports have been enabling conditions for first movers of zero-emission fuels to achieve this target. But for which fuels?

At this point, there is no right answer: navigating the transition will require experimenting with multiple fuels across the bunkering land- and seascape.

In some cases, that experimentation will even need to happen within a given port: the medium-term strategy for some hubs will likely be multifuel.

The approach ports take to the fuels question will therefore be crucial to achieving sufficient progress by 2030.

Notably, delivering port infrastructure for the transition will require a high level of coordination throughout the entire value chain, with effective dialogue between energy companies, fuel service providers, ports, shipowners, and shippers.

In the mix

The Getting to Zero Coalition's Mapping of Zero Emission Pilot and Demonstration Projects shows an increasing level of activity throughout the value chain, including ports and bunkering infrastructure.

The port and bunkering projects included in the mapping cover essentially all of the potential zero-emission energy alternatives – battery power, bio-based fuels, hydrogen, methanol, and ammonia.

Several projects, particularly those in Northern European ports, are explicitly

investigating multiple fuel and energy sources and modular systems to flexibly meet the needs of different ship designs.

This makes sense: on the shipping side, the mapping of pilot and demonstration projects indicates some measure of specialization, with hydrogen and batteries in focus for smaller vessels and ammonia and methanol prioritized for larger ships.

Furthermore, early indications from the industry's orderbooks are that fuel flexibility, in the form of both dual-fuel engines and conventionally fueled engines that are ammonia-ready, are an important part of managing uncertainties and risks at this stage in the transition.

Over time, fuel cost and availability, vessel designs, and even the cargo type moving through ports will affect which fuels and energy solutions are adopted



ABOUT THE AUTHOR

JESSE FAHNESTOCK is the project director at the Global Maritime Forum and lead of the Getting to Zero Coalition's Motivating First Movers workstream. This workstream seeks to catalyze initiatives that demonstrate tech, business models, and investment cases to bridge the gap to commercially viable zero-emission vessels.

in each location. The big challenge will be coordination – making sure that appropriate and efficient bunkering solutions can be developed and deployed to match operators' strategies.

In the early part of the transition, projects that engage the entire value chain will have a big impact.

Looking to ammonia

The case of ammonia provides an important example. Ammonia has some characteristics that set it apart from fossil fuels – including its toxicity. Yet ammonia is already shipped as cargo around the world, and routines and systems for its safe handling can help inform the development of bunkering solutions.

Collaboration between the companies with cargo handling expertise, vessel designers and operators, and ports can help accelerate the development of ammonia bunkering and lower the uncertainties around deploying ammonia-powered ships.

Ammonia's relatively low explosiveness means that it also requires a pilot fuel for ignition. This means that bunkering hubs may want to provide multiple fuels for ammonia-powered ships, including perhaps net zero-emission biofuel for ignition purposes.

Looking at the other end of the value chain, ports may also play an important role in enabling fuel production.

Pictured: The bunkering infrastructure in ports will change with a future fuel mix.

Ports often host industrial clusters, and most heavy industries are beginning to explore the role of blue and green hydrogen in their own transformations.

Facilitation of industrial symbiosis that produces hydrogen for multiple sectors can lower the risks for all parties – including for off-takers of shipping fuels.

A related challenge from the ports perspective will be building the sufficient demand for a given fuel, to give ports the confidence to invest in infrastructure at scale.

Purported buyers' clubs, which aggregate soft commitments from many companies to purchase zero-emission solutions, have been used with some success in the renewable energy and electric vehicle sectors.

As shipping companies begin to narrow their interests down to a few fuels, the time could be ripe to send a similar signal to

ports and fuel producers. Governments can also help to de-risk these investments, for example by using public innovation funding, grants, and loan guarantees.

Two-thirds of the port-centric pilot and demonstration projects in the Getting to Zero Coalition's Mapping have received some public funding, and this will probably be the key to success.

Synchronizing the development of

infrastructure with the development of demand and supply is not simple. Many ports will be familiar with this process from the emergence of LNG as a shipping fuel over the past two decades.

The transition to zero-emission fuels will have to happen more quickly than the adoption of LNG at scale.

On the other hand, this is a challenge for the entire industry and every port will be impacted. This means that once investment begins, it will be large and transformational.

Ports preparing for the transformation today may find themselves in a better position than those who waited. ■

“A related challenge from the ports perspective will be building sufficient demand for a given fuel, to give ports the confidence to invest in infrastructure at scale”

JESSE FAHNESTOCK
Project director,
Global Maritime Forum

FEATURE INVESTMENT IN PORTS

Cause and effect

Investment in port infrastructure has continued apace despite the pandemic, by way of economic stimulus. However, climate-change mitigation and a move toward a more integrated trading network are major factors for existing plans with capacity being of prime importance to governments and operators

FRANK LENNOX-MILLARD

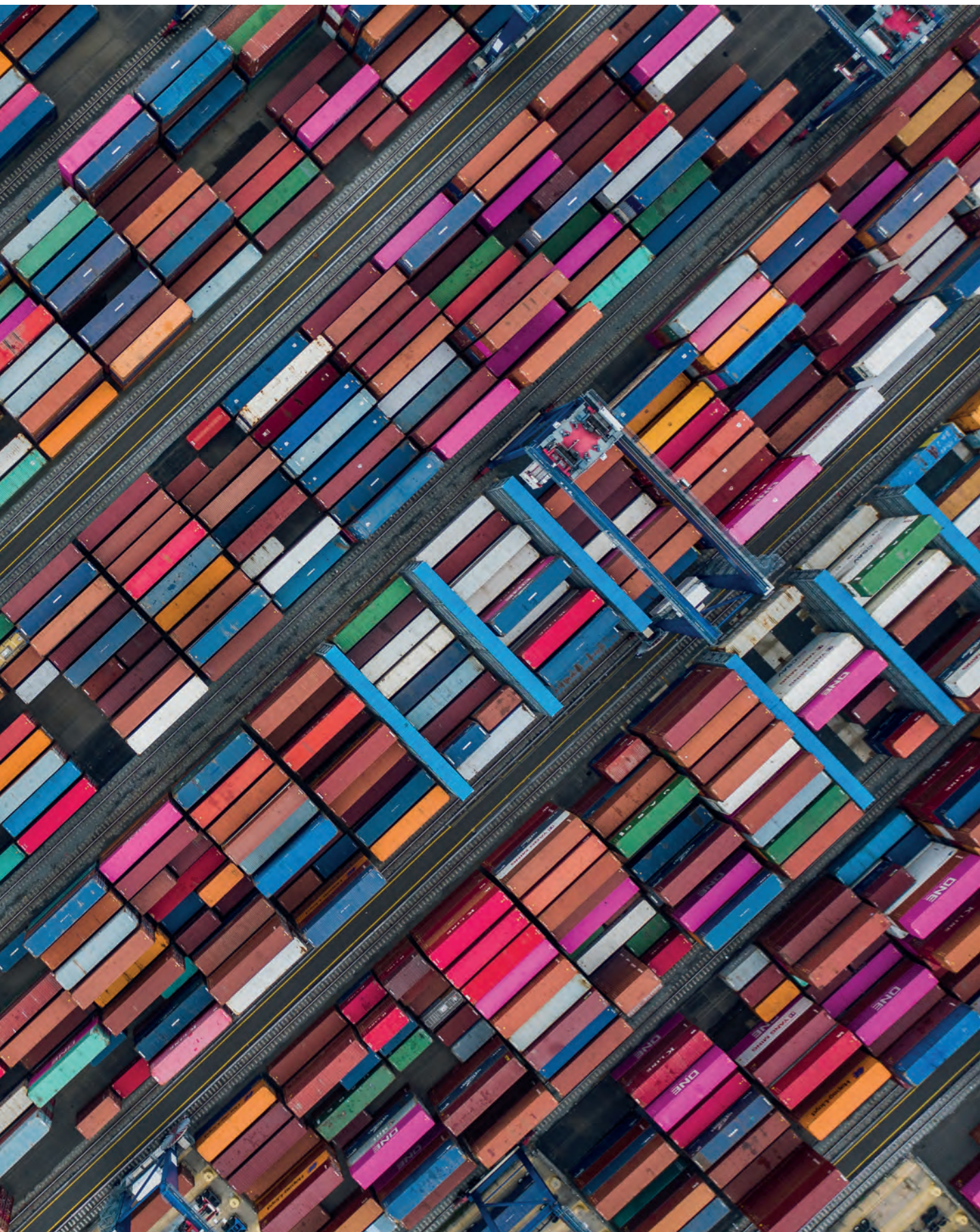
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hen it comes to the main drivers that steer port investments, Guy Haesevoets, client director, Corporate Banking Ports Practice at BNP Paribas Fortis, opined three factors: capacity, in the terminal but also to the hinterland, the modal shift, and sustainability — the reduction of carbon emissions through renewable energy and digitalization — meaning better use of data to improve efficiency. “These drivers are of course strongly geographically linked,” he said. “The investment drivers in the Le Havre-Hamburg range will be different from West Africa or Asia. In Northern Europe, focus will be clearly on ESG and digitalization and automation along the supply chain.”

Christa Sys, BNP Paribas Fortis chair on Transport, Logistics, and Ports at the Department of Transport and Regional Economics, University of Antwerp, added that investments by public authorities will remain crucial, “Private players will always follow and never be in the lead here, they sometimes get directly involved through PPPs, but always with a big public covering of main risks.” Sys sees the relationship between trade growth and transport infrastructure spending as: “Demographic growth followed by trade growth influences maritime trade, which again influences potential port throughput/port infrastructure, affecting effective port throughput, meaning the competitive position of a port determines which part of maritime traffic it can attract at present as well as in the future.”

However, Ziaul Haque Munim, associate professor in the Maritime Logistics Faculty of Technology, Natural and Maritime Sciences, University of South-Eastern Norway, and co-author of *The impacts of port infrastructure and logistics performance on economic growth*, believes private investment is increasingly important. In his opinion, cargo and container throughput are the main drivers of current investment in ports. “All major ports including transshipment ports, involve large private investments. This is logical as private entities would be willing to invest in growing businesses. Also, when ports become large, it becomes difficult for public entities to keep pace with required investment and technological advancements,” he said.





FEATURE INVESTMENT IN PORTS

Photo: Getty Images/Abstract Aerial Art



“Another key driver would be geographical locations. Some small ports or potential port locations would be attractive to private entities for port investment if they offer potential for a growing port throughput market share. Some ports may be attractive due to overarching hinterland expansion possibilities, which is observed in the case of several European ports such as Le Havre, Barcelona, and Marseille. On a higher level, global economic growth also drives port investment as port throughput is highly associated with global economy.”

The pandemic

Global economies were hit in 2020 at different times, to different degrees, and in different ways. Thereafter followed a rollercoaster of recovery slowed by new waves, variants, and restrictive measures imposed by states, then an easing and reimposing of measures that perpetuated uncertainty. However, with vaccination rollouts and their positive results the return to normality has remained steady, if slow.

The IHS Markit Global Trade Atlas (GTA) forecasts a global recovery in 2021, with year-on-year real GDP growth rates predicted to reach 6%. This renewed optimism must be a factor in investment, but the application of Keynesian economics in attempts to stimulate artificially recessive economies was certainly an influence. Mainland China, taking advantage of its centralized power structure, invested in exports and manufacturing, which did result in a swift recovery of its economy with services following back into profit. The European Union and United States also announced huge investment programs to stimulate the economy post-COVID-19. Most of these funds are being used to invest in sustainable infrastructure. “Public spending will increase and therefore, might be at the front door of an era of infrastructure investment as seen in the 1960s–1970s,” said Haesevoets, who added that although the pandemic has created uncertainty, it has also improved creativity and innovation and benefited digitalization: “Resilient supply chains will get more attention. Trends such as nearshoring might in time have an impact on globalization.”

An example of recovery and investment is the Port of Houston, US, where a rebound began in the latter part of 2020 despite the pandemic and summer slump. “We surpassed the 3 million TEU mark for the first time, with a total of 3,001,164 TEU for the year,” said a port spokesperson. “The outlook was solid as we began this year — and after an unprecedented winter storm in February — container TEU have had double-digit growth in March, April, and May.” Projects include widening the Houston ship channel from 160 to 213 m, which began in May, and there are plans to continue growing the infrastructure at both terminals.

With a note of caution, PricewaterhouseCoopers’s director in Jakarta, Julian Smith, regards the pandemic as a driver of fluctuations in trade but not of investment because he said demand for shipping is a derivative of a demand for other things. “So, when you get a relatively small percentage change in the economy, it can lead to a larger change in demand for shipping because the capacity in the shipping network is fixed in the short term. There tends to be quite a bit of volatility in the shipping market, because of how long it takes to build a new port or a new ship.



Pictured: The container market is in turmoil following the pandemic.

“Demand is volatile in the shipping market and the pandemic has just made it worse because there have been slumps in demand followed by rapid recovery and global supply chains struggled to keep up, and when you get a ship stuck in the Suez Canal for a week, it doesn’t help.”

Capacity

Sys highlighted capacity and a need for a long-term vision incorporating the hinterland. She identified demographic change as a driver of capacity — increases in population mean more cargo, food, and port capacity. “More ships mean a requirement for adequate infrastructure and superstructure in the ports.”

Smith said ports will only invest in more capacity if there is expected demand. “A lot of port investment doesn’t pay for itself in cash terms because if you build a new port, it has a life of about 100 years. No investor really thinks about a 100-year investment, so the underlying infrastructure, in particular the dredging of a new port, really needs to be underwritten by government.

“A lot of the time it is government saying we need more port capacity. It will be doing what government wants it to do, but also trying to make itself commercially viable.”

Capacity, consolidation, and automation are driving investment in a four-phase development program at the Maritime and Port Authority of Singapore (MPA), said spokesperson Serene Liu. Consolidation is intended to reduce inter-terminal haulage operations. “Our plan is to consolidate all container port activities from the current terminals to a single location at Tuas at the western end of Singapore. When fully completed in the 2040s, Tuas Port will be the world’s largest fully automated container terminal, capable of handling up to 65 million TEU per annum.”

It is likely that real estate has also been a factor in repurposing the existing port, which has become prime because the port is adjacent to the central business district and the

high-end Sentosa development. The high-speed rail connection to Kuala Lumpur and beyond may have also been a factor in consolidation to Jurong. Automation and scale are drivers as well — COVID-19 stimulus not so much — with plans having been set before that became a factor.

Capacity pressures are also driving investment at the Port of Durban (TNPA). General manager Moshe Motlohi said the port has a container capacity of 2.9 million TEU and the demand is fast catching up with the available capacity. “Actual volumes handled in the recent past is approximately 2.8 million TEU, thus leaving a very marginal surplus capacity. Based on this background, it is therefore imperative to create more capacity.”

The port intends to create capacity ahead of demand and position. It is a hub port, able to handle large deepsea vessels and service the sub-Saharan via transshipments.

Geopolitics

Another important factor is geopolitics. There has been a gradual realignment of trading power and relationships providing for evolving national and regional requirements. In maritime terms, the global village is a supranational lake with an interconnectedness that transcends artificial boundaries.

Japan has several projects underway based on regional policy. The Japan International Cooperation Agency’s cooperation strategy for the port sector aims to formulate the global maritime network toward improvement of connectivity as a pillar of growth in accordance with Japanese government strategies such as Free Open Indo-Pacific and quality infrastructure investment. “Therefore, we mainly focus on port development projects in the countries along the major maritime route from Asia to Europe through the Middle East and Africa, which have enough depth for very large ships by Yen Loan, plus some port development projects in Pacific countries to improve their quality of life.”

Researcher Munim said that many ports are skeptical of foreign investment, for example, Chittagong in Bangladesh. “I see the foreign investment in port projects in developing countries as positive. The takeover of the Sri Lankan Hambantota port by China Harbour Engineering Company was rather unexpected. In my opinion, the Belt and Road initiative by the Chinese government is good for trade facilitation but the participating countries should carefully negotiate the terms and conditions,” he said. “Also, countries should consider a trading cap with other countries so that they do not rely on a single country for majority of their trade.”

The drivers

A port and its environs consist of a layering of disparate but complementary elements working together. These elements include the super, infra, and substructures required to facilitate efficient port operation as well as the mobile, human, and digital elements that fit into the geographic entity. All these evolve together toward smoother, safer, and more efficient transportation of cargo in and out of and within a state’s maritime borders.

The speed and constituents of this steady progression are of particular concern to governments as well as commercial interests. The import and export of food, goods, and

services are vital to national prosperity and security with far-reaching international implications.

The source of port investment varies around the world, which is also related to port governance models, of which there are several, said Munim. “In 2007, the World Bank proposed four main classifications: service, tool, landlord, and private. In the service port model, all port labor, superstructure, and infrastructure are owned by the government or a public entity. In the tool port model, only port labor is privately arranged, while in the landlord port model, both labor and superstructure are privately arranged. In the private model, of course everything is privately owned, hence, all investment comes from private sources under this model. Currently, the majority of ports in western countries are operating under the landlord model, while private ports are mainly seen in the United Kingdom and Australia. Service ports are still dominant in the developing world, financed by mainly host governments.

“When it comes to port investment, we also have to bear in mind that it is a capital-intensive industry and investments can easily take a minimum of 25–30 years to reach breakeven. Some investment might never reach breakeven if the ports fail to attract cargo. As international trade brings economic growth, countries must invest and maintain ports for international trade. Initially, before the 1980s, the majority of all port investment came from the governments. In later decades, in the developed world, the majority of the port investment already comes from the private sector. But this is not the case for developing world.”

Munim favors the landlord model because wholly public organizations are often less efficient and lack service quality, particularly in the developing world where country level institutional forces are weaker.

Haesevoets believes the important developments going forward will consist of creating a more efficient maritime supply chain by boosting digitization and smart applications in combination with an improved cooperation between the different actors — shipper, liner, terminal, and transporter: “In addition, the main challenge for each port will be to create the right capacity in a sustainable way. This is also a huge opportunity since ports should play a key role in the production and transport of renewable energy and carbon-free alternative fuels.”

Various factors drive investment in port infrastructure, but these are often largely the concern of the government. These factors include climate change and sea-level rises; demographic changes affecting long-term demand for capacity; and consolidation and integration within and beyond ports involving automation, digitalization, and other efficiencies. These generally coincide with the commercial imperatives of a port and the symbiotic relationship that can provide — and provide for — a broad vision.

The port can affect the need for investment from whatever source, especially transport links in the hinterland, but everything hangs on government and commercial policy, both of which are dependent on the fluctuations of international trade and internal domestic pressures. Smith said he does not see ports as driving investment, “Ports respond to trends or government policy rather than themselves driving infrastructure investment.” ■



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PADDY RODGERS

Director, National Maritime Museum, Greenwich, UK

THE COLUMN

I would not start from here

The story goes that a US tourist walking through Dublin stopped a local and asked, “How do I get to Trinity College?” and the wag answered, “Well, first of all, I wouldn’t start from here!”

This was no doubt an irritating advice, if it ever happened, but perhaps it would be good advice for the shipping industry in these times. As we aim for zero-carbon emissions and struggle with powering our modern monstrous ships from one huge remote deep port to another huge remote deep port, we might like to think about why we ship like this? The economy of scale associated with bigger ships is so ingrained in shipping that it is often not questioned or its wider consequences analyzed.

The economy of scale is dependent on the cost of hydrocarbons. Globalized trade is based on markets being unified through the willing buyer’s price exceeding the willing seller’s price by more than the cost of transport. This opening of the arbitrage establishes the trade lane and creates the world of trade as we know it.

However, the cost of hydrocarbons has been subsidized throughout their use because the environmental damage of their extraction, refining, and consumption has not been counted properly, or at all! They have always been too cheap!

Bigger ships had another damaging feature; as they got bigger, the ports to accommodate them had to be rebuilt further out from the cities that had been built around the older smaller ports, which we are so desperate to revive as heritage harbors, or city center attractions today. As the ships moved away from the cities, so did the seafarers, in fact, today most people in the West hardly know that shipping is the mode of transport that has globalized the world markets.

Needless to say, road transport has bridged the gap from the mega-port to the city and consumer, leading to the belief that all transport is by lorry.

Solving the fuel problem for big ships with the tools currently available, and with the necessary autonomy for long voyages, looks difficult on a single-ship basis, and all but impossible, on a fleet-wide basis. If shipping stepped back to the era of smaller ships that complete more of the cargoes total voyage, sailing back into the center of London — beyond the upper Pool — or Liverpool, or to smaller ports such as Whitby, then there will be fewer lorries on the road, more jobs at

sea and in revitalized cities, and renewed familiarity with the maritime industry for the general public, and perhaps more recognition that sea workers are key workers. It is a single change that suddenly could be solving a multitude of modern ills.

So, as we struggle with ammonia versus methane or solar panels or hydrogen, we might need to think differently, but not in a revolutionary way. There

is no need to end containerization; I am not pleading for out-of-the-box thinking!

The romance of this idea should not obscure the fact that it could be a good solution, nor should it be a surprise that when the right things are done, they can come with collateral benefits, not collateral damage. It is nature’s way of telling you that you are on the right track! ■

“Most in the West hardly know that it is shipping that has globalized the world markets”

ABOUT THE AUTHOR

PADDY RODGERS is the director of the National Maritime Museum in Greenwich. Before taking up this role, he led tanker company Euronav for almost two decades.



There is a common industry saying that “if you’ve seen one port, you’ve seen one port”. This means that every port, including the organizations and facilities operating within its boundary, has evolved in a unique way. As ports have modernized, this saying now applies to how digitalization and cyber risk management have been handled. Each port facility will have unique information technology and operational technology architectures and leverages industrial internet of things capabilities to meet the needs of its business and customers. These organizations now need to be prepared to limit the fallout of cyber incidents to within their defined acceptable risk limits for their unique situation.

As the maritime business are relying more heavily on systems, applications, and information to one extent or another, resiliency requires the involvement of the entire organization. Ultimate responsibility lies with the executive leadership of the organization, whether that be the owner, CEO, board, or other senior executives. The ports that are best coping with cyberattacks realize this is a business challenge, not just an IT issue. These organizations are investing in technical cybersecurity controls, but also ensuring that processes are in place, training occurs, and that they collaborate with and



share cybersecurity related information with their third-party partners.

Based on the information reported to the Maritime Transportation System Information Sharing and Analysis Center (MTS-ISAC), ports and port facilities experience cyberattacks daily. These are not hypothetical cyberattacks, but near continuous real-world events. Most of these attacks are thwarted and port operations continue unhindered.

However, as media reports have shown over the last few years, there have been cyberattacks at port facilities globally that have resulted in operational impacts.

Recovering from an takes a toll on personnel and impact resources at the targeted facility and across the supply chain as well. However, those facilities have been able to recover and can resume operations. Holistically speaking, the maritime transportation system (MTS) is highly resilient.

Regardless of the threat, the MTS has proven over centuries that it is able to cope with the fallout of impactful events and continue moving goods and people around the world. Cyberattacks are just one of several modern risks requiring risk management strategies to be continually reviewed, evaluated and updated and MTS stakeholders can further improve their cyber preparedness and resiliency by applying IAPH’s Cybersecurity Guidelines for Ports and Port Facilities. ■



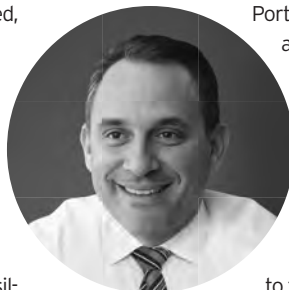
THE DEBATE

Are ports readily prepared to cope with the fallout of a potential cyberattack?



There is no elegant, all-encompassing answer to this, and that a range of factors affects any measure of a single organization’s level of cybersecurity preparedness. For a port or port facility to be cyber resilient, what matters most is the degree to which its capabilities – its people, procedures, technologies, and budgets – are appropriately and effectively organized, deployed, managed, and sustained. Additionally, the COVID-19 pandemic has accelerated the pace of digitalization across the port industry, conferring technological, economic and even intellectual advantages to some organizations and port communities. Such considerations only signify the tip of any effort to determine a port’s cyber resilience. However, the deployment of capital into complex and integrated technologies for the purpose of operational efficiency and economic gain does not always equate to a more cyber resilient operation; the more technologically sophisticated, complex, and integrated a port or port facility, the more vulnerable and damaging or disruptive a successful cyberattack will be.

No two ports are alike but they all operate within a global threat landscape populated by organized criminal syndicates, nation states, and hacktivists unconstrained by borders, legal norms, funding, or imagina-



tion. Collectively, their actions and campaigns are constantly evolving, persistent, and increasingly sophisticated. As such, it is less a matter of if than when a cyberattack successfully impacts a port or port facility.

Notably, ransomware attacks are increasingly targeting public services – local government agencies and municipalities, hospitals, utilities, etc.

Port operators, residing at the nexus of local, regional, and global trade, should take note. Cyber resilience – also considered cybersecurity capability maturity – can be achieved by implementing an enterprise, all-hands approach. It begins with executive engagement and oversight. Additionally, establish procedures to promote regular communication between IT staff and key staff, such as facility security and operations. Implement cyber awareness training and incorporate cyberthreat scenarios into drills and exercises to test the organization’s response. Update incident response plans and procedures with lessons-learned. Only deploy technologies if they can be appropriately managed and sustained. Establish budgets to support cyber risk management activities.

While no two ports are equally prepared to meet the cyber challenge, all ports and port facilities can seek to achieve suitable levels cybersecurity capability maturity. ■

FIFTY SEVEN

Readership results: Are you confident your port is readily prepared to cope with the fallout of a potential cyberattack?

43%

57%

SEPTEMBER/OCTOBER
CYBERSECURITY

POLL RESULTS

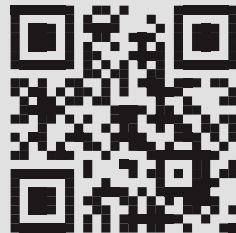
Just as differentiated as our debate contributors, *P&H* readers see the discussion around the readiness of ports following a cyberattack. 57% of respondents think ports are not prepared, a marginal majority and maybe no shrieking alarm signal but definitely no vote of confidence either.

However, it is a chiming alert that more preparation needs to be done, as, to quote Max Bobys of this month's debate, it is a question of when a port gets attacked and not if.

With ports being one part of the supply chain, fallouts can be devastating and unleash a cascade of delays all caused by a preventable attack that hinders ports from processing cargo. ■

NOVEMBER/DECEMBER | PORT DUES

THE POLL



Should ports consider a bonus-malus system based on the environmental performance of a ship in terms of air and GHG emissions?

With November playing host to two significant meetings pertaining to the global journey of emission reductions, COP26 and IMO's MEPC77 meeting, we want to look at voluntary – or even mandatory – measures ports can introduce to expedite this journey.

With them being gateways to the world, they also have the opportunity and responsibility to foster sustainable business practices among shipping as well as transport companies.

For the November/December edition of *P&H*, we therefore want to discuss if port authorities should introduce differentiated port dues that are based on the carbon foot print of the fuel a shipping company uses. This is aimed at encouraging low emission fuels and aid with reducing toxic air pollution. ■

Either scan the above QR code or use the web link below to submit your answer to this month's poll:

🌐 bit.ly/IAPHNovDecPoll



Dr Robin Li Yubin

China Merchants Port Holdings Co Ltd is trialling blockchain to ease the administrative burden of transshipments on ports

CHARLIE BARTLETT

Maintaining the through-flow of cargo is essential, but global supply chains have proven extremely delicate and vulnerable by the work stoppages and interruptions more than a year into the COVID-19 pandemic. Part of the problem is that processes are antiquated, and a reliance on human intervention holds up the system. BIMCO highlighted that only 49 of the 174 IMO member states have port community systems, whereupon stakeholders can coordinate port processes without having to rely on telephone calls and sheaves of paperwork.

The IAPH, together with major maritime associations, made a joint statement in 2020 that called on port operators to collaborate and implement smart port measures.

China Merchants Port Holdings Co Ltd (China Merchants Port) offers one example of how this can be done: operating ports across the Greater Bay Area, which services an area of mainland China incorporating 11 cities and seven different customs regimes. Expediting these processes has been a major priority for the company. This has been achieved using a coordinated port model, whereupon an international hub port corresponds with a hinterland counter-port. Customs processes undertaken at the inland port are similar to when the container reaches the export terminal and vice versa; meanwhile, the cargo is free to move by barge, unimpeded by the process.

This is accomplished using a blockchain-based system that enables customs authorities to verify compliance with regulations, and trading companies can complete import and export clearance in their home territories, allowing containers to keep moving throughout the process. The ledger software prevents records from being falsified, maintaining a trust-based timeline between authorities, which does not require them to be in constant communication.

"The blockchain platform project for logistics and trade facilitation in the Greater Bay Area connects customs, ports, cargo owners, freight forwarders, financial institutions, and other related parties, integrating information, logistics,

and capital flow," said Dr Robin Li Yubin, deputy general manager of China Merchants Port. "The vision in the long run is to achieve precise supervision, logistics intensification, intelligent operation, process visualization, and financial inclusion," he said. The successful completion of the project will not only provide strong support for the company to build the most competitive port logistics capacity system but also provide a successful model for the improvement of the business environment of cross-border trade and the incubation of technological innovation applications in the Guangdong-Hong Kong-Macao Greater Bay Area, he added.

"By the end of June 2021, a total of 14 terminals and 35 barge berths in the Pearl River Delta had been successfully connected with the system, among which Shunde Xingang, Beijiao Phase I, and Beijiao Phase II terminals have started live cargo testing, successfully realizing the export business on the system, improving the means of supervision and enhancing the efficiency," he summarized.

5G connectivity

Enabling the connected port is 5G, a technology poorly understood by the general population, but already conferring considerable benefits for industries throughout mainland China. A short-wavelength band, the physical limits of high-band 5G for data transfer allow for Gbit/s download speeds. This is enough to download every episode of the *Sopranos* in high definition in under three minutes, but it is also fast enough to make laying expensive networks of cable across ports a moot point.

"Operation flow of container terminals is a typical context to demonstrate the capability of 5G technology in terms of its speed and coverage," said Dr Li Yubin.

The connectivity 5G affords has enabled the use of automation to integrate equip-

ment around the port, such as quay cranes and unmanned trucks, and connect them to a proprietary port operating system. "The in-house container terminal operating system [CTOS] is functioning as a host system to connect with other technology to formulate an advanced, practical solution using our automated terminal — Haixing Container Terminal in Mawan, Shekou. CTOS is a proven product as it is adopted in our home-ports in [mainland] China and overseas, as well as other commercial terminals not under the China Merchants Port network."

However, Dr Li Yubin warned that automation comes with downsides, and cyber-attack drills and precautionary measures must be taken seriously to prevent malware attacks and security breaches. "With the improvement of the port's intelligent automation level and the online service, operations and services of the port are exposed to a higher degree of cyberattacks and risks. Production will be impacted significantly. Cyberattacks should be one of the most key tasks an automated port operator should

strictly monitor in the future."

For this, "we recommend raising the level of awareness of cybersecurity and transcend this awareness in day-to-day working routine and practice in the company. Also, to strengthen network security technical protection capabilities, adopt cloud deploy-

ment and other technologies to optimize and enhance technical defense capabilities against cyberattacks."

More than just a port

Developments at China Merchants Port are guided by the ethos that a port should be regarded as a hub for transport, rather than a waypoint. Closer integration with cities through the port, park, and city (PPC) model emphasises on the role of ports as centers of business. "Shenzen-Shekou used to be a fishery village 40 years ago. By adopting this PPC model, it has developed into a modern city with a GDP of US\$60,000."

Consequently, Dr Li Yubin said, "A port is no longer just a physical infrastructure providing stevedoring services to vessels. Ports are vital to the supply chain. After a port is built, it attracts various economic activities, manufacturing, and trading." ■

"Cyberattacks should be one of the most key tasks an automated port operator should strictly monitor in the future"

Better be prepared

A look at the growing number of maritime cyberattacks being made public support the need for the new IAPH Cybersecurity Guidelines for Ports and Port Facilities

INES NASTALI

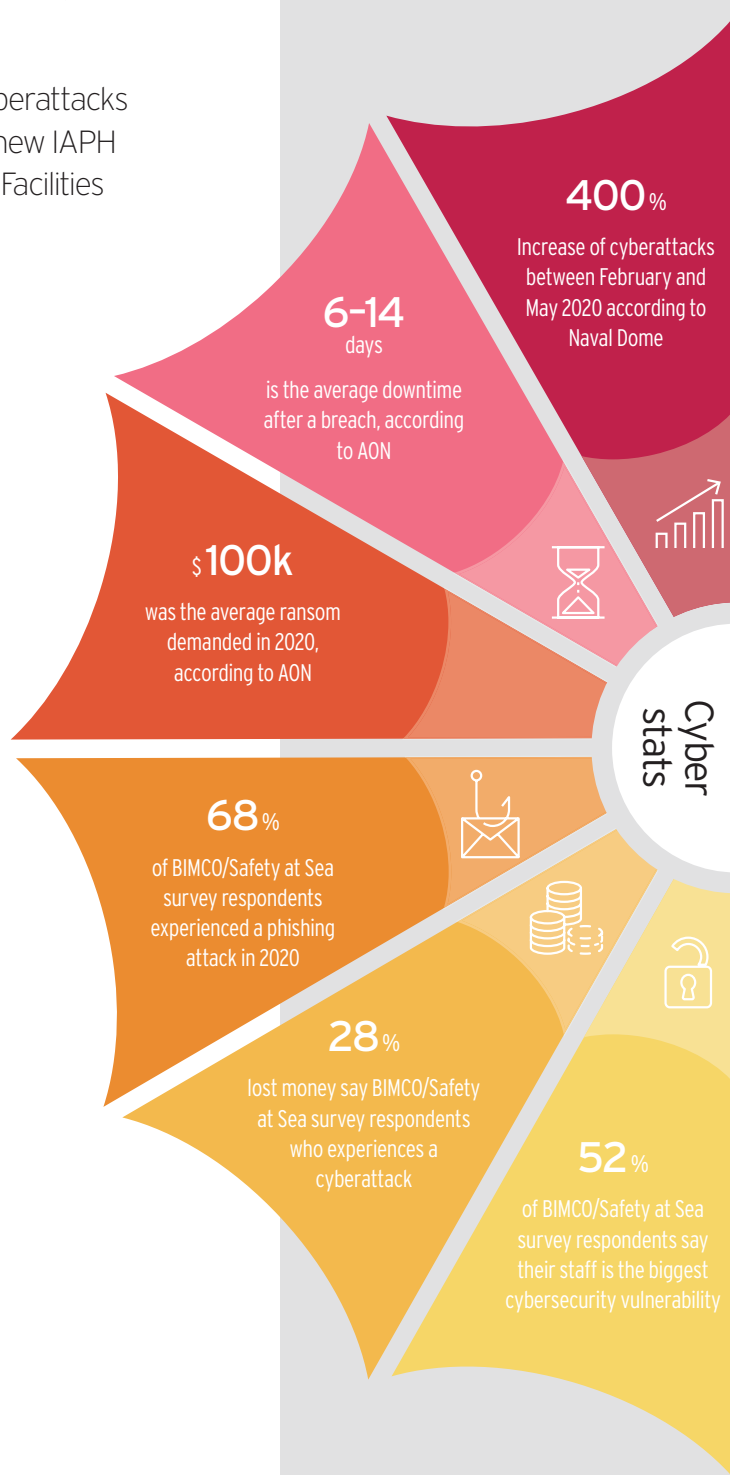
During the World Ports Conference in June, organized by the IAPH and IHS Markit, a panel on cybersecurity warned of the low insurance uptake in the maritime sphere to cover oneself from threats. This is particularly worrying as to gain cover, a company has to prove counter measures are in place.

With the maritime supply chain being so connected, even if a company is not the direct target of an attack, its operation can suffer from collateral damage. Having procedures in place is thus vital to ensure operations continue after an incident. This is also pertinent owing to the manifold directions threats come from, including governments, competitors, organized crime, and insiders.

Regulation of this issue for ports is difficult, considering they cannot be included in the IMO 2021 guidelines on maritime cyber risk management albeit sitting within this net of cyber threats. However, the IMO's International Ship and Port Facility Security Code, as part of the SOLAS Convention, does ask for cyber preparedness.

Consequently, the IMO issued a circular, following IAPH's call to push digitalization, and worked with the association on guidelines for the C-level management of ports. These will be presented at the IMO MSC104 in October and *P&H* summarized them on the following pages.

Adhering to those will also be important as future insurance coverage will be judged on the level of cyber preparedness a port can show. ■



2011-13

Port of Antwerp

Suffered a breach of IT systems that controlled the movement and location of containers

Notable maritime cybersecurity attacks 2011-21



Targeted



Opportunistic



2011

Port of Rotterdam

The Tax and Customs Administration's IT systems to process import and export data were down



2016

Port of Rotterdam

The port only declared a major cybersecurity incident without giving details



2017

Maersk

Computers were infected with NotPetya malware, which disturbed operations in 17 port terminals that Maersk operates



2018

Port of Long Beach

IT systems of COSCO within the US were targeted and breached



2018

Port of Barcelona

During this attack, IT systems of the port were affected



2018

Port of San Diego

More than 200 public entities were attacked in this cybersecurity breach



2018

Toll Group

IT systems of the freight company were shut down resulting in an offline booking and tracking system



2019

Princess Cruise (Carnival)

The cruise company was targeted for passenger data



2020

IMO

The breach led to web services not being accessible



2020

CMA CGM

The French company reported a data breach and isolated systems to limit the impact of the ransomware attack



2020

Carnival

In the following year, Princess Cruise' head company Carnival also had passenger data stolen



2020

MSC

Following the attack, the company website was unavailable



2020

Port of Shahid Rajae

Terminal operating system were hacked that resulted in a shutdown of the port



2021

Carnival

In the fourth attack in three years, the company's IT systems were encrypted by hackers



2021

HMM

The South Korean liner suffered from an email system outage



2021

Transnet

The attack resulted in the slowdown of container operations



2021

Bourbon

Offshore service provider Bourbon had its IT systems breached



2021

K Line

Another liner that suffered from an attack on its IT systems

1. The business case

To determine levels of investment in cyber risk management, executives must first understand how a cyber event impacts the organization's ability to function and the potential costs of disruption. This can be achieved through a business impact analysis and the development of realistic cyber loss scenarios.

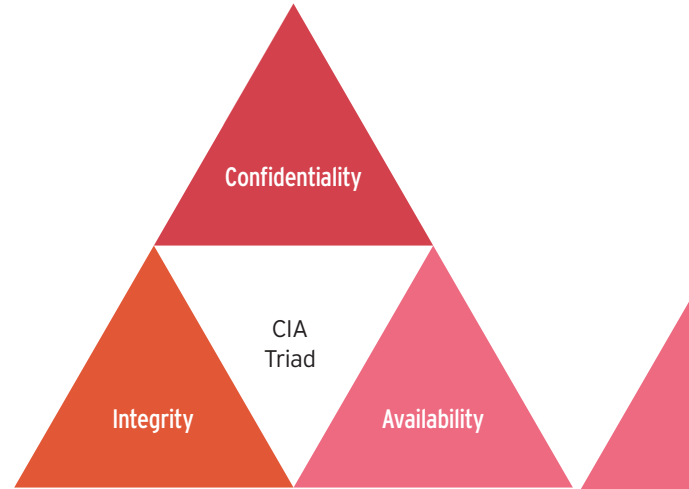
Access the full IAPH Cybersecurity Guidelines for Ports and Port Facilities here:

bit.ly/IAPHCyberGuide1

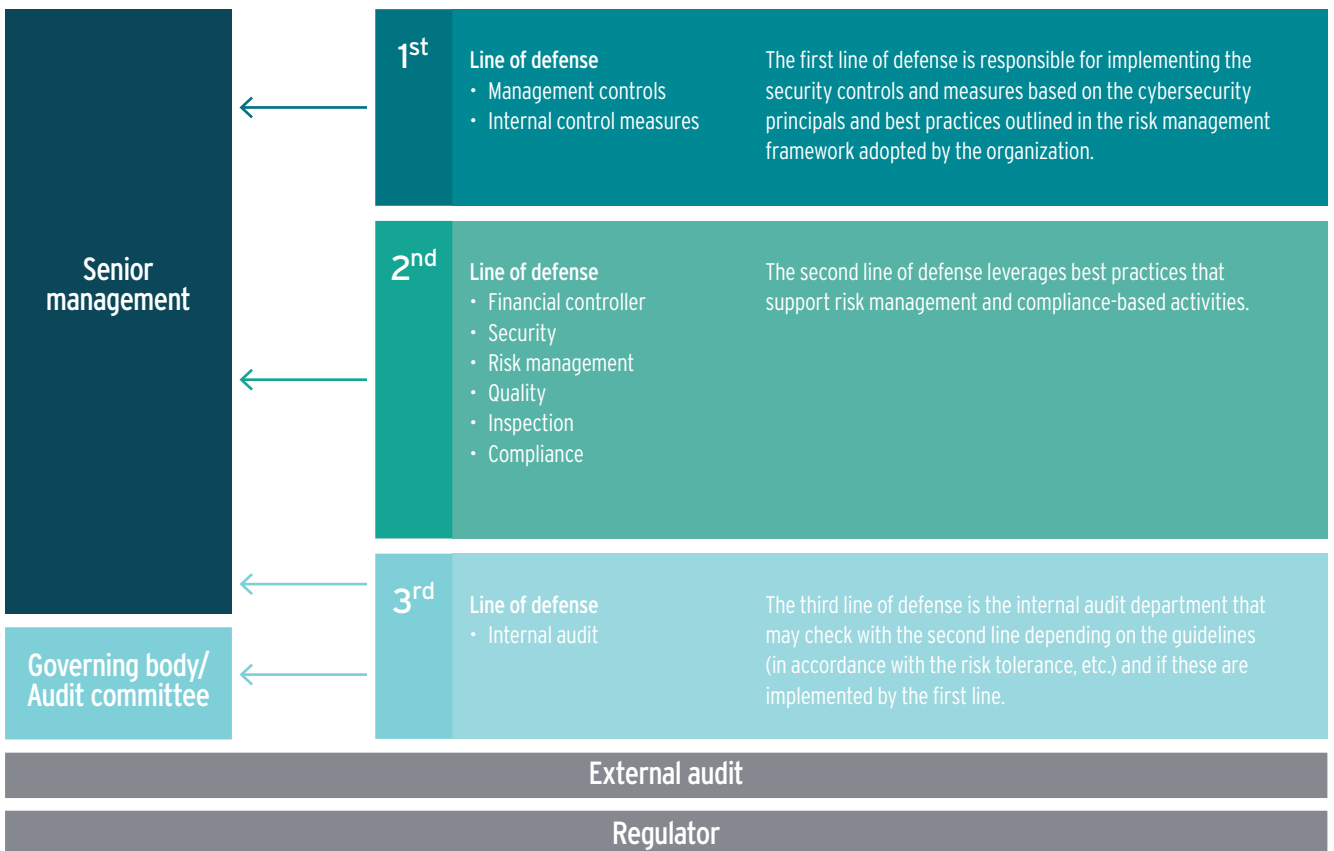


2. The CIA triad

Availability, Integrity, and Confidentiality, typically referred to as the "CIA-triad" is a valuable approach to protect the hyper-connected global maritime supply chain.



3. The three lines of defense







PROJECT FOCUS SOUTH AFRICA

Trialing tests

Recent force majeure declarations have shown the insecurities of South African maritime infrastructure that is poised to host alternative fuels hubs

NICCI BOTHA

On paper, South Africa's maritime industry appears to be thriving. As the second-biggest economy on the African continent, South Africa serves as the international trade gateway for many of its interior neighbors. It is also the axis to East/West and North/South shipping routes. Yet, it is not living up to its potential.

There are many reasons. It is easy to blame the aftermath of the COVID-19 pandemic for the underperformance of the country's ports, but the fault lines run deeper than that. As with many of South Africa's state-owned enterprises, the port authority's infrastructure was hollowed out by the widespread, almost institutionalized, corruption.

Under the stewardship of former president Jacob Zuma, billions were reportedly siphoned unchecked out of state coffers, while various economic reports state that mismanagement and neglect has led to the deterioration of essential port infrastructure and equipment.

This is evident as the country's four major container ports were ranked in the bottom four of the World Bank's Container

Pictured: Aerial view of Cape Town, South Africa, with its port.

Photo: Getty Images/brazzo

Port Performance Index 2020. Out of 351 ports in the study, Cape Town, Gqeberha (formerly Port Elizabeth), Ngqura, and Durban came in at 347th, 348th, 349th, and 351st respectively, below other African ports, such as Djibouti, Abidjan, Beira, Maputo, Walvis Bay, Dar es Salaam, and Mombasa.

Independent subsidiary

On the positive side, there are moves to get South African ports back to a global standard. In June, President Cyril Ramaphosa announced that the Transnet National Ports Authority (TNPA) will become an independent subsidiary from the state-owned logistics, freight, and rail company, Transnet, albeit 15 years after the National Ports Act of 2005 was promulgated.

"The weak performance of our ports is the result of structural challenges in our logistics system and operational inefficiencies," he said.

The Act provides for the port authority to separate into two entities: TNPA as the infrastructure owner with its own board appointed by the Minister of Public Enterprises and Transnet Port Terminals (TPT) as the terminal operator.

President Ramaphosa made the announcement under the auspices of the country's Economic Reconstruction and Recovery Plan, designed to help the country's growth post-COVID-19.

"In particular, it will mean that revenues generated by the ports can be invested in port infrastructure, both for the replacement of old equipment and for the upgrading and expansion of our ports.

"The creation of a separate subsidiary will allow the ports authority to make its own investment decisions and will ensure that it treats all terminal operators fairly and equally in the interests of port users," he added.

Ramaphosa said this reform will have a direct impact on port users and export industries. They will benefit from increased efficiency, lower costs, and new investment in port infrastructure.

There is also talk that TPT is on the look out for a global operator partner to improve the poor performance of its container terminals.

Force majeure

However, not long after the presidential announcement, South African ports were hit by two unprecedented crises that unfolded quickly after another.

The first was the civil unrest that started in KwaZulu-Natal province in early July, caused by Zuma's incarceration for contempt of court after he defied a Constitutional Court order for him to attend a judicial inquiry into allegations of his involvement in the aforementioned institutionalized corruption.

The protests turned into looting, triggered by socio-economic hardships, such as unemployment and poverty, which have been worsened by the pandemic.

The unrest severely disrupted operations in the province's two ports: Durban, which handles about 60% of South Africa's traffic and is the busiest container port in sub-Saharan Africa; and Richards Bay – before spreading to the country's economic hub – Gauteng province. The TNPA and TPT declared force majeure in both ports and various private terminals followed suit.

Pictured right: Aerial view of jack-up type drilling rig *Endeavour Spirit of Independence*, berthed in the tranquil turquoise Saldanha Bay, South Africa.
Photo: Getty Images/ Grant Duncan-Smith

A few days later, the TNPA reported that operations are slowly beginning to normalize as the number of employees reporting for shifts starts, and terminal operations at the Port of Durban continue to improve. The Port of Richards Bay also managed to clear all shipping backlogs.

Barely a week after the civil unrest, reports started emerging in the local media that a cyberattack had disrupted the Navis container operating systems at Cape Town, Durban, Gqeberha, and Ngqura, leading to TNPA declaring another force majeure.

The four major container terminals had to resort to a manual processes, where the shipper had to submit a physical copy of necessary documents instead. These had to be checked and processed, resulting in limited efficiency of port operations and extension of the cargo dwell time and backlog, TNPA said in a statement.

In the immediate wake of the cyberattack, the local government in the Western Cape province said in a statement that "the IT disruptions have had a significant impact on operations at the Port of Cape Town and performance has been way below the daily average of more than 2,000 containers over the quay wall per day."

"In total, seven days of full operation have been lost with more than 10,000 containers delayed and 2 vessels having bypassed the Port of Cape Town," the statement added.

Zero-carbon emission fuel hub

Despite the immediate problems facing South Africa's port operations, the country's abundant renewable energy resources and geographical location make it well positioned to supply zero-carbon fuel to the global maritime industry, a report by Ricardo and Environmental Defense Fund for the P4G Getting to Zero Coalition Partnership said.

"The choice of zero-carbon shipping fuels for vessels bunkering in South Africa is dependent on a range of factors, including uptake within the global maritime sector, local context around the port, cost and practical implications of the infrastructure, the characteristics of the fuels, and suitability to different shipping applications," the report said.

Green hydrogen is the proposed fuel of choice for larger vessels, which fits in well with several government initiatives such as the Hydrogen Society Roadmap, aimed at tapping into South Africa's mineral and renewable energy resources, and developing hydrogen to boost the economy and decarbonize some of the country's heavy industries.



"In total, seven days of full operation have been lost with more than 10,000 containers delayed and 2 vessels having bypassed the Port of Cape Town"

TRANSNET on the impact of the cyberattack in July



■ City 🚢 Port — International boundary

Source: IHS Markit

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For green hydrogen to become a viable bunker fuel option to reach zero-carbon emissions by 2050, there would have to be some major infrastructural and safety changes at the country's ports.

Captain Vernon Keller, deputy chief operations officer at the South African Maritime Safety Authority, said that hydrogen raises several safety concerns: it is extremely explosive and needs to be stored at temperature of -253°C and large storage volume is required. "Infrastructure needs to be developed to ensure proper management and storage of hydrogen fuels. As South African ports are built close to residential areas, there may be a greater possible risk should there be a leak or explosion," he continued.

"With any new fuel or technology, the IMO would consider the safety precaution requirements and amend any applicable convention to ensure that any fuel can be carried safely."

"New legislation would need to be drafted based on these convention amendments to regulate compliance and enforcement," Keller added.

Saldanha Bay

Home to a large ore exporting port and located 150 km north of Cape Town, Saldanha Bay, is mentioned as a case study in the report. There is also an industrial development zone that offers special concessions and tax breaks for companies that set up there, especially those focused on beneficiation or adding to the value chain.

The fact that Saldanha Bay does not have the same urban density as other ports in the country adds to its attractiveness as a potential zero-carbon fuel bunkering hub.

"We adopt a mix between a market-led and forward-looking approach to the possibilities of cleaner fuels from the Port of Saldanha, as we have to think about existing land

uses and availability, environmental authorizations, and longer-term concurrent planning between ourselves and the TNPA as an example," said Kaashifah Beukes, CEO of Saldanha Bay IDZ (SBIDZ).

"One of our proactive approaches has been the servicing and development of the bulk of our land over the last three to four years, through catalytic investment funding accessed via the National Department of Trade, Industry, and Competition's SEZ fund. Project developers may have to undertake specialist studies and regulatory processes as part of their investment due diligence and project financing.

"Another proactive, unique approach is that the SBIDZ was gazetted as a customs control area over nearly 70% of its footprint in 2019, which includes the existing port terminals. This means that qualifying activities have access to certain tax and VAT incentives when located in the CCA in the SBIDZ. So in short, some of the investment has already been made and the SBIDZ is open for business," Beukes continued.

"Looking forward, we work strategically with TNPA and many others to collaborate on the holistic positioning of the Port of Saldanha as a maritime and energy hub. Our mission is to attract responsible and sustainable investment into Saldanha as part of South Africa's economic recovery and reconstruction, and we've laid a strong foundation with a first-class business enabling environment in that regard since the start of our operations in 2014," she said. ■



Unstable conditions

Grieving families of the more than 200 people who died during the explosion of ammonium nitrate in the Port of Beirut on 4 August 2020, and other citizens, came to protest the lack of answers into the cause of the explosion and solutions for the future of the trade hub on the first anniversary of the incident. They struggle to find addressees for their anger.

Following the incident, then prime minister Hassan Diab resigned in anger at the government and a new one has yet to be appointed. A judge tasked with bringing light into the matter was ousted after charging Diab and other ministers.

The explosion has thus destabilized the entire country. With the government incapable of changing this and the mismanagement of the port going back to the 1990s, Beirut relies on foreign aid. Consultancies and the World Bank have taken charge of plans to rebuild at least the capital and its trading hub that has largely been run by a temporary administrative committee since the 1990s. The operating – but suffering from bad maintenance – container terminal is run by a consortium of international port operators.

The World Bank updated its *Reforming and Rebuilding Lebanon's Port Sector* note in August 2021. Within, it gave further recommendations to rebuild the port as a landlord port, saying digitalization will be of utmost importance. The World Bank hopes this will reinforce anti-corruption practices, make movements of hazardous substances more transparent, and increase people's trust in government organizations.

Hamburg Port Consulting, also involved in rebuilding efforts, has launched the Beirut PortCity Dialogue as a platform to discuss options for the future development of the port and the city. It suggests "the relocation of sections of the port from the city center to vacant industrial zones. This reurbanization would provide the income to finance the entire project. In this way, the concept avoids new debt for Lebanon".

The consultancy hopes this will create a more self-sufficient and stable future for the country. ■



Sub-Saharan countries hope to establish fruitful trade relationships

The backlog of outstanding work in developed economies continues to rise as the COVID-19 vaccine rollout programs enable the reopening of developed economies amidst ongoing global supply chain disruptions, latest IHS Markit Purchasing Managers Indices show.

Stronger demand for consumer goods raised prices for raw materials and all other inputs required to manufacture goods, including distribution, warehousing, and transportation of products. The COVID-19 pandemic has also renewed businesses' focus on managing strategic reserves and ensuring future protection of supply chains against exogenous shocks.

This focus also builds upon experiences made as far back as in 2011, after the Fukushima Daiichi nuclear disaster, as well as from increased trade tensions between China and some of its major trading partners in pre-2020.

However, not all regions will benefit from the global supply chain diversification drive.

Split view

IHS Markit research clearly shows that countries in Eastern Europe, Mexico, and Southeast Asia will benefit the most from this drive, while the sub-Saharan African (SSA) region will trail behind. Currently, SSA lacks the ability to produce most goods that could substitute manufactured products of other large global producers such as mainland China in the global supply chain, as shown by SSA's small share of manufactured goods exports compared with total world exports. In addition, most risk factors dictating investors' decisions in SSA,

such as security, operational, policy, and economic risks are far less attractive than for other global producers.

Nonetheless, IHS Markit believes that supply-chain diversification opportunities within the SSA region, presented by the African Continental Free Trade Agreement (AfCFTA) are more promising over the medium-to-longer term. The biggest incentives and growth benefits – also for ports – will derive from the removal of tariffs, which ultimately will reduce production costs and induce advantages of economies of scale.

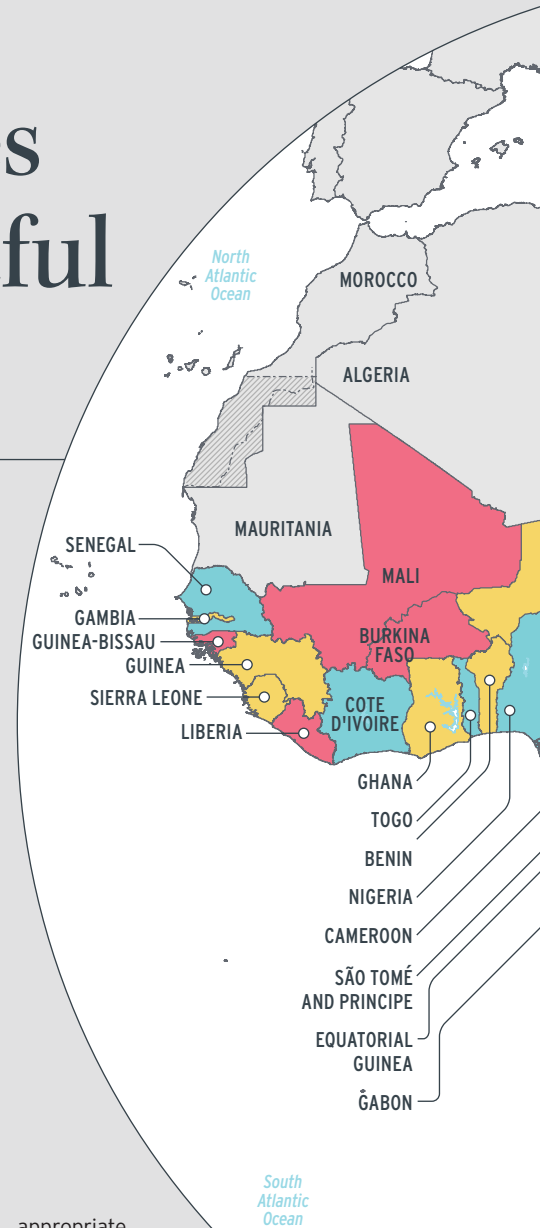
Other policies such as services liberalization and regulation, investment and cross-border movement of labor, trade remedies, as well as monitoring and evaluation, are earmarked under the AfCFTA and will ease the current regulatory burden across the subcontinent.

The benefits of trade integration will be accelerated substantially once the alignment and reduction of nontariff barriers, such as rules of origin and health as well as safety regulations, also occur.

Deploying additional technical support and resources allocated to the financing of intra-African

trade by bilateral development partners and multilateral lending institutions, such as the African Development Bank and the World Bank, will speed up the process.

Countries within SSA that are better positioned to reap the benefits of supply-chain development and enhanced trade flows under the AfCFTA are those that are ready to effectively adopt the agreement and have a substantial share of interregional trade, as well as the institutional strength to pursue



appropriate business-policy reforms that attract global and regional investment.

Countries will benefit most if they have a solid consumer base and skills pool, pursue inclusive growth and labor-force skills development, maintain political stability, and prioritize the development of information and communications technology to enhance productivity and cost efficiency. Lowering the risk of expropriation of property, ensuring labor market flexibility and the transferability of funds will also play a key role in IHS Markit's view.

A closer look

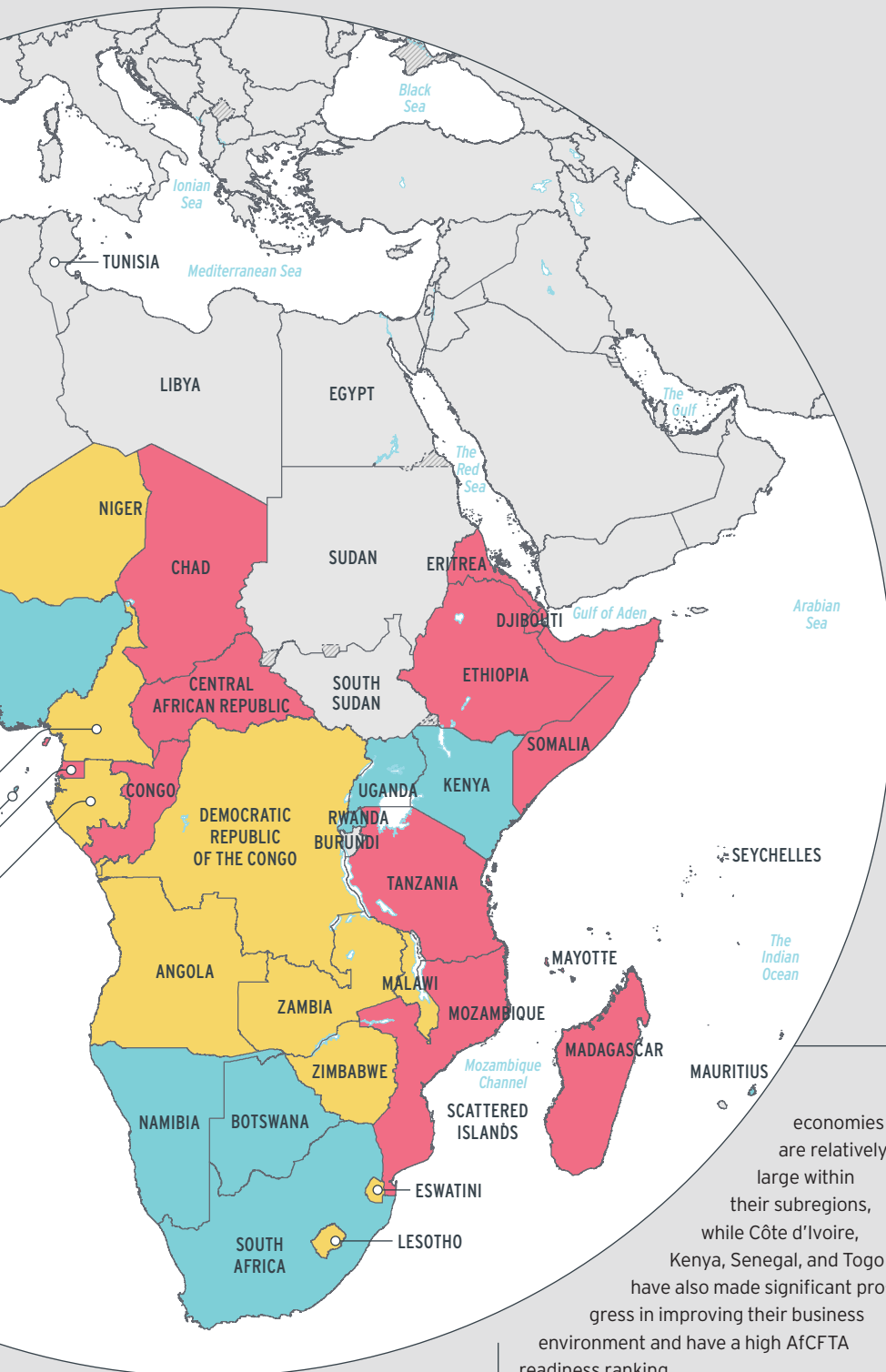
Taking all these factors into consideration, IHS Markit analysis shows that small island economies such as Cape Verde, Mauritius,

“Raw materials, agricultural products, and food and beverages will benefit from the AfCFTA”

THEA FOURIE
Associate director, IHS Markit



THEA FOURIE, associate director, Sub-Saharan Africa (SSA), Economics, IHS Markit, has been in her role since 2020. She is based in Pretoria, South Africa, and is responsible for analyzing and forecasting economic developments in Benin, Comoros, Madagascar, Mozambique, Namibia, Niger, Nigeria, Réunion, South Africa, and Zambia.



Best supply-chain opportunities
Moderate supply-chain opportunities
Limited supply-chain opportunities

— International boundary Subject to claim or dispute
Source: IHS Markit

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São Tomé and Príncipe, and Seychelles are well prepared to benefit from the AfCFTA agreement. These economies have the advantage of political stability, a favorable skills base, enhanced ICT infrastructure, and high readiness for AfCFTA adoption.

Botswana, Côte d'Ivoire, Kenya, Namibia, Nigeria, Rwanda, Senegal, South Africa, Togo, and Uganda are also expected to benefit from supply-chain diversification under the AfCFTA agreement. Most of these

economies are relatively large within their subregions, while Côte d'Ivoire, Kenya, Senegal, and Togo have also made significant progress in improving their business environment and have a high AfCFTA readiness ranking.

The products and services that will benefit from a sizeable deal such as AfCFTA will be those that are the most affordable to clients across the subcontinent. Typically, these include raw materials, agricultural products, and food and beverages.

Agricultural production benefits hugely from economies of scale, and this has been seen on a global level over the past two decades. According to the UN Food and Agriculture Organization (FAO), the global productive agricultural land area has decreased

from 37.6% of total global land area in 1997 to 37.1% in 2017, a marginal decline. Yet, with less land, food production increased by 60%, double the rate of global population growth over this same period.

This astounding trend has been evident in Africa, with an 82% increase in food production, according to FAO estimates, and only a 1% increase in land area – base effects play a large role here. There is still much room for Africa's food production to grow, as much of it is still derived from subsistence farming.

As the continent prepares for the next decade of growth in the post-COVID-19 period, achieving success with AfCFTA and supply-chain diversification will enhance production capacity to boost interregional trade and enable the subcontinent to provide more jobs, manage natural disasters more effectively, and reduce insecurity related to tepid economic growth. ■



IN COURT DRAFTING

A court ruling left a cruise operator with significantly higher lay-by rates following its administration, showing how quickly one can become bound to contractual obligations

CASE

A cautionary tale in drafting

JANE ATKINSON | Trainee solicitor at law firm Womble Bond Dickinson

The new UK Corporate Insolvency and Governance Act 2020 (CIGA 2020) has significantly changed the way businesses are able to manage the challenges of having insolvent suppliers in their supply chain.

In the recent decision in *P&O Princess Cruises International Ltd v The Demise Charterers of the Vessel Columbus* ([2021] EWHC 113 (Admlty)), the court considered the application of section 233B of the Insolvency Act 1986, as incorporated by section 14 of CIGA 2020. The effect of CIGA 2020 means that suppliers cannot rely on their contractual rights to terminate a supply contract or to “do any other thing” (including, suspending supply of goods or services, requiring a deposit, or amending pricing) when a customer becomes subject to a relevant insolvency procedure.

Prior to this decision, “doing any other thing” was yet to be tested by the courts. The conclusions reached on that provision are less surprising given its wide drafting, but the decision raised some interesting points for businesses to consider when entering into contracts with suppliers.

To summarize, this case concerned disputed charges in relation to two cruise ships, *Columbus* and *Vasco Da Gama*, owed to the Port of Tilbury, UK, because of the COVID-19 pandemic.

Both vessels were part of the Cruise & Maritime Voyages (CMV) fleet, managed by Global Cruise Lines, which is part of the

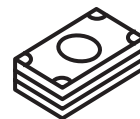
CMV Group. The invoices for berthing and associated fees had been issued to the demise charterers.

As a result of the COVID-19 pandemic, CMV had suspended its operations and had a pressing need to lay over the vessels until trading could resume. As a regular customer of the port, it was able to negotiate a lay-by agreement at a preferential rate of £3,000 (\$4,174) per vessel per week. Invoices for the layover charges were paid up until June 2020.

The CMV companies went into administration on 20 July 2020, but this did not include the companies that were the demise charterers of the vessels. On the same day as the administration, the port communicated that the reduced lay-by rate would end the next morning, with the vessels being charged in accordance with the port’s published tariff, equated to £99,000 and £100,000 respectively, per vessel per week.

CMV responded that it was relinquishing management of the vessels with immediate effect. On 23 July 2020, the port wrote to the demise charterers of the vessels, setting out the charges already owed and the published tariff now being levied.

The court concluded it was dealing directly with the demise charterers and not CMV. Since neither was in administration, section 233B of the Insolvency Act 1986 was of no relevance on the facts of this case, and the port’s upward variation of the lay-by rate was not prohibited as a result. ■



£100,000

lay-by rate asked by the Port of Tilbury, UK, from an insolvent cruise company

"As a result of COVID-19, CMV had suspended its operations and needed to lay over vessels"

A cost-effective alternative

ERIK VAN WELLEN | Partner at Maverick Enterprise; independent expert and alternative dispute resolution professional

As a response to the COVID-19 pandemic, countries across the globe such as France, Spain, the UK, and the US have amended their insolvency legislation. This sensible reaction was aimed at assisting otherwise healthy companies to endure and not to perish during this event.

In the UK for example, this saw the introduction of the CIGA 2020. One of its effects is that a service provider – for example, a landlord, energy supplier, or port – can neither terminate contracts nor terminate a supply or even “do any other thing” when a company enters insolvency proceedings.

This broad shield was raised in *P&O Princess Cruises International Ltd v The Demise Charterers of the Vessel Columbus* ([2021] EWHC 113 (Admlty)). This case centered around an international cruise liner group failing as a result from the pandemic, with its UK business going into administration and two of its ships that it had demise chartered through Liberian subsidiaries got arrested and sold with the proceeds paid to court.

The port where the vessels had been laid up claimed unpaid dues, some at a low pre-agreed rate of £3,000 per vessel per week, but some at the – approximately 31 times higher – standard rate from the date of administration. As the port’s claim took priority and with the standard rates likely to consume an important amount of the funds from the sale, the other claimants challenged this entitlement citing the Insolvency Act 1986 and CIGA 2020.

The court found that as the Liberian demise charterers were not in administration, this argument could not be relevant. The court did however, based on what it held to be a lack of “reasonable prior notice”, given that the rate adjustment notification took place via emails and letters that gave at best only 12 hours’ notice, adjust the date from which the full rate would apply.

In all, the cards fell mostly in favor of the port – in this case. It is likely that we will see similar cases in future and ports, as well as entities surrounding ports, best take note if they do not want to be caught out by local CIGA 2020-like legislation.

The high street commercial tenants that have fallen behind on the rent owing to dried-up sales are countless. Many have subsequently simply skipped full payments and at times have adopted a “we will see how it goes” approach. Others have been able to come to an understanding of some sort between them.

Often this is all done in an informal manner without proper cross-referencing to the underlying contract, a phase-out methodology, etc.

The resultant situations often prove to be a potential hotbed for ensuing disputes and are to be avoided. Engagement between the parties, possibly through a mediation service, remains key. Case in point in the cited case – as also alluded to by the judge in his judgement – is that the port had made a prior offer of £10,000 per week for each of the two vessels rather than the full standard rate but this was never accepted. ■

Lessons to take away

JANE ATKINSON

The lay-by agreement was negotiated over three emails and was considerably sparse. However, the judgment does not question whether details were sufficient to form a legally binding contract or whether the terms were clear enough to be enforceable. Business operatives should be aware of how easy it is to become bound to significant contractual obligations. Bad deals can often be escaped if clear termination rights are included. In this case, the port had not reserved a right to terminate the arrangement.

The court considered an argument that the port could only vary the rate by a reasonable amount, but dismissed it and found that the port had freedom to increase the charges as it saw fit, while it did describe the decision made of a thirty-fold increase as “eye-watering”. This shows the power and danger of unilateral variation rights. Despite failure to give reasonable notice, the court found the notices effective, despite the expiry of the 28-day reasonable notice period. Other decisions have not been generous – notices can be held to be ineffective if the procedural requirements are not complied. ■





Creating a legacy

CREATIVE SIDE PORTUS PROJECT

A

research project, led by academics from the University of Southampton, UK, looks at the most important maritime port in the Roman empire – aptly named Portus.

“It was established by Emperor Claudius in the mid-first century AD, initially to boost limited anchorage facilities in Ostia and ease the dangers of flooding in the lower reaches of the Tiber. It was greatly expanded under Trajan in what must represent one of the greatest engineering achievements of the Roman Empire, encompassing up to 6.54 km² of port installations,” the researchers stated on the project website.

Aside from a better understanding of Portus, researchers also wanted to examine better techniques to investigate complex classical sites.

Research first began in 1998 with a geophysical survey, followed by excavation and geoarchaeological study. It is still ongoing today: “Documentation recording work is due to be done soon on the Imperial Palace, via laser scanning of the structure, to allow for future consolidation of the building and its presentation to the public. This work is funded by the Italian government and is a part of efforts to open Portus to visitors,” Dr Dragana Mladenović, visiting fellow at the Department of Archaeology, University of Southampton, told *P&H*.

From these works, 3D modelling of the ancient port side became possible. “Many of the structures serve as individual projects within their own right and have been built to offer up close detail. Materials such as marble, stone, and brickwork have been accurately created using the closest examples or photographs from existing references on site.” Using plugins, theories about “how light might influence spaces, or how flooding could have affected the harbor basins and the surrounding areas,” can be examined. “This are good examples of ways the digital environment can be used to offer a reflexive methodology so that it offers more than simply a tool for visual reconstruction,” the researchers further stated.

Portus has thus become a memorial of ancient Rome but also for lead archaeologist Simon Keay, who passed away aged 66 in April 2021. “Simon was one of the first archaeologists to apply pioneering geophysical surveys – using detection techniques that allow you to see below the soil without disturbing the surface – on a large scale in the Mediterranean world: first in Spain, and then jointly with me in Italy, in Falerii Novi, Lazio, in 1997,” colleague Martin Millett wrote in an obituary in *The Guardian*. “This work led the Italian authorities to invite us to undertake the first large-scale geophysical survey of Portus the following year.” ■

Watch the making of the port murals here:

bit.ly/PortusProject

Pictured: The ancient Portus.

Photo: Grant Cox, Artas Media/Portus Project, University of Southampton

QUICK 10



KITACK LIM
IMO secretary general



N°1

What is your favorite app?

Since the pandemic and the extended period at home, I would say my current favorites are Amazon – including Kindle services, Netflix, and news apps.



N°2

Is there a memorable place you enjoyed visiting and why?

I particularly enjoyed Peru where I had the opportunity to take in the magnificent awe-inspiring views of Machu Picchu.



N°3

What is an item you cannot live without and why?

I do not think there is a specific item I could not live without, but I could not live without hope. I usually have an optimistic outlook on situations.



N°4

What is a quality that impresses you in a business partner?

Sincere, honest, and good communication skills. A quality that is essential in all human relations.



N°5

If you could time travel, where would you go and what would you do?

At different times and places in the early 20th century, as a pacifist to advocate to avoid the catastrophic wars.



N°6

Three things you take to a deserted island

A pen knife, a mountain bike, and golf clubs.



N°7

What is your proudest achievement?

As the secretary general of IMO, it would be the promotion of communication and collaboration between member governments and the maritime industry.



N°8

When you are not working, how do you like to spend your time?

Playing golf, reading a good book – in particular non-fiction – and watching films.



N°9

If you could spend a day in someone else's shoes, whose would they be?

Why?
Sir David Attenborough. I am fascinated by his environmental work and his experience with the natural world.



N°10

Best advice ever received

A biblical quote my mother referred to often: "A man's pride will bring him low, but a humble spirit will obtain honor." (Proverbs 29:23)



Developing smart hubs and connections

Santiago Garcia-Milà, immediate past-president of the IAPH, offers *P&H* a sneak peek into the program of this year's virtual Smart Ports conference, taking place 16-17 November

Q&A

SANTIAGO GARCIA-MILÀ
Deputy general manager. Port of Barcelona

Q: What are the key focus areas the port works on that correspond to the conference theme?

A: The Port of Barcelona has presented its new strategic plan this year. It outlines our long-term vision to consolidate the Port as the SMARTest logistics hub in the Mediterranean. This will be consolidated as a multidisciplinary space where all means of transport converge, regardless of the origin and destination of the goods.

In this sense, we must highlight the importance of multimodality as an essential axis of the port, since one of the value proposals we have is to develop ourselves as a transport, and not only a maritime hub. The Port of Barcelona rail and land transport, in addition to maritime transport, is also growing, which increases the role of peninsular and intra-European rail hub.

One of the areas we are focusing on is to become a city-port that develops in a sustainable way, is culturally attractive, and is recognized as a benchmark in innovation. To do this, we rely on the three pillars that make up our strategic plan: environmental sustainability and the energy transition; economic sustainability, with competitiveness as the axis; and social sustainability, with a focus on human capital. As you can see, all of this is closely linked to Smart Ports and its innovative function within the maritime, port, and logistics sector.

Q: Can you give us a brief overview of what will be this year's conference highlights?

A: The Smart Ports project is defined by the acronym SMART, which stands for Sustainability, Multimodality, Agility, Resilience, and Transparency. The primary focus of the event will revolve around these concepts, with special emphasis on energy transition, e-mobility, digitization, and above all, the blue economy.

Q: What aspect of the conference are you most looking forward to?

A: This year, the Smart Ports conference will draw a transversal line. We will address social issues such as the city-port relationship, technological advances in transportation such as Hyperloop, and maintain a focus on environmental sustainability and efficiency in port operations. The objective is to explore all the social and economic potential that ports offer today. The Blue economy will be one of the most interesting panel sessions that we will have. We believe that it is one of the strongest and most important points of this year's edition of Smart Ports, due to the great impact it has on the world economy and society. We will discuss how national governments may leverage the

blue economy for sustainable wealth creation and economic growth. This panel will include Virginijus Sinkevicius, European Commissioner for Environment, Oceans, and Fisheries. So, we will have the honor of having one of the greatest experts on the subject present.

Q: What sets this conference apart from other virtual events?

A: Smart Ports is a unique event in which seven of the most influential ports worldwide – Antwerp, Barcelona, Hamburg, Los Angeles, Montreal, Rotterdam, and Busan – meet to share their innovative initiatives related to digitization, cybersecurity, and sustainability, to be more efficient and competitive. In addition, one of our greatest strengths is the level of our speakers. We have professionals and experts in each of the topics that we are presenting to offer the best content to our viewers. This is without a doubt our biggest difference from other virtual events.

Q: Why should people register to attend the conference?

A: This conference brings together the union of professionals and experts who will present new practices and projects that can help attendees to train in their professional field and improve their work efficiency. Additionally, attendees can network in the chat function through which Smart Ports is broadcast and will be able to ask the speakers questions. So, it will also be a great networking opportunity for the attendees. Finally, people who decide to register and attend, will be able to keep abreast of the latest advances in ports, maritime, as well as logistics matters.

Q: How does the conference agenda link to the strategic priorities of IAPH?

A: The IAPH, for the next few years, has marked the climate, energy risk, resilience, and digital innovation as its main strategic areas. Right now, these are also the main issues on the agenda of most international managers and regulators.

In addition, the IAPH has joined the IMO-Norway Green Voyage 2050 project, where the main focus will be on energy transition and environmental initiatives related to ports.

Cybersecurity and automation are also two of the issues that the IAPH has in mind, in addition to promoting technological innovation through start-ups.

Considering these points, we can appreciate how the IAPH and this third edition of Smart Ports work in two parallel lines under a very similar framework of action. ■

🌐 www.smartports.tv

Membership notes

We are pleased to welcome as new regular and associate members of the association:

Regular member

Port Authority of Trinidad and Tobago

- 📍 Trinidad, West Indies
- ☎ 1-868-625-2511
- ✉ trudyg@patnt.com
- 🌐 www.patnt.com
- 👤 Trudy Gill-Conlon, general manager/CEO

Associate member

BM Bergmann Marine

- 📍 Germany
- ☎ 49-6186 912727
- ✉ michael.bergmann@bergmann-marine.com
- 🌐 www.bergmann-marine.com
- 👤 Michael Bergmann, owner, BM Bergmann Marine

IAPH speaks your language

Since 1 January 2020, the IAPH website can be accessed in many languages. Just click the tab 'Translate' on the top right of your screen and a selection of languages will be provided.

If you have any questions, please contact IAPH secretariat:
✉ info@iaphworldports.org.

IAPH Women's Forum Scholarship winners named

Flor Pitty, chair of IAPH Women's Forum is pleased to announce the winners of the IAPH Women's Forum Scholarships 2021-23 below. Congratulations!



IAPH Women's Forum Annual Meeting Scholarship 2021-23

HETTI MUDIYANSELAGE DIMUTHU HANSIKA SAMARAKOON
Organization: Sri Lanka Ports Authority

Photo: Sri Lanka Ports Authority

"I'm sincerely honored to have been selected as the winner of the IAPH Women's Forum Annual Meeting Scholarship and for the privilege received to be a part of this selected group of talented women representing several ports scattered around the world.

This scholarship is an empowering reminder of the potential I have in my field and the impact I can make with my education, as well as work experience regardless of race, gender, or background. I am excited to make this a valuable opportunity to share my knowledge and experiences, and also to learn about different perceptions.

When considering the internationalized nature of the world seaborne trade, I wish to explore the challenges faced by the port sector due to prevailing pandemic situation. Taking part in this international forum gives me the opportunity to learn about innovative practices adopted worldwide and new opportunities investigated for the port sector to sustain in this challenging and changing environment. I also wish to continue the dialog we initiated by keeping ourselves updated and reinforce our bond as the global port community." ■



IAPH Women's Forum Biennial Training Scholarship 2021-23

FERNANDA ARAÚJO
Organization: Port of Açú, Brazil

Photo: Port of Açú

"The scholarship is a pretty welcomed opportunity! When I started working in the port sector, I constantly needed to learn, especially about the business features, which were a novelty for me. I used to work in an engineering office, so what first struck me was the dynamic environment of port operations and the multiple disciplines involved. Thus, the IAPH's Women's Forum Biennial Training Scholarship came as a fortunate opportunity for me to pursue a professional masters in port management. I plan to make a difference in the port sector, especially being a reference to other women, so the scholarship is the encouragement I needed. I thank the IAPH for such initiatives, and I hope I can help future participants!" ■

EVENTS TIMELINE 2021

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SEPTEMBER (13-17)

London International Shipping Week
Physical and virtual events week
🌐 bit.ly/LISW2021

15

SEPTEMBER (15-17)

IMO Intersessional WG on GHG
Virtual meeting
🌐 www.imo.org

28

SEPTEMBER

IAPH Risk and Resilience Committee
Virtual Teams meeting
🌐 www.iaphworldports.org



The IAPH Climate and Energy technical committee chair Peter Mollema discusses MEPC meetings and GHG reduction cooperations

Q: Please talk us through the results of the IAPH open-loop scrubbers survey.

A: The committee ran this survey to identify how different authorities apply restrictions in the use of scrubbers. A total of 42 ports from 30 countries responded and the results showed that there is a great variety of regulations for discharges of wash water from scrubbers in the port area, inland waters, and territorial waters. Around 41% of the surveyed ports seem more or less forced to play a role as an authority in this field and are being questioned by shipping companies about how and why this is regulated by the port. Many of those would rather have regulations on the international level. As a next step, the committee agreed to appoint a group that will, with shipping organizations and IMO member states, look for common ground for a position paper that advocates global regulation on the IMO level.

Q: You recently discussed the outcome of the IMO MEPC 76 meeting. Can you share what was discussed?

A: The reactions within the committee about the results of MEPC76 were mixed. Most members felt positive about the fact that MEPC 76 finally reached a compromise, despite the highly divergent views of member states. However, many were disappointed that the relatively small carbon intensity reduction that was agreed on for the years until 2026 and that further reductions until 2030 were left open. The agreed workplan for market-based measures, is of particular interest for the port sector as it might offer opportunities for the funding of port infrastructure that supports decarbonization. In May, IAPH organized the first workshop on this topic, which will be followed by a second one at the end of 2021. As climate change poses the greatest threat to mankind today, ports should treat it as a priority. The committee will ensure IAPH representation at all relevant IMO meetings and it is working on formulating concrete IAPH views and positions to feed the IMO MEPC debate to follow.

Q: What are the main environmental challenges that ports have to tackle and you hope the IAPH can help with?

A: In my experience, today's ports face roughly the same environmental challenges as decades ago. Although it varies greatly from port to port, high on the list are air, water, sediment and soil quality, noise, nature preservation, and spatial planning in the port area. But, of course, there is one important challenge and that is the threat of climate change. The need to drastically reduce GHG emissions will instigate practises in the port area, such as new fuels, energy, transport, technologies, companies etc. It is safe to say that the regulations currently in place are not set up for this new reality. Fortunately, ports have already realized this.

Q: What are the next steps for the committee?

A: The initial workplan of the committee (2020-21) has a strong focus on IMO/MEPC related topics, namely IMO GHG Strategy – including port bunkering infrastructure, onshore power supply, incentives, port call optimization, and other ship emissions and marine litter. Typical results of the committee are submissions and interventions, workshops, and sharing of best practises. This will continue in 2022. What we will see more is the committee taking on a coordinating role, stimulating and connecting both global port-initiated initiatives and inter-industry cooperation. Particularly in the field of GHG reduction, it has become clear that involvement of stakeholders throughout the value chain is indispensable. Currently, the committee is evaluating its scope and method of work and suggestions are very welcome.

Q: Are you looking for a specific cooperation to connect to other member ports or for them to join the committee?

A: I would like many more ports to join the committee for different reasons. Most importantly, we simply need the voice and expertise of ports with divergent backgrounds for the promotion of our interests in the international arena. The committee is as good as its members. Committee members should take the opportunity to co-determine the formal positions of IAPH and potentially also to submit those positions to their national government. Another great reason to join is that committee membership guarantees that you will get the latest and most relevant information on international policy developments. It will also give you opportunities to learn from your peers, share your successes, create new partnerships, and have more impact. ■

Q&A

PETER MOLLEMA
Strategic advisor, Port of Rotterdam Authority

IAPH INFO

Photo: Peter Mollema

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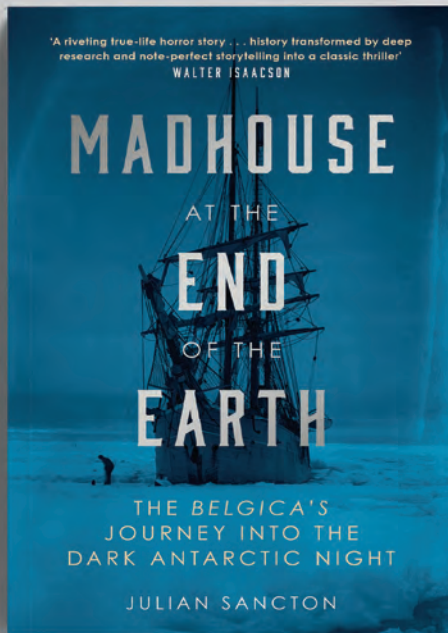
OCTOBER (4-8)
IMO Marine Safety Committee
Virtual meeting
www.imo.org

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OCTOBER
IAPH Data Collaboration Committee
Virtual meeting
www.iaphworldports.org

18

OCTOBER (18-22)
IMO Intersessional WG on GHG
Virtual meeting
www.imo.org



BOOK AUTHOR

JULIAN SANCTON is a senior features editor at *Departures* magazine, where he writes about culture and travel. He has reported from every continent, including Antarctica, which he first visited while researching this book.

THE REVIEW

Madhouse at the End of the Earth - The Belgica's Journey into the Dark Antarctic Night

PATRICK VERHOEVEN



Belgium's leading shipping companies CMB, Euronav, and Exmar have their headquarters in De Gerlachekaai, Antwerp. The waterfront location is named after polar explorer Baron Adrien de Gerlache de Gomery (1866–1934) and is not far from where his ship the *Belgica* – a converted whaler – set sail for largely unexplored Antarctica on 16 August 1897. He returned more than two years later, after a narrow escape from annihilation in polar ice.

De Gerlache's adventure has been the subject of a continuous flow of publications, starting with his own account, which appeared in 1902.

In 2020, Dutch novelist Jolien Janzing romanticized the story from the perspective of Léonie Osterrieth, one of the expedition's main benefactors. Still, De Gerlache's exploits are less known than those of his fellow explorers Ernest Shackleton, Robert Falcon Scott, and Roald Amundsen, who

started his career on board the *Belgica* as an ambitious second mate.

Madhouse at the End of the Earth revives the harrowing story of the *Belgica*. American writer Julian Sancton meticulously reconstructed the journey by using the ship's logbook, diaries, correspondence and family archives of the crew members, and several other unpublished sources – some accessed for the very first time. His research brought him as far as Gerlache Strait, near the Antarctic peninsula. The resulting book is an absolute page-turner, which is closer in style to a thriller than a nonfiction work.

The voyage of the *Belgica* seemed ill-fated from the start. While its commander was no doubt an exceptional sailor, he was less of what today we would call a people person. De Gerlache could not manage his unruly and internationally diverse crew. His constant fear of what sponsors and media back home would think about his decisions

did not help his steadfastness either. Luckily some of his officers, including the stoic Amundsen, the ship's doctor and adventurer Frederick Cook, and the ship's captain Georges Leconte had the leadership skills needed for survival.

Madhouse at the End of the Earth offers first-hand insight on human behavior under the most extreme circumstances thinkable. It is no surprise that NASA uses the experience of the *Belgica* to prepare its astronauts for space travel.

Additionally, on a smaller scale but with an equally devout sense of teamwork, is the project New Belgica. Sponsored by port operator PSA Antwerp, it brings together young unemployed people in building a full-scale museum replica of De Gerlache's legendary ship. ■

You can find more information on the *Belgica's* replica project here:

🌐 bit.ly/TheNewBelgicaProject



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