

# ports & harbors

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

## Climate- resilient ports

Eranda Kotelawala, CEO of Solomon Islands Ports Authority, highlights the challenges of building future-proof maritime infrastructure

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Improving supply chains

Port power  
Demystifying the dilemma

Good governance  
Collaboration against corruption



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2024 will be a pivotal year for ports and their communities. Geopolitical instability is on the rise. Physical and digital security is under threat, at sea and on shore.

Shipowners, supply chain providers and cargo owners must adapt rapidly. The energy transition towards low- and zero-carbon fuels must be balanced against national energy security concerns.

#IAPH2024 will offer attendees insights on these topics, revealing how ports – from developing and developed nations – are building secure and sustainable solutions to these shared challenges, in a deeply interconnected world.

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

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## EDITOR'S COMMENT



**MARTIN CLARK**  
Editor

# Brave new world

F

or centuries, ports have played a key facilitating role in the movement of goods and people around the world, effectively shaping the political, economic and demographic maps that we see today.

Fast forward to 2024 and much of global trade remains dependent on the sea, again underlying the value of ports. In the UK, for example, over 95% of imports and exports by volume, and 75% by value, still pass through the country's ports.

This global trade hinges on a vast network of maritime highways that, crucially,

## CONTRIBUTORS



**ROB WARD**  
Journalist & researcher

Latin America journalist and researcher, Rob Ward has been covering the region, especially the Mercosur countries (Brazil, Argentina, Uruguay and Paraguay), plus Chile, for nearly 30 years for a wide variety of trade publications, as well as national newspapers covering ports, shipping, transport and other areas. ■

intersect at ports and harbours across the world. These transport hubs are conduits for anything from grain and gas, to holidaymakers on luxury cruise liners chasing the next sunset.

But it's not quite business as usual. Maps are quietly being redrawn as the global economy shifts. New technologies and geopolitical pressures are slowly, sometimes more rapidly, influencing the direction, pace and nature of world trade and the shape of its transit routes.

As such, ports today are faced with a complex web of challenges, issues that they must overcome in order to thrive and to continue to underpin the world's economic needs and those of related industries, including shipping.

This issue of P&H reflects some of those challenges and uncertainties currently being faced by ports around the world as they pass through this difficult navigation.

Many of these echo the priority themes of IAPH itself: climate and energy, risk and resilience and data collaboration. All of these strands are interwoven into many of the developments that we are now seeing play out across the ports and maritime industries worldwide.

Perhaps the biggest test of all is the energy transition. With the demand for electrification at ports set to grow exponentially in the coming decades, this issue explores some of the challenges looming, as well as some of the opportunities opening up. That includes a look at possible future fuels and alternative solutions, from hydrogen to nuclear. It remains a tricky pathway ahead as ports look to make long-term investment decisions right now but based on a still-emerging view of future fuels and energy technologies.

This issue also examines other key industry trends too, with a look into the evolution and uptake of smart containers and how this digital interconnectedness can help to improve supply chain resiliency and overall efficiencies within the industry.

All of these themes will be addressed at the World Ports Conference 2024 in Hamburg, Germany from 8th-10th October. The conference is an ideal way to keep abreast of the latest industry developments and to connect with colleagues from around the world. Some of the sessions and speakers at the event are previewed inside this issue.

If anything, the role of ports in international trade and the world economy in general is about to gain even greater significance. As the nexus connecting supply chains and regional production and consumption markets in an increasingly globalised world, it is essential that ports succeed.

But these are no longer the days of Magellan or Columbus, the so-called golden age of exploration, nor the early years of steamships, a watershed event in maritime transport that saw the first wave of trade globalisation in the latter part of the 19th century. Life is more complex. Rapid technology advances, new energy solutions and broad climate-related directives are transforming the maritime industries, bringing with them disruption and transformation and, hopefully, improvements.

There's certainly no going back, no matter which way the geopolitical winds blow. In the new era of data and digitalisation, of smart containers and AI, of hydrogen e-fuels and carbon taxes, perhaps the only certainty is that change is inevitable. Industry disruption is coming thick and fast – but don't expect that to change anytime soon. ■



**FELICITY LANDON**  
Freelance journalist

Award-winning journalist Felicity Landon is a well-known figure in maritime circles, with the depth of knowledge and network of contacts to prove it. Felicity is versatile in her areas of coverage, with these spanning the container, dry and liquid bulk, cargo handling, energy and other diverse subject areas. ■



**NIGEL NIXON**  
Nigel Nixon and Partners, Inc

Nigel Nixon is the chairman of an international firm of port advisors that works on a wide variety of projects worldwide. Established over 45 years ago, it has built a reputation as among the leaders in the field of heavy-duty pavement design, and conducts work in other areas from port planning to financing. ■

# Blue seas, green futures

Eranda Kotelawala, CEO at the Solomon Islands Ports Authority, talked to Patrick Verhoeven about the challenges and opportunities facing ports in the South Pacific, a region on the front line of climate change

MARTIN CLARK

**Q Eranda (E) please can you introduce yourself and your role at Solomon Islands Ports Authority?**

**E:** I joined Solomon Islands Ports Authority in 2017. Prior to that, I was with Fiji Ports, so I'm pretty much familiar with Pacific ports and the geography as well. My role as CEO is to oversee the operations of the port authority and the port terminals. There are two main ports of entry into the Solomon Islands: the Port of Honiara is the main port, while the Port of Noro predominantly handles tuna and tuna products, so it's a fishing port, but one that is also transforming to become a fully-fledged containerised port. Our ports are the key drivers of the Solomon Islands economy.

**Q: What would you say are your chief priorities right now?**

**E:** There are many, but I would highlight four essential priorities right now. Our first major objective is to improve our operational efficiency, which of course, is similar to other bigger ports as well. But the reason in our case is we are going through a major transformation process at our ports, improving the infrastructure and moving towards digitalisation.

Second, we have all the climate-related challenges. We are now looking at how we can build more climate-resilient infrastructure, looking at the recent changes to sea levels, some of the storm surges and the impact on the maritime trade of the Solomon Islands. We are a maritime nation, so the ports play a pivotal role in the country's economy, connecting more than 900 islands.

Third, we are looking at how we can adopt renewable technology into port operations. If you look at the Pacific now, because of its geographical isolation, the cost of doing business and running a port is relatively more expensive

compared to other ports in Asia and the rest of the world. Due to this geographical isolation, Solomon Islands is still using fossil fuels, we're still 100% diesel, so when it comes to power generation, bringing in fuel to the region is expensive. We are also looking at hydropower, and there are some projects that are going to start in the next few years. But we are trying to adopt some renewable energy into our port operations so we can bring down the costs.

Our fourth priority is port waste management. We're looking at how we can manage our port waste better and dispose of it properly, or to treat it without using landfill or the sea. These are pristine waters around the Solomon Islands so this is a big priority.

**Q: Can you elaborate on some of the environmental or climate-related challenges you face as a South Pacific island nation?**

**E:** Yes, if you ask me which of these priorities is the most critical, I'd say it's in building climate-resilient infrastructure. The alarming sea level rise has made port operations (international and domestic) more difficult.

When we raise the deck level to 1m to 1.5m with our new infrastructure, we would face obvious operational issues with difference in levels between the wharf and container handling area. This can become a major hindrance to our existing operations with the design of ramps to access the apron.

The only other option is to build a completely new port, but that might cost us billions and where is the money going to come from for these kinds of massive projects? The cost of capital, especially in our part of the world, is pretty expensive. These are some of the issues that most Pacific ports are facing up to right now.





**Q: Patrick (P) what is the IAPH doing in this area that might assist ports in the region facing such climate-related challenges?**

**P:** The element of financing coincides with discussions at the IMO on the introduction of an economic measure, also known as a market-based structure. This would likely take the form of a carbon levy that shipping companies would start paying at some point. One of the main questions is how the revenue generated from this instrument should be used. We have suggested in previous submissions to the IMO the some of it should really go to port infrastructure investments in countries that are most vulnerable to the effects of climate change.

We have commissioned a study, which we hope to deliver in August, that looks at the numbers, exploring what type of investments we are talking about and their magnitude. It examines five case studies in detail, including the Marshall Islands. We want to show what positive benefits a market-based measure could have for port infrastructure development, notably related to energy transition and making ports climate-proof in these examples. We will present the results to the IMO at the end of September, ahead of the next Marine Protection Environment Committee.

Our initiative fully aligns with what Eranda is saying that the countries and ports in the Pacific are amongst the most vulnerable to climate change, and it would make sense that any international funds managed by the IMO would be allocated to help alleviate that problem. Ship owners initially argued that funding should only be used for making ships ready for alternative fuels, which is also a legitimate interest, but we definitely want to extend that to ports.

**Q: To what extent do smaller ports, and those in the Pacific in particular, need a greater voice on the world stage given such pressing climate issues?**

**E:** I would like to see more inclusivity for small island states and small ports when it comes to policy dialogue and policy making.

“ We are now looking at how we can build more climate-resilient infrastructure

**ERANDA KOTELAWALA**, Solomon Islands Ports Authority

If you look at the whole of the Pacific and its GHG emissions, it's only about 0.03% of the global total, and yet it's where the brunt of climate change is being felt. And yet we also still have these targets of achieving net zero, so some sort of inclusivity would definitely give us a voice and draw attention to the Pacific, Caribbean, or any small island developing state.

Looking at some other global trends right now, I would also highlight the circular supply chain and how shipping can play a pivotal role in this, and the role of the blue economy. Especially in the living resources sector as well as in the marine or renewable energy sector. These are all areas that would encompass ports and harbours. How can we expand the concept of the blue economy and how can ports and shipping play a role in this?

**P:** At the World Ports Conference this October we will have a session on community building, and how a port authority can engage with the wider community in facing these environmental challenges.

We are keen to promote the role of a port authority as a community builder, a leader in bringing different stakeholders together, working with local communities in creating a license to operate and grow for the port, which is vital to the overall welfare of regions and countries. Port authorities are well placed to bridge the gap between societal stakeholders and commercial operators.

**Pictured:** Eranda Kotelawala and Patrick Verhoeven discuss climate resilience at a recent IAPH meeting in Japan

Photo: IAPH



**Q: Can you tell us about the work you are doing with the IAPH across the broader Oceania and south-east Asia region?**

**E:** IAPH has done a substantial amount of work in this area, covering key issues such as the energy transition, maritime decarbonisation, digitalisation, cyber resilience and risk and resilience. IAPH has already published several guidelines to assist ports in all of the above areas. These are, of course, issues that are similarly being faced across the rest of the world. It's an ever-evolving dialogue.

**P:** Oceania and south-east Asia is one of six IAPH regions and Eranda has been involved from the early days. He was one of the first to engage with our World Ports Sustainability Programme, which goes beyond the pure environmental dimension and looks at all aspects of sustainability, including social aspects, infrastructure and digitalisation among other things. It's really good to see that leadership from ports within the region.

Solomon Islands Ports Authority won one of our sustainability awards in 2022, and Fiji Ports was among the winners last year. We are really proud to have an active group of ports here.

**Q: Where do you stand on the issue of public versus private ports and investments given that Solomon Islands Ports Authority operates a successful state-run model?**

**E:** Of course, there are positives and negatives to both. When it comes to small island ports, Solomon Islands is the only state-run port authority in the Pacific right now, because if you look at most other regional ports, they are now privatised. This particular model has been quite successful for us and we have been making profits for the last seven or eight years, due to various management and other changes. We also have an edge over other ports in the region, especially when it comes to investments on our critical infrastructure. As we manage our own ports, decision making has been fast when it comes to infrastructure design and development, purchase of essential equipment and systems for port operations.

Privatising ports in small island developing states is a complex issue, unique and specific to each country, it also depends on the agreement type and how you negotiate terms and conditions for mutual benefits and interests. When you

**“ Solomon Islands Ports Authority won one of our sustainability awards in 2022**

**PATRICK VERHOEVEN,**  
Managing Director of IAPH

look at some of these privatisations it depends on how the agreements are set up, that's where there may be a gap, so maybe there are lots of areas for improvement in those agreements as well. Scale and volume also play a vital role, so it certainly can be positive and makes more sense for the bigger ports with potential

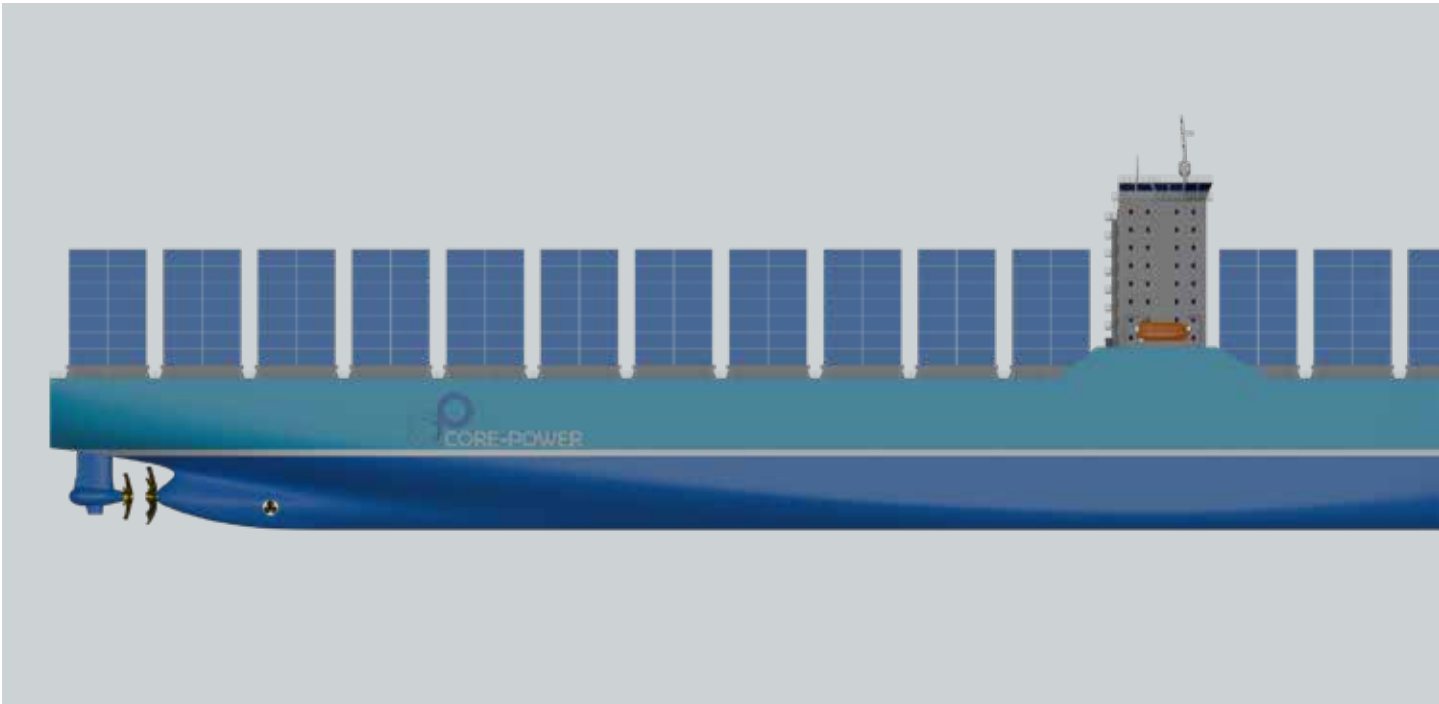
for higher volume growth and competition. But for the small island ports, there's quite a different dynamic and different economic theories apply.

**P:** The governance of ports is very relevant. We've been involved in the New Port Reform Toolkit the World Bank is preparing. What I notice is that in the previous editions of this toolkit there was almost a fixed recipe for governance, in that you have a publicly-owned port authority and then private operators. We are coming back from that idea of this 'one size fits all'. You really need to look at the circumstances, the size of the port, the services it offers and the cargo it handles. You need to look at what works best for your own situation and in your region. There's no panacea, we've got to come back from that way of thinking.

**Q: To what extent might competing global interests in the Solomon Islands, and South Pacific generally, impact your business plans and operations?**

**E:** There is a lot of interest in the area right now but what we've seen in the Pacific is that countries are finding ways to maximise some of their development options with non-traditional partners. This approach might help some of the small island countries and the Pacific ports to find leverage and to achieve their development goals. So that's one way of looking at it in a positive light. The other way is the competition aspect, to manage that competition but without compromising on the good governance that we have. If it's not well managed it could lead to certain governance issues.

**P:** Geopolitical tensions are among the chief disruptions that we see to world trade right now. The Red Sea, of course, is the most obvious example of how trade is being attacked, with the principle of free navigation under threat. As a global port community, and here at IAPH, we will continue to support open and free trade and that also means freedom of navigation. ■



## PERSPECTIVE NUCLEAR POWER

# Nuclear-powered ports

**T**here will be no net-zero emissions from energy without nuclear. All fossil fuels and proposed synthetic replacements release energy from combustion and emit exhaust gases. Weather-dependent energy sources only produce energy when conditions are right, and combustion engines substitute when not. Nuclear is the only reliable energy form that does not emit exhaust gases.

Nuclear has to date sought economies of scale by building big. That has meant building nuclear power plants on a very large scale, with high complexity and in very few series. Cost and schedule overruns during construction have become so common that building nuclear energy requires state-funded programmes. However, around 80% of the costs are 'non-nuclear' costs, such as site preparation, civil construction, installation, labour work, cooling systems, as well as interest on debt

financing. There is a better way to scale nuclear: fully modular floating nuclear power plants.

### **New solutions needed**

We know that floating nuclear power works because it has been in use by nuclear navies since the 1950s. Reactors operate safely at sea, tolerating pitching, rolling and heaving with the ocean. However, these 'naval reactors' cannot be insured commercially, which means the commercial market cannot bring them into ports, which is a showstopper.

The reason for that is simple. Naval reactors are cooled by water at extreme pressures. If the coolant is lost, such machines can overheat and start melting, turning water into hydrogen which can be released and spray nuclear

material into the environment. As a result, all pressurised reactors have a large, often many kilometres wide, Emergency Planning Zone (EPZ) surrounding them, in which the operator of the reactor is responsible for safety. For a nuclear ship moving into or around a port, this is not possible.

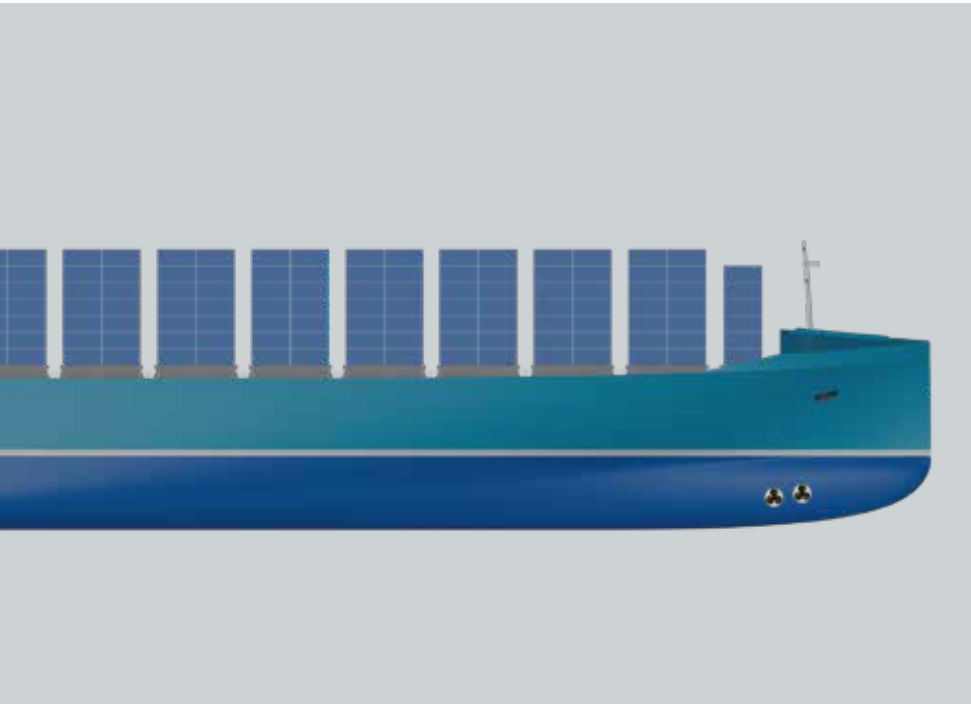
We therefore need a new nuclear solution which can be brought 'up close and personal'. That means technology which is suitable for the marine market with a tiny EPZ, possibly confined to the boundary of the hull and which can be manoeuvred and safely stationed in ports and waterways.

### **Making nuclear affordable**

To achieve scale, nuclear construction must be serialised, or it will forever be prohibitively expensive for all but large national energy programmes. This can be solved by modular construction of small floating nuclear power plants in shipyards.

**Pictured:** Demand for clean power is driving the search for alternative energy solutions

Photo: Core Power



## ABOUT THE AUTHOR

**MIKAL BØE** is a senior maritime executive with three decades of experience from floor-to-board level in shipping, finance and technology. As chairman and CEO of Core Power, he plays a key role in the development and deployment of a new generation of reactor technologies as the solution for ocean transportation to meet its emission reduction targets.

Modular construction in shipyard production is a key strategy for scaling nuclear deployment so that Floating Nuclear Power Plants (FNPP) can be centrally manufactured and floated to their site of operation. This will enable large-scale nuclear fabrication, encouraging serial production and a transition from '1st to nth of a kind'. FNPPs can be constructed in series, all identical to one another.

### Changing perceptions

The fearless use of nuclear technology is essential to combating the real dangers of climate change, shortages of water, food and energy and social stability. Its historical record must be re-examined.

In 1934, international agreement had been reached on the scale of a safe radiation dose, 0.2 roentgen per day – in modern units, 2 milli-gray (or milli-sievert) per day. However, the politics of the fearful perception pushed limits to be set to 1 milli-sievert per year, a modest fraction of the natural background from rocks and space, in full denial of the natural protection provided by evolution.

We must ask how human society has persisted with such a gross misperception of nuclear energy for over 70 years. The work to educate the maritime market, and

the public, about the benefits of nuclear energy is now having a positive effect.

The realisation that floating nuclear power from permanently-moored installations could be commercially insured – and therefore unlocking a vast new international market for affordable and scalable nuclear energy – has now reached the point where the issue is being dealt with at the United Nations agencies regulating both maritime (IMO) and nuclear (IAEA) to ensure appropriate international standards are in place by the time the first FNPPs are launched.

### Clean, reliable power

The benefits of floating nuclear in ports are many. Small, affordable and commercially insured, FNPPs moored in ports can power mini grids for port infrastructure, cold ironing of vessels, EV charging, hydrogen production and water desalination to name a few.

As a consistent and reliable power source, essential for meeting the high and fluctuating energy demands of ports, FNPPs can eliminate the need for costly energy storage and generate clean reliable electricity in the 400-1500 MWh/day range.

FNPPs can also be more cost effective than traditional energy sources. Stable

energy prices, insulating ports from the volatility of fossil fuel markets, helps avoid the costs of carbon emissions and health impacts from air pollution. FNPPs can be deployed quickly and scaled to meet the specific energy needs of different ports. Their plug-and-play nature reduces the time and complexity associated with building new terrestrial power plants, allowing ports to adapt to changing energy demands swiftly.

To facilitate the adoption of FNPPs, and accelerate the energy transition at ports, governments and regulatory bodies need to update and streamline regulations to support their deployment. Public-private partnerships can play a significant role in funding and developing the necessary projects, and collaboration between port authorities, energy providers and the maritime industry is essential to create integrated solutions that leverage FNPPs effectively. Building public trust and understanding of nuclear technology through education and transparent communication is also vital.

In conclusion, FNPPs offer a unique combination of clean, affordable energy as an innovative approach that can position ports as leaders in the global effort to combat climate change. ■

## FEATURE SMART CONTAINERS

# Supply chain traceability

Smart containers are getting smarter. As well as traceability throughout the supply chain, they promise to add efficiency and accuracy to port operations

FELICITY LANDON

**I**n 1956, Malcom McLean transformed shipping and international trade with the simple idea of packing cargo into standard, uniform steel boxes. This ultimate disruptive innovation has been recognised as the key to globalisation.

It's taken decades, but at last the intermodal shipping container is being transformed. It's getting smart.

"This year we celebrated the 68th year of containers. The introduction of containers transformed global supply chains. What has changed since then? Nothing! This is the time for innovation," said Gadi Benmoshe, vice chair of the IAPH Data Collaboration Committee.

"Smart containers provide visibility for shippers and other stakeholders, but that's only part of the story. These digital solutions also support the sustainability efforts of the supply chain. With enhanced tracking capabilities, you can better plan your just-in-time (JIT) inventory, reduce the transport of empty containers, and keep your cargo more secure. Real-time alerts enable you to take action to prevent spoilage or damage to your cargo."

However, in the context of the entire supply chain, 'smart' means more than tracking and tracing, he added. "Innovative smart container designs allow shippers to load significantly more cargo into each container, resulting in fewer trips and a reduced environmental impact. Design features that minimise wind resistance during road transport help lower fuel consumption and emissions."

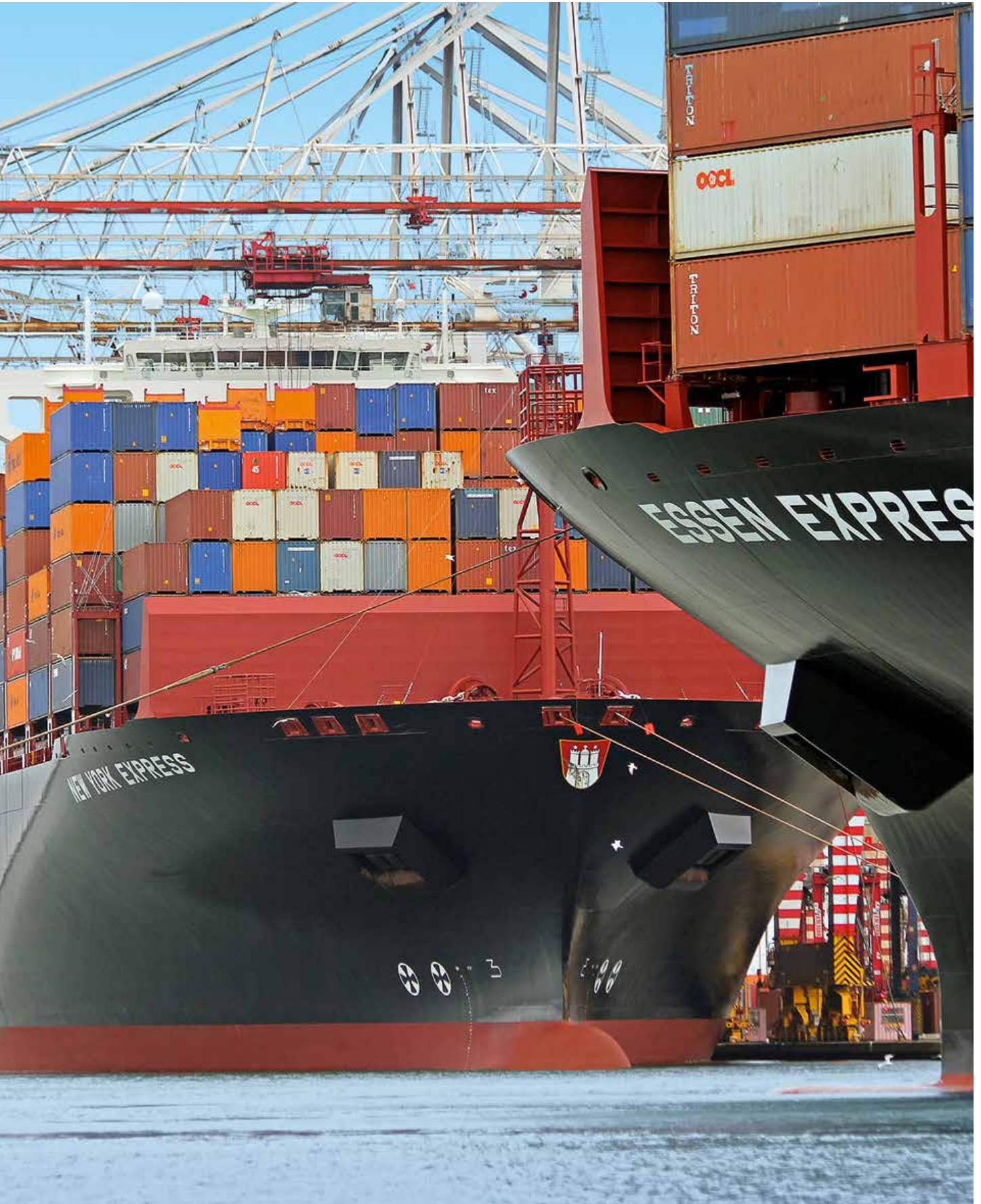
## Transforming port operations

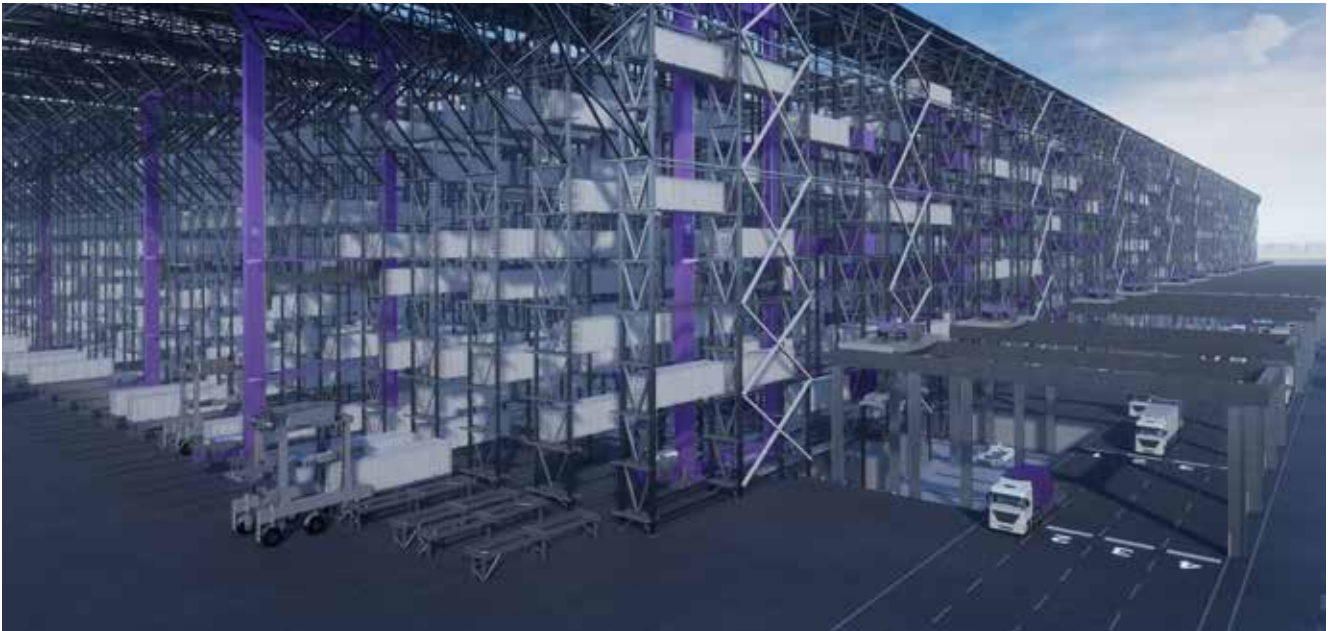
Smart containers are also set to transform port operations – if the port systems are set up to communicate and share relevant information, said Benmoshe.

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**Pictured:** Smart containers could transform traceability in the supply chain  
Photo: Hapag-Lloyd







“Smart containers can communicate their location, enabling systems to inform the port of the container’s estimated arrival time at the terminal gate. This allows the port to be prepared and, with proper communication channels, even ‘respond’ to the container if required documentation has not yet been received. This resolves issues where containers arrive at port gates without the necessary information. Additionally, future smart containers should be able to transmit their container number directly to the smart gate, eliminating the need for OCR cameras, which can be prone to errors.”

The smart container can support port automation, enhance sustainability and improve cargo security, said Benmoshe.

“Knowing when and where a container door has been opened or tampered with can also aid in resolving insurance disputes. In the future, a smart container could transmit information directly to the customs risk management system if it has been opened or damaged, for example.”

Numerous companies are already active in this space, with a range of innovative products and solutions that reimagine the container for the modern age. While the original-look container was first conceived way back in the pre-digital era, life looks a whole lot different in 2024.

Shipping industry giants such as Maersk and MSC have been alert to the smart container opportunity and their potential to improve supply chain visibility on a global scale for some time. There are many other innovators seeking to capture a share of a market that looks set to grow significantly in the years ahead.

#### **AELER model**

Lausanne-based AELER’s smart container is made with composite materials and embedded Internet of Things (IoT) capabilities, which supplies real-time information to a central hub, from location and temperature to a door being opened (or forced).

Marianna Levtov, head of network and advocacy at AELER,

said: “Unlike conventional IoT solutions for intermodal dry containers that mainly offer basic services, our smart container takes a systemic approach, ensuring both cargo conditions and container traceability. We aim to discuss smart containers in a broader context – not just their digital and IoT aspects but also the design and materials used. Our containers are made from composite materials that provide numerous sustainability benefits.”

The composite material offers superior insulation, she said. “Typically, shippers transporting cargo that requires a stable temperature use additional insulation materials inside the container. These materials are generally single-use and environmentally unfriendly, and require extra time for installation, removal and disposal. The AELER smart container eliminates the need for additional insulation materials. This design frees up more cargo space and reduces handling time. Currently, cargo requiring insulation but not refrigeration is often transported in non-operating reefer containers, which have less cargo space due to the installed refrigeration systems. In contrast, our container provides 11% more cargo capacity than a reefer container, leading to fewer shipments and a lower environmental impact.”

The composite material, which includes recycled plastic, is stronger than steel, which is particularly beneficial for transporting liquids in flexibags, she said. “Typically, shippers underload flexibags to prevent bulging in conventional containers. However, the strength of the AELER container allows for 17% more cargo per unit.”

From a port’s perspective, a stronger container minimises damage-related challenges, said Levtov. Also AELER conducted

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**Pictured:** Overview of high-rise storage system and shuttle carriers at Boxbay  
Photo: DP World

a test with a European port community system where the container communicated its location and estimated gate arrival time to the port, enhancing the port's readiness. "Better information facilitates improved decision-making and operational planning for ports."

### Live Position

Hapag-Lloyd says its container tracking system Live Position provides customers with full transparency on the location of their shipments, from the start of transport to arrival at destination. More than two-thirds of its dry container fleet has been equipped with tracking devices and installations continue globally.

Hapag-Lloyd chief operating officer Dr Maximilian Rothkopf said the Live Position product will "close the blind spots of global logistics, enabling real-time decision-making and risk mitigation for our customers, while allowing a more efficient steering of our fleet of boxes."

The system provides a search functionality by container, booking number or in batches, and gives customers a quick overview of their shipment's current location, allowing them to make any necessary adjustments.

"Customers seeking enhanced visibility in their supply chains can receive clear benefits using our Live Position product that is using dry container monitoring to deliver real-time visibility to our customers," said Karsten Schmidt, product owner, Live Position/Track & Trace, at Hapag-Lloyd. "Live Position is sending a signal every 15 minutes when moving inland, showing our customers where their containers are on their journey. Live Position will also enable customers to view additional information regarding the timeliness of their containers by logging into our Online Business Suite."

The main focus of Live Position is GPS location data to answer the question: 'where is my container?' However, Hapag-Lloyd also tracks additional data about the container's condition; the device records shock events and ambient temperature and has a Bluetooth gateway to connect additional external sensors. "These can be connected to the device via Bluetooth, such as door sensors to detect door openings, temperature or humidity sensors inside the container," said a spokesperson for Hapag-Lloyd. "These features are on our roadmap to include in the customer product in future."

### Growing market

While smart containers are not the norm yet, their numbers are on the rise. That's a trend not only driven by technology advances and digitalisation, but one accelerated by landmark events such as the Covid-19 crisis and the war in Ukraine, which triggered disruptions to the global supply chain.

The smart container fleet is expected to grow eight-fold over the next five years, according to industry experts Drewry. By the

end of 2021, it is estimated that around 3.6% of the global container fleet was fitted with smart technology.

"In the future, supply chains will be completely digitalised, with all communication taking place between smart assets," said Jules Coleman, managing director, containers and logistics at ING, in a briefing paper.

This means the collection of a vast amount of data, which can be deployed to smooth the supply chain and improve traceability along the entire process. This data can also be used for other purposes as well, from potential environmental benefits to cost savings.

While it's difficult to quantify what the growth in smart containers might equate to in monetary value for the industry, there are clearly economic benefits up for grabs.

"Smart containers create a lot of data, which can ultimately optimise the supply chain," noted Coleman. "Estimates suggest that there can be a \$7 billion cost-saving by creating a more optimised process."

It could be more across the wider industry. Research from the Boston Consulting Group has previously estimated

that avoiding empty container shipping 'for carrier-specific reasons' could allow the maritime industry to reduce carbon emissions by six million tons a year. More optimised fleet management means less repositioning of empty containers — some estimates suggest up to \$20 billion a year is spent on this activity, resulting in unnecessary fuel consumption.

Integration of smart container systems with other technologies, including artificial intelligence (AI), could yield additional savings and efficiencies not yet fully understood.

### Inflection point

Ports around the world, large and small, are already adapting to the changing realities and potential of smart container systems.

DP World's BoxBay 'intelligent' High Bay Storage (HBS) system — with a pilot project underway at Jebel Ali Terminal 4 in a joint venture with industrial engineering specialists, SMS Group — illustrates changes to the way containers can be handled in ports with smart innovation.

In Malaysia, Midports Holdings has begun work to look at the development of a smart AI container port at Port Dickson, Negeri Sembilan. It recently handed a contract to China's CCCC Dredging for initial design and implementation.

At PortMiami in the USA, start-up firms are being encouraged to come up with innovative approaches to enhancing cargo visibility, via the award of grants.

Announcing the grants initiative earlier this year, Hydi Webb, director and chief executive of PortMiami, said it was a sector now reaching a critical moment. "Innovation in cargo visibility is reaching an inflection point with new technologies allowing for real-time tracking of trucks and containers, efficiency metric reports and advanced data analytics." She said PortMiami aims to be at the forefront of these 'smart port' technologies. ■

“This year we celebrated the 68th year of containers. The introduction of containers transformed global supply chains. What has changed since then? Nothing! This is the time for innovation.”

**GADI BENMOSHE**, vice chair, IAPH Data Collaboration Committee



**ARDAVAN BAYAT**

Global Chief Process & Transformation Officer,  
House of Shipping

## Wake-up call

The container sector, after decades of relatively little change, is now poised for significant innovation and transformation

**D**espite the additional costs, smart containers offer several benefits that can outweigh these expenses. Real-time tracking will enhance visibility into the location and status of goods, reducing the risk of loss or theft and bringing visibility to the supply chain — particularly relevant for sensitive production lines with just-in-time delivery being critical, and where delays could cause stoppage of production causing bigger capital losses. It is worth bearing in mind that the costs associated with smart containers are also likely to fall over time as the technology matures and is more widely adopted.

The data provided by smart containers can further help with cost reduction like demurrage. Sensors can monitor temperature, humidity and other conditions to ensure the integrity of sensitive cargo. This also helps customs officials in immediate detection of unauthorised access, improving cargo security. Of course, the benefits would only outweigh the costs when stakeholders are ready to make use of the technology and integrate it into the business process and decision-making cycles.

While advanced technology can complicate logistics operations, the overall impact is positive when managed correctly and assuming that the complexities from the introduction of such technologies are addressed seamlessly. There may be a period of adjustment as teams learn to use new systems and integrate them into existing processes. Users will need training to effectively adopt and maintain new technologies. We should also ensure new technologies work seamlessly with, or fully replace legacy systems which can be a daunting task, particularly when handling large volumes of data generated by smart containers that require robust data

management solutions. These challenges are often outweighed by the long-term benefits of improved efficiency, accuracy, and visibility in the supply chain.

The container sector is currently experiencing significant transformation. The adoption of digital technologies is helping optimise operations, from tracking and monitoring to data analytics and automation. Also, there is a growing emphasis on sustainability, with companies investing in low-carbon technologies and adopting sustainable business practices. New materials, design improvements and advanced manufacturing techniques are enhancing container durability and functionality.

Internet of Things (IoT) is becoming increasingly integrated into container logistics, providing unprecedented levels of connectivity and real-time intelligence, in addition to the customers who are increasingly demanding greater transparency and faster delivery times, driving the need for more advanced logistics solutions. Artificial Intelligence, a hot topic across several sectors, has also influenced the shipping industry from predictive analytics of transit times and possible delays to the optimisation of fleet navigation.

Most importantly, the commitment to make the transformation and implement technologies in an effective manner — usually stemming from visionary leadership and strong beliefs in such practice — becomes a key enabler for those early adopters who quickly understand the need for such changes particularly given today's dynamic in the shipping industry. The container sector, after decades of relatively little change, is now poised for significant innovation and transformation. ■



# Closing the gaps

Preparing port infrastructure for the challenges of the future: responding to changing needs and developing innovative solutions for successful long-term results

Q&A



**NIGEL NIXON BSc FICE PE**  
Chairman, Nigel Nixon  
and Partners, Inc

**Q: Please give us an introduction to your role and your work with ports?**

**A:** Nigel Nixon and Partners is an international firm of port advisors who work on a wide variety of projects worldwide. Established for over 45 years, it has built a reputation as a leader in the field of heavy-duty pavement design. Other expertise extends to market studies, economic and financial analyses, due diligence, planning, design, costing, procurement and implementation. More recently, NNP provides advice on financing projects mainly in the private sector and placement of early seed money for port investments.

**Q: How would you assess the current state of ports infrastructure and its readiness for challenges ahead?**

**A:** Newer port infrastructure ought to be serviceable and compliant with the design criteria developed at the time of design. Unfortunately, that has not always been the case. NNP has been advising on far too many issues of premature failure of operation supporting infrastructures. Such early failures not only cause operational disruption, but are highly costly in remedying those defects. NNP has related such issues from inaccurate market and operation predictions, bad design and lastly to bad construction – in some cases, all three. Where older port infrastructure exhibits early defects and failures, those defects have often been associated with inappropriate or a total lack of routine and pre-planned maintenance, as well as possible design inadequacies and defective construction. As to rising to the challenges ahead, my advice to port owners is to seek a full understanding as to what their existing

infrastructure was designed to handle, assess its current condition and seek advice how to enhance the residual strength of their infrastructure to accommodate the new impact that bigger ship operations impose.

**Q: How have your services expanded to accommodate the needs of ports?**

**A:** Our services have expanded to address many of these issues. We see more situations where ports seek finance to allow them to deliver a well thought through business case. We also see situations where such port-related development opportunities fall short of procuring finance. Consequently NNP has expanded to help promoters raise seed money to properly inform the development process to reach a shovel-ready project. This seed money can be significant when applying for permits, seeking and carrying out extensive investigatory studies, including both commercial and financial. These early planning tasks are expensive. There is a gap in the financial market to fund these works which NNP has exploited, and now hopefully enables many a project to pass the initial stages to a shovel-ready state where the residual finance needed is easier to place.

**Q: What are the main factors**

**underpinning port development going forward?**

**A:** Suitably experienced engineers and contractors are mostly capable of delivering innovative technical solutions, at minimal risk to owners, but the main question is how these technical briefs are developed. They should develop from a business case that requires cost-effective solutions for most customer-driven requirements. The technical designers too often interpret these project briefs unchallenged and seek to design what the designers want a contractor to build. Not only should any brief be challenged but the brief implementation should be a partnering effort between owner, designer and contractor delivery team, following a procurement process that delivers both cost certainty and at minimal owner risk. This approach is not always easy to deliver, but our experience shows that it does work, and projects not only get financed but also delivered at a cost that the business case was based on, both to an appropriate quality and at best timeline.

**Q: Anything else on your approach to handling the complex challenges of modern port operations?**

**A:** I don't necessarily agree the challenges need to be complex. If your procurement road map is complex, then your road map needs revisiting! I would reiterate the need to engineer port project solutions that not only deliver best practice by applying innovation and to put aside the 'when in trouble, put in double' mentality and bring the contractor delivery team early in the process to tap their own experience and drive to be cost and time efficient. ■



Deepoak Sachdeva

## INTERVIEW DEEPAK SACHDEVA

Steel giant ArcelorMittal named Deepak Sachdeva head of global ports a year ago. Now settling into his role in London, he talked to P&H about the need for a common baseline standard amongst ports and his life-long passion for the sea

## MARTIN CLARK

**A** former ship's captain, Deepak Sachdeva has spent much of his career at sea. He stepped ashore in 2005, making a successful switch to the ports and offshore business, which culminated in his appointment in 2023 as the first head of global ports at ArcelorMittal, one of the world's largest steel and mining conglomerates. Arcelor Mittal Shipping has recently joined IAPH, alongside other major beneficial cargo owners IKEA Supply Chain Operations and Cargill.

Now based in London, Sachdeva is driven to elevate standards not just at ports owned or operated by ArcelorMittal, which span across geographies, but across the board. That's why he's calling for a baseline standard for ports, something that could be introduced as voluntary at first, but would raise the bar long-term at ports worldwide in areas ranging from safety and efficiency to social and environmental governance. "I believe in sustainable systems and best practices and because I am now looking at things across geographies, that's the reason we should have a common baseline standard."

He has a track record of delivering too. From construction to commissioning and over 10 years at the helm of Vadinar Oil Terminal in Gujarat, India, a double five-star-rated facility by the British Safety Council and a recipient of the Sword of Honour. It serves the 405,000 barrels-per-day Vadinar oil refinery. "It's one of the most efficiently-run ports. I am extremely proud of it." Sachdeva also spearheaded an offshore construction entity, "so basically a lot of exposure and experience in ports, offshore projects, with inherent passion for continually raising the bar."

**Global ports network**

It's a template he's keen to put to the test with his new global remit. ArcelorMittal's

footprint spans four continents, with mines and steel plants around the world. It also boasts over 20 ports, both owned and under long-term concession, that support its business operations, including three in Brazil, two in the USA and half a dozen across Europe. In addition, the group has a separate shipping division with a fleet of 48 ships handling around 100 million tonnes of cargo every year.

The newly-formed ports team will look closely at how these assets can be better utilised to enhance productivity, create synergies and unlock value. "Historically, our ports have been an extension of the steel plant or the mine. We've started to look at our ports as added-value assets, to see how we can bring in greater efficiencies. What is the underlying value in an asset that can be passed on either to the plant, or for shareholders?"

The group is making significant investments into its ports. In Liberia's Port of Buchanan capacity is being raised to accommodate a huge uplift in iron ore mining and logistics from around 5 million tonnes to 15 million tonnes per annum, with an option to further augment. ArcelorMittal is the largest foreign investor in the West African country and, as such, is similarly nurturing work, skills training and associated social initiatives alongside its development plans.

"We are making significant investments into our port assets in terms of enhancing reliability, efficiencies, capacity augmentation in certain geographies, modernisation, adopting new technologies, better practices. We're also reaching out to stakeholders with

the intent to strengthen engagement with society at large."

**Supply chain resilience**

Sachdeva sees the adoption of common baseline standards not only as a means to extract greater value from the company's own port assets, but also a way to embed greater resiliency within the supply chain.

"Ports and harbours play a key role in the entire supply and logistics chain. With certain unforeseen events in parts of the world, whether we're talking about the impact of ongoing war, the Panama Canal, or what recently happened in Baltimore, if one side gets disturbed, there's pressure on the other side. So it's essential all ports and harbours are as efficient as they can be, that the turnaround times are faster and the supply chain gets more resilient as a result."

He comes back to the idea of a baseline standard to enhance efficiencies and unlock value, not only within

ArcelorMittal, but at other ports across the world. In its broadest sense, this could encompass areas such as the ship-port interface, in terms of

**“We are making significant investments into our port assets**

safe moorings, safe navigation and safe access to and from the vessel, to turnaround times, environmental practices and social governance. Initially, it would be voluntary, and self-audited, though later it could mean engaging a third-party body to verify compliance.

Sachdeva's desk is pretty full. But the baseline standard idea is something he will be sharing keenly with industry colleagues and among the IAPH community. If you catch up with this former skipper, he'll also tell you of his fondness for the sea. "When I'm visiting a port, I make a point to board a ship to experience the different energies on board. I miss it, but I'm thankful that it's because of what I did when I was sailing that I have this opportunity today." ■

# Demystifying the port power dilemma

Ports and the electricity conundrum: What will it take to meet demand?

MARTIN CLARK



**I**n the future, ports are expected to need a lot more power — and from cleaner energy sources. Yet that comes at a time when national grid networks are likely to be increasingly challenged as the energy transition gathers pace and new renewable technologies displace existing, proven thermal-based solutions.

The drive to electrification, as part of efforts to decarbonise in both ports and shipping, and to offset the use of traditional maritime fossil fuels, brings with it an anticipated spike in power demand that could rise exponentially within a generation under ambitious climate goals.

How are ports to navigate this transition if it can no longer be assumed that the national grid — facing additional demand for electric power from other industries and consumers simultaneously — will be there to help?

“Shipping is facing a transition — but although the sector has faced transitions in the past, this one is different,” said Nelson Mojarro, head of innovation and partnerships at the International Chamber of Shipping, speaking on a recent IAPH webinar, held in association with media partners Mercator Media.

This time there are differences, he noted, in that we face both a “multi-fuel future” and a “policy-driven” with a net-zero

deadline by 2050, rather than a “market-driven”, energy transition. More importantly, it is a paradigm shift towards direct and indirect electrification.

## CEM hubs

Industry sectors including shipping are looking to hydrogen and sustainable biofuels to decarbonise, while nuclear energy and other emerging technologies are also vying for attention to provide the necessary power that forecasters suggest will be needed.

Ultimately, it appears increasingly likely that ports will need to compete for their share of power as this huge and growing demand for electricity matures. It underpins a trend that will drive and shape a societal-wide shift to electric vehicles, digitalisation and a world hungry for data and clean energy.

Out of this has emerged the idea of Clean Energy Marine Hubs, or CEM Hubs, with key power infrastructure to be located close to, or even within, port facilities themselves.

Potentially, a network of these ‘hubs’ could stretch across the globe, coordinating efforts to advance faster together in

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**Pictured:** Demand for clean power at ports is set to soar  
Photo: 728jet | Dreamstime.com



de-risking and greening the energy-maritime link and global supply chains and providing a foundation for new, clean energy alternatives.

But in a time of change, what appears to categorise all possible scenarios is the collaborative nature of solutions to meeting future electrification needs. It points to further integration and connection of technology, fuels and energy management, as well as ports and industry.

Ports and future hubs which can produce green hydrogen from solar and wind renewable energy as well as hydro-electric power, store and then export that fuel by liquid bulk carriers “would become part of a new and unprecedented level of electricity demand,” said Mojarro.

Citing IEA and IRENA data, Mojarro confirmed the estimate that the maritime sector share of overall hydrogen demand by 2050 will only be 5-10%, hence, shipping and ports will be a relatively minor user of hydrogen-based fuels, but a key enabler of transporting these low- and zero-carbon solutions from source to consumption.

Ports might face challenging clean power supply access due to the potential unprecedented demand, not just for their operations or for onshore power but to produce low-carbon fuels at scale within, or dispatched close to, the ports.

### Shore-to-ship power

Ports are presented with a unique set of problems. A recent whitepaper by GE Vernova, ‘Managing Energy at Ports’, noted that depending on traffic at a port at any given time, peak power needs can exceed baseload demand by a factor of 10 to 20, or more, if multiple ships are berthed alongside requiring load/discharge operations and onshore power.

The evidence of a transition is not hard to find today, with ports assisting the shipping industry to bring down its carbon footprint, using electricity to solve more of its needs.

The adoption of onshore power supply, or cold ironing, means ships at berth can cut exhaust emissions and noise by drawing on clean electricity from the port, rather than utilise on-board engines.

Shore power was recently launched at PortMiami, allowing cruise ships to turn off their engines and plug into landside electrical power while docked, a move it says can reduce emissions by up to 98%. In the coming year, the port will have more than 350 vessel calls plugging into the shore power system.

It is a collaborative effort, with Miami-Dade County partnering

“ Shipping is facing a transition – but although the sector has faced transitions in the past, this one is different

**NELSON MOJARRO**, head of innovation and partnerships at the International Chamber of Shipping

flagship cruise lines including Carnival Corporation, MSC Cruises, Norwegian Cruise Line Holdings, Royal Caribbean, Virgin Voyages, as well as state electric utility, Florida Power & Light Company.

Similar steps are being taken around the world, although more innovative projects utilising nascent hydrogen technologies, for example, are also taking shape.

These include initiatives to deploy mobile solutions providing cold ironing from green or low-carbon hydrogen, complementing the

electrical grid, for container ships, cruise liners or tankers.

Among those active in this emerging niche is HDF Energy, a leading global player in the nascent hydrogen industry.

After early pilot projects, the intention is to replicate the idea, with higher power levels, at ports, including future large hydrogen hubs.

### Investment conundrum

It is part of a much broader challenge confronting the ports sector right now. Even as ports begin to electrify their own operations and prepare to deliver more shore-to-ship power, peak energy needs are set to grow substantially, and could start to exceed those of the surrounding towns, businesses and communities they serve.

Perhaps the biggest challenge of all: ports are having to plan long-term investment decisions right now based on a still-emerging view of future fuels and energy technologies.

In the GE Vernova white paper it noted that as demand for electric power at ports goes up, opportunities are growing to add new, cleaner energy sources and establish on-site micro-grids. Potentially, this could even unlock new energy revenue streams for port owners and operators.

This could mean that to supplement limitations in grid capacity, as well as reduce greenhouse gas (GHG) and noise pollution, ports may look to introduce their own projects in renewables, with investments in solar, wind or hydrogen-based fuels and potentially other technologies.

In addition, the deployment of a smart energy management system can help maximise power availability and energy efficiencies. The adoption of battery energy storage systems will also aid ports in creating their own micro-grids to service customers, users, and the broader community.

“Energy transition is a journey,” according to the white paper. That is true for most households and business around the world right now. For the ports sector, the journey is really only just beginning. ■

# E-fuels: a slow burner

The widespread development and use of synthetic e-fuels is still at least a decade away, new research suggests

**MARTIN CLARK**

**T**he ports and maritime industry still has time before synthetic e-fuels are likely to make a genuine impact, but preparation and understanding is something that needs to happen now.

A new report suggests that the widespread development and use of synthetic e-fuels is still at least a decade away. E-fuel costs for the marine industry are also significantly higher than conventional fuels, unless factoring in rising subsidies, which could climb through to 2050.

E-fuels — also known as electrofuels, eFuels, synthetic fuels, Power-to-X (PtX), Power-to-Liquids (PtL) and renewable fuels of non-biological origin (RFNBOs) — are produced by combining electrolytic (green) hydrogen, made by electrolysing water using renewable electricity, with captured carbon or nitrogen. An e-fuel can be considered carbon neutral if the emissions released into the atmosphere during its combustion are equal to (or less than) the captured CO<sub>2</sub> used to produce it.

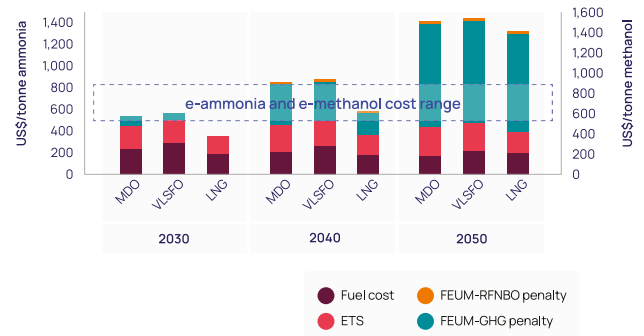
## Costs

The use and development of e-fuels also depends on the successful deployment of other technologies, though companies that position themselves now are best placed for the future, according to the 'Adding Fire to E-fuels' report by data and analytics firm Wood Mackenzie. It states that e-fuels are a synthetic alternative to fossil fuels and can decarbonise difficult to electrify sectors, such as maritime or aviation, without the need for the early scrapping of long-life equipment. This means e-fuels can offer a solution to power-critical segments of transportation such as ships, long-haul aircraft and heavy-duty commercial vehicles.

But as Wood Mackenzie data shows the costs of e-fuel marine fuels like e-ammonia and e-methanol versus conventional shipping fuels only start to level out from 2040 onwards, and crucially, by factoring in rising greenhouse gas (GHG) penalties. Its basket of marine fuels in the study includes liquefied natural gas (LNG), Very Low Sulphur Oil (VLSFO) and Marine Diesel Oil (MDO).

The data also highlights FuelEU Maritime laws that are designed to give investors certainty that the cost gap between low-carbon fuels and incumbent fuels can be closed, essentially pushing up the price of traditional MDO, LNG and VLSFO.

E-fuel marine breakevens versus cost of production



But the journey to placing e-fuels in the market will not be straightforward, even with the huge financial levers applied.

"Identifying pathways from legacy fuels into low-carbon alternatives is a perennial challenge for incumbent energy players," said Murray Douglas, vice president of hydrogen research at Wood Mackenzie.

"E-fuels offer companies an intriguing prospect at the intersection of electrons and molecules. So the potential to capitalise on existing technical, commercial and marketing capabilities make it an appealing, if challenging, opportunity."

Commercial viability is the key challenge in scaling up e-fuel production with green hydrogen production and CO<sub>2</sub> capture costs both high. The subsequent conversion process to the final e-fuel product is also energy and capital intensive, while delivery costs must be considered too.

Douglas said that current conversion technologies differ depending on the final e-fuel desired, but the key challenge for all is in integrating green hydrogen, carbon or nitrogen, and their subsequent conversion in a large-scale commercial e-fuel production facility. The report highlights e-ammonia and e-methanol are most suited to sectors such as maritime.

## Long-term

It will take time, and plenty of things to fall into place first. However, if the shipping, chemical and related industries can conquer the key issue of scale and make green hydrogen abundant, then e-fuels could hold great long-term potential in terms of marine decarbonisation solutions.

"E-fuels are undoubtedly one of the longer-term plays in the energy transition," said Douglas. "However, companies that set a strategic direction quickest can position themselves to capture the most attractive elements of the value chain and take those learnings forward." ■

**Pictured:** E-fuel marine breakevens versus cost of production

Photo: Wood Mackenzie

# A window into future fuels

A new 'future fuels' portal launched by the IMO – [futurefuels.imo.org](https://futurefuels.imo.org) – sheds light on the energy challenges and opportunities facing an industry in transition

**MARTIN CLARK**

With a dizzying array of marine fuels and emerging technologies now available, it can be hard to see with great clarity what the energy future looks like for the maritime sector. The uptake of new fuels, such as LNG, ammonia, methanol and others, has given the industry the opportunity to reduce its carbon footprint.

It has likewise thrown up tremendous challenges too.

But one certainty that pervades is the seemingly relentless drive to decarbonisation, which suggests that a return to business as usual is not one of the options on the table.

To mitigate the environmental impact of shipping, the International Maritime Organisation (IMO) has adopted a strategy to steer the industry to a cleaner, lower-carbon future.

This has brought with it a stream of more sustainable fuels and solutions that are now being adopted throughout the industry, albeit at different rates. There are massive implications for this in terms of vessel design and related global investments, both in fuels production and infrastructure, as well as for bunkering ports and harbours.

It is a time of profound change for both shipping and the ports sector.

## IMO portal

To help navigate through the maze, the IMO, working with other well-known institutions, has pulled together expert guidance for the industry.

That includes a newly-launched IMO portal — [futurefuels.imo.org](https://futurefuels.imo.org) — offering easy access to data, technical analysis and more, on zero and near-zero marine fuels and technologies, including pricing information, news and the latest research.

The website, launched in April 2024, was developed by the Future Fuels and Technology Project (FFT Project) — a partnership between the IMO and the Republic of Korea, supporting the development of new regulation within the possible IMO Net Zero Framework to achieve the targets contained in the 2023 IMO greenhouse gas (GHG) Strategy.

“This portal aims to facilitate user-friendly access to up-to-date data, with the hope that no one is left behind on our journey to decarbonisation,” said Ji-man Seo, project manager, FFT Project.

## Central aims

The IMO's new dedicated Future Fuels website is regularly updated and shares the latest facts about zero and near-zero marine fuels and technologies, including data and resources provided by relevant stakeholders.

Its main focus is to provide:

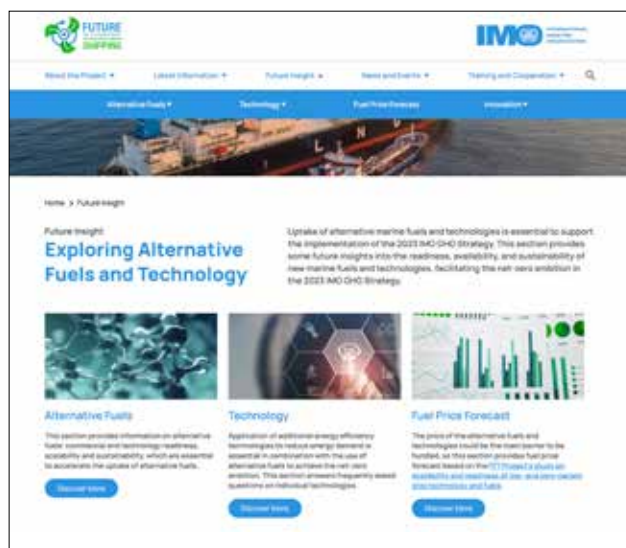
- Statistics and the latest information on the uptake of zero and near-zero marine fuels and technologies, port and bunkering infrastructures, fuel prices, etc.
- Future insight on GHG reduction scenarios and possible mitigation pathways, fuel mix, cost, etc.
- Training materials, education, technical cooperation and events.

The portal includes essential information on topics such as vessel uptake of alternative fuels and the latest developments in bunkering infrastructure, provided by DNV's Alternative Fuel Insight (AFI) platform, as well as data on prices and fuels availability.

Data providers and collaborators involved on the Future Fuels website also include IAPH, with external links to information pertaining to the ports sector.

Current information on the site is also sourced from a range of other stakeholders and data providers, such as DNV and Lloyd's Register, who have joined the initiative in its early stages. The IMO is inviting other data providers and industry experts to join the collaboration as the resource expands. ■

*To learn more about the future of clean marine fuels and to explore the new IMO portal please visit: [futurefuels.imo.org](https://futurefuels.imo.org)*





**FRANS VAN ZOELLEN**  
Former head of legal  
at Port of Rotterdam  
Authority

# THE COLUMN

## Legal instruments greasing the supply chain

**T**he Comité Maritime International (CMI), founded in 1897, contributes to the uniformity of maritime law. This resulted in the drafting of most current international maritime conventions.

Every two years, CMI organises an event to discuss topical issues. This year, its Gothenburg Colloquium also celebrated 100 Years of Unifying Carriage of Goods by Sea, referring to the anniversary of the Hague-Visby Rules of 1924. In this regard, Professor Michael Sturley (University of Texas Law School) delivered a lecture and emphasised that the old regimes are now outdated; they ignore new developments in maritime operations and the need for a better-balanced system. At this point in time, states are considering filling in these lacunas on the basis of individual national legislation, which is detrimental to the uniformity of maritime law – key foundations on which maritime operations and international trade thrive.

The way forward is the adoption of the United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea (2009). This Convention is the result of a consultation between 116 governments, plus intergovernmental organisations and other bodies representing relevant industry groups. The product is a modernised and balanced Convention, which includes containerisation, multimodality and e-commerce. It is important to highlight that the Convention harmonises the legal effects of bills of lading and other transport documents (whether electronic or paper form). This is a necessary

condition to let the Model Law on Electronic Transferable Records and digital platforms work.

It also encapsulates recent views in the context of safety and the environment. An important general effect is that the Convention delivers the much-needed uniformity and greases a frictionless supply-chain, reducing congestion, something that was essential in the situation of a pandemic, for example. For ports, it is also important that in the case of executing stevedoring functions (service ports) their position is

better protected than at present.

In order to promote this Convention, CMI is starting a global campaign for its adoption and ratification. In practice, this means the advantages of the Convention and uniformity will be

**“The Convention delivers much-needed uniformity and greases a frictionless supply-chain, reducing congestion, essential in the situation of a pandemic**

underlined and the favourable effects on the economies of connected markets will be emphasised. The entering into force of the United Nations Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea will benefit us all. ■

### ABOUT THE AUTHOR

**FRANS VAN ZOELLEN** is an honorary member of IAPH, active in the Data Collaboration Committee and the Subcommittee on Cybersecurity, and functions as liaison between IAPH and CMI. A former head of legal at Port of Rotterdam Authority, he now assists governments getting cybersecurity legislation up to standards and implemented.

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**PROJECT FOCUS BRAZIL**

# Building up Brazil

With key decisions, investments and upgrades looming, it is shaping up to be a busy time ahead for the team at Port of Santos in Brazil, Latin America's busiest container port

**ROB WARD**

**I**n a new spirit of co-operation, authorities in Brazil are working together with Santos Port Authority (SPA) to build a long-awaited tunnel connecting the two banks of South America's biggest port. Various other projects and initiatives will further help to consolidate Port of Santos as the main hub port along the eastern coast of South America.

Key meetings in March saw senior officials and executives jointly agree for the Reais 5.8 billion (\$1.2 billion) project to move ahead as soon as possible. Funding will be shared by the federal and state governments in a rare example of opposing political parties agreeing on a joint project.

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**Pictured:** Aerial view of Ecoporto Santos with Grimaldi vessel unloading

Photo: Ecoporto

"The tunnel will come out, it will work, we will leave a legacy. Congratulations to everyone who has fought for the tunnel," said Tarcísio Gomes de Freitas, Sao Paulo state governor and a former Infrastructure and Ports Minister. Sao Paulo is the biggest and most powerful city and state economy in Brazil, with a population of 23 million and accounting for about 32.5% of national GDP.

Although a controversial plan for STS10 – a 600,000-square-metre (sqm) capacity 'super terminal' worth \$1 billion – was ditched, for political and practical reasons, the scale of ambition is still noteworthy.

The new plan is for Santos's biggest box terminal, Brasil Terminal Portuario (BTP), a joint venture between Maersk and MSC, to be given an extra 136,000 sqm – on top of its current 450,000 sqm – and for Ecoporto Santos, a multi-purpose facility owned by toll road giants EcoRodovias SA, to be granted a 300,000 sqm terminal adjacent to that.

### All change

This, in turn, will then allow for the Concais Passenger terminal to be shifted from its present site, near grain terminals, into the downtown Valongo area currently hosting Ecoporto.

"So, yes indeed, it is going to be 'all change' in Santos over the next few years," said a veteran port consultant based in Sao Paulo, who did not wish to be identified. "And there are plans for a new version of STS10: a very large new container terminal to be constructed in the Barnabe Bagres vicinity, an area still mostly undeveloped. The tunnel project has been 100 years in the making, but now it seems the various authorities are getting their act together and making it a reality. With federal, state and municipal backing I am convinced it will definitely go ahead now unless something wildly untoward occurs."

SPA operations director Beto Mendes told P&H that moving the cruise terminal to downtown would be a huge boost for the port and city and tourism in general. "The re-organisation and improvements to the port are necessary," he said, "and moving the Concais cruise terminal will be great for the city and surrounding region, as well as the port. Our Parque Valongo Project will re-energise the city centre which has been neglected for years."

The Valongo area is close to the historic centre, with the Coffee Exchange and Museum plus the Pele Museum two of several tourist attractions that would benefit; as would the local economy with the cruise season generating Reais4BN (\$744 million) for Brazil, of which about 40% goes to Santos and its environs.

Santos is one of the three main hub ports – along with Rio de Janeiro and Buenos Aires – for cruise ships along the east coast of South America. MSC Cruises and Costa Cruzeiros (which together deployed nine vessels in the 2023 to 2024 occidental cruise season; November to end of April) are keen to invest in Brazil so they can extend the season up to nine if not

12 months a year. An estimated 800,000 passengers start a cruise in Brazil each year with another 400,000 visiting from around-the-world cruises.

In terms of general cargoes, Mendes said that Santos was well on its way to handling 200 million tons of cargo for the first time in a calendar year; last year, it handled 173.3 million tons (up 6.7% compared with 2022). The first four months of 2024 have seen a rise of 13.5%, up to 57 million tons, bolstered by containers rising a massive 19%, up to 1.7 million TEU. Last year containers, surprisingly, fell by 4.1% to 4.8 million TEU.

"If we continue growing this year at the current rate, we will go very close to the 200 million tons barrier," he said, adding that such an increase would necessitate more capacity.

Various factions in Santos got together to oppose the original STS10 plan (which would have created an extra, large box terminal in the port), arguing that it would give far too much power and leverage to the world's leading mega carriers (Maersk and MSC), via their port terminal operations. STS10 was effectively cancelled, as well as another plan to privatise SPA, after a change of government at the start of 2023.

In the past, officials at port authorities such as SPA have been accused at times of being too political or too parochial. The

current SPA administration is trying to debunk that association with Anderson Pomini, the SPA president, undertaking in June lengthy 'field trips' to both Spain and China to learn how other countries handle their biggest ports and gain insight as to how strategically-built tunnels can bolster activity and boost logistics options.

Accompanied by Brazil's Vice President Geraldo Alckmin, Pomini went to Beijing for the 7th plenary session of the Sino-Brazilian High Level Commission for Co-ordination and

Co-operation (Cosban), where infrastructure projects were discussed. Alckmin met Chinese President Xi Jinping at the Great Hall of the People.

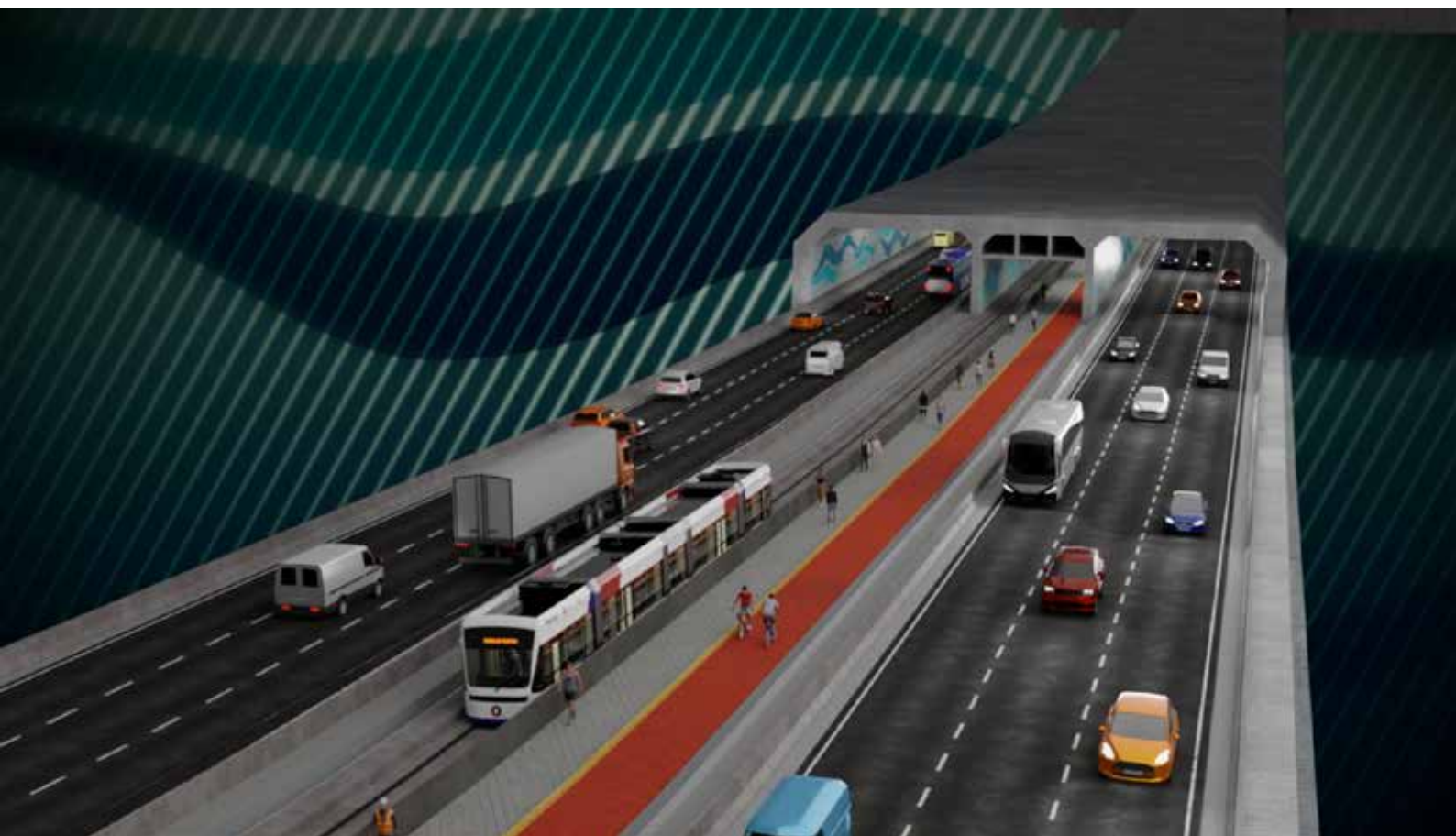
Xi stressed the importance of Cosban to expand co-operation between the two countries and how this could have an impact on Santos as it accounts for around 30% of Brazil's foreign trade. China is the country with largest share of imports and exports through the port. Brazil is likewise keen to sell more coffee, beef, pork and poultry exports to China.

### Belt & Road

There were also promises to explore greater synergies between China's Belt and Road Initiative and Brazil's own reindustrialisation strategy and the 'Roads for South American Integration' initiative. The latter includes creating a 'Trans Andean, Bioceanic' link to a Peruvian port, possibly the mega port being built by Cosco Shipping at Chancay, 60 miles from Lima, at a cost of \$3 billion.

Pomini, along with Alckmin, visited a dry dock in the city of Guangzhou where four concrete blocks had been constructed, which will be laid across the channel to form a 1km tunnel and connect two banks of the port city.

“Authorities in Brazil are working together with Santos Port Authority to build a long-awaited tunnel connecting the two banks of South America's biggest port



“The size of the concrete pieces and the technique applied was impressive. It was the feeling of seeing that everything we put on paper, about the Santos-Guarujá tunnel, was there, already being carried out,” said Pomini.

As well as bringing in more container capacity, via the various terminal expansions and Terminal Operating Companies (TOCs) bringing in more equipment, Santos also needs more draft in order to accommodate the bigger vessels that will follow in the wake of those upgrades.

### **Concessions**

In the short term, last November, SPA granted Van Oord, the Belgian dredging company, a 24-month extension to its existing maintenance dredging contract, to maintain Santos's 15 metre draft; the company may hope for a longer, more lucrative upgrade on top of that.

Another former policy to be ditched is the privatisation of the port authority, SPA. This will no longer be pursued but some kind of privatisation of the dredging and signalisation looks to be on the cards.

According to Beto Mendes, the question of the “concession of the Santos harbour navigation channel” was on everyone’s

lips in the port city and that it was a “very important objective” for the port authority. “The studies for this concession will be carried out next year and alternatives looked at. We think the contracts could be signed in 2026 and would lead to the winners dredging down to 16 metres and eventually to 16.5 metres,” he said.

SPA’s president Pomini and Ports Minister Costa Filho both agree that a Public-Private Partnership (PPP) is the way forward for management of the navigation channel and have stated that it should generate round Reais6BN (\$1.1 billion) of investments, and last for either 25 or 30 years, and provide ‘predictability and cost-effectiveness’.

Robert Grantham, a director at Solve Shipping, who used to be commercial director for the Itajai Port Authority (2009 to 2012) and also Brazil country manager for China Shipping (2005 to 2009) said he was “optimistic” this kind of concession could be a success.

“Privatising dredging operations could work well,” he told P&H, “and the concessionaire would charge waterway tolls like with the highways. However, I think it might be best if they stick to maintenance dredging and not be responsible for deepening dredging because that is a capital investment and should be the responsibility of the government, in my view.”

All in all, directors and officials at the SPA have a busy year ahead, with crucial decisions looming that will impact the Port of Santos for the next 20 to 30 years. ■

**Picture:** Proposed tunnel connecting the two banks of South America’s biggest port

Photo: Santos Port Authority



## LOOKOUT TRIDENT PIER

# Gaza pier



**T**rident is the name of the floating pier attached to Gaza's shoreline to offload emergency aid into the troubled region.

The temporary pier is to enable the maritime delivery of international humanitarian aid to relief agencies in Gaza, for onward distribution to the Palestinian people.

It has been in use since May 17 after being assembled by US military personnel working on ships in the eastern Mediterranean, before being connected to the shore by causeway.

The controversial project has faced numerous challenges, however, including the weather. The pier has been relocated on several occasions to avoid forecasted high seas and to ensure the structural integrity of the facility, as well as the safety of operating personnel. The pier is then re-anchored to the beach in Gaza to continue aid deliveries. At one point, rough seas damaged the pier, forcing repairs.

It has rendered the facility inoperable on certain days and there is speculation that the roll-on, roll-off distribution facility may be dismantled earlier than planned due to weather damage, stormy seas, as well as ongoing security concerns.

A significant amount of aid has made its way through the maritime corridor, however, including supplies of food, water, medicine and temporary shelters.

The largest single-day delivery to date (at the time of writing) was June 20, when approximately 656 metric tons of humanitarian assistance was transferred from Cyprus to the beach in Gaza.

It means over 4,160 metric tons of aid had been delivered by that date from the pier to the marshalling area where it is then collected by humanitarian agencies for onward delivery and distribution to those in need.

US officials have always stressed that the relief pier is a temporary solution but have yet to establish an end date for the project, estimated to have cost in excess of \$200 million.

Some officials have suggested that it is likely to be a sustainable option only until August or September this year at the latest because the sea state in the region typically worsens after that, though there is speculation that it could be dismantled even sooner. ■

**Pictured:** Humanitarian aid reaches Gaza via the temporary Trident Pier on June 11, 2024

Credit: DVIDS



## PERSPECTIVE PORT INTEGRITY

# Collaboration against corruption

**D**ue to inherent risks associated with the time-sensitive operations in ports and terminals, there are many opportunities for corruption, in particular, facilitation payments and bribes as vessels and cargo are inspected and cleared. Maritime corruption of this kind increases trade costs and impedes economic and social development.

To address corruption and mitigate its negative impacts, ports and terminals have a role to play to strengthen supply chain governance frameworks and implement robust measures that promote integrity. Enhancing integrity in ports and terminals reduces costs and bottlenecks, leading to higher efficiency, increased transparency and a more predictable business environment for port users.

### Good practices

So, what can ports do to collaborate and proactively address corruption vulnerabilities?

At its 46th session, in 2022, the

IMO Facilitation Committee approved a Guidance to Implement and Adopt Procedures Against Maritime Corruption. This urges member states and relevant stakeholders, such as port authorities and terminal operators to adopt, maintain and strengthen systems that promote transparency and integrity. This guidance reflects a significant step towards promoting transparency and integrity and is a call for action to IMO members and the port and maritime industry generally. Several good practices can help with the guidance's implementation for ports and terminals.

Establishing a compliance function and policy framework to ensure internal capacity and procedures to resist, report and follow up incidents of corruption, that may be internal or external to the organisation, is a first step. The policy should enable reporting of corruption and

establish mechanisms for escalation and for addressing specific corruption challenges faced by staff in different functions, as well as outline redress mechanisms and response protocols.

Building capacity will ensure the anti-corruption policy is successfully put into practice and communicated to all relevant staff within the port so they know how to prevent corruption and what they should do in case they witness or experience corruption. This can be done through training on business ethics, integrity or anti corruption. Raising awareness on corruption within ports and terminals and promoting accountability will help to build an ethical business culture and create trust among port users.

### Other measures

In addition, reducing human touch points will limit opportunities for corruption and can be facilitated through the automation of clearance processes or by implementing electronic systems for

**Pictured:** Collaboration is key to port integrity  
Photo: Xuejingwen Dreamstime



## ABOUT THE AUTHOR

**MARTIN BENDERSON** is associate director, collective action & partnership development at the Maritime Anti-Corruption Network. He is responsible for scaling MACN's collective action initiatives and for stewarding partnerships with international donor organisations and provides oversight on its Global Port Integrity Platform.

document submission and processing. Initiatives like the Maritime Single Window (MSW) represent significant progress towards public-private data collaboration through a system that facilitates the electronic exchange of information.

Beyond electronic exchange of information, promoting good governance and ensuring smooth operations through transparent procedures and collaboration across agencies is essential. This can reduce the risk of corruption by creating more efficient clearance processes, reducing redundancies and ambiguity which can be exploited for corrupt purposes. Simplifying and harmonising documentation requirements from vessels upon arrival will minimise bureaucratic hurdles and risks of bribery.

Ports and terminals are also encouraged to foster public-private sector dialogue and work more with regional and international organisations or engage in regional partnerships to share best practices and coordinate anti-corruption efforts. In line with IMO guidance, the Suez Canal Authority issued a notice highlighting its commitment to the Egyptian National Anti-Corruption Strategy and promoting a culture of integrity. This shows the Suez Canal Authority's effort

to mitigate risks of improper behaviour, which has been positively received by industry players.

### **Nigerian example**

In Nigeria, MACN has since 2012 implemented a collective action initiative in partnership with the private sector, the Nigerian government and the Convention on Business Integrity (CBI) to tackle corruption and enhance the operational environment in the port sector. Agencies in Nigeria including ports and terminals strive to work more closely to ensure a unified effort towards promoting good governance for port competitiveness and more efficient trade in the Nigerian maritime sector, which has enabled port users in the private sector to demand, track and ensure greater compliance with policies.

The Nigerian government launched the Nigerian Port Process Manual to facilitate the ease of doing business by making standard operating procedures (SOPs) for vessel and cargo clearance fully transparent across all government agencies. This manual led to the formation of the Presidential Port Standing Task Team (PSTT) in 2020 to ensure compliance with the procedures through monitoring and enforcement, to

help remove corruption risks. The PSTT is an example of inter-agency collaboration, formed with multiple key agencies, including the Nigerian Ports Authority (NPA). The commitment of the NPA and other agencies has helped the private sector overcome trust barriers and report any deviance to SOPs without the fear of retribution.

In addition, specialised training was rolled out across agencies to build the capacity of compliance officers within agency functions to encourage cultural shifts in behaviour and ensure authorities take preventive measures against corruption. With these efforts, the industry has seen an 80% decrease in the number of reported corruption incidents through MACN's anonymous reporting system since the launch of the Nigerian Port Process Manual in 2019.

With ports and terminals playing such a crucial coordination role between government agencies and the private sector, taking steps to limit opportunities for corruption during vessel and cargo clearance is paramount to the good functioning of business operations. Through a consistent, aligned and collaborative approach, ports and terminals can play a key role in the fight against maritime corruption. ■



## ABOUT THE AUTHOR

**FLORA CAIA**, associate, collective action & risk analysis at the Maritime Anti-Corruption Network. She manages the Global Port Integrity Platform and anonymous incident reporting tool, used to assess risks and drive MACN's in-country work. She also leads MACN's efforts in Nigeria and expansion in West Africa.

# How to ...foster good governance and build port integrity

The complexity of vessel clearance operations creates an environment of heightened risk and potential for corrupt practices. Here, Flora Caia of the Maritime Anti-Corruption Network outlines 10 ways, based on the IMO guidelines, that port authorities can enhance integrity to counter corruption in vessel clearance.

N° 1



## Regulatory frameworks and controls

Port procedures should be compliant with national and international laws prohibiting corruption, such as the United Nations Convention Against Corruption (A/Res 58(4)) (UNCAC). Regular audits can be done to identify whether policies, procedures and systems are operating as expected and, if not, whether corruption may have occurred that would require further investigation. It is important for port procedures to be in line with the legal frameworks to detect, avoid and penalise corrupt demands. Another good practice is to regularly solicit feedback from the private sector and port users to assess how procedures are interpreted and enforced in practice.

N° 2



## Anti-corruption policy or code of conduct

To help prevent corrupt demands, port authorities are encouraged to ensure implementation of anti-corruption measures by establishing or reviewing existing anti-corruption policies or codes of conduct. A fully comprehensive anti-corruption policy should include zero-tolerance towards bribery and facilitation payments, managing conflicts of interest, due diligence and management of third-party relationships. Additionally, incorporating anti-corruption clauses in all contracts related to port operations, including those involving employment, suppliers and contractors is strongly advised. These proactive steps not only signal a commitment to ethical standards but also serve as practical deterrents against corrupt behaviours. A good practice is to link anti-corruption measures to national anti-corruption strategies and efforts by law enforcement agencies.

N° 3



## Risk assessment


An effective anti-corruption policy should be based on a risk-based approach where the port authority systematically maps and records stakeholder interactions, processes and procedures that are vulnerable to corruption. This could include human interactions involving cash transactions or time-sensitive approvals. A proactive approach where control mechanisms are established to mitigate corruption risks in high-risk areas is useful to actively prevent corruption and invest time and resources in high-risk areas.


N° 4





## Training and communication


It is important to communicate the port authority's anti-corruption policy for it to be implemented appropriately. Port authorities can play a role in providing comprehensive training for personnel directly involved in vessel clearance operations to prevent corruption, such as facilitation payments. Anti-corruption training can include the legal ramifications and reputational risks associated with corrupt practices for any stakeholder involved. Moreover, it is crucial to effectively communicate professional standards and values expected from individuals engaged in these operations. Publishing and sharing successes and challenges in anti-corruption efforts enhances awareness of the issues and highlights ongoing improvements, to foster a good ethical culture.


N° 5		Harmonisation and standardisation of operating procedures
<p>Port authorities can encourage the adoption, regular monitoring and review of standard operating procedures (SOPs) that provide comprehensive guidance concerning all operations to prevent opportunities for discretion. These will ensure compliance from both public officials and the private sector. A good practice is to push for procedures, official payments, fines and fees to be appropriately recorded, transparent, public and easily accessible.</p>		

N° 6		Collaboration
<p>The port authority plays a crucial role as a central point of communication between all stakeholders involved in the vessel clearance process and is encouraged to lead greater collaboration to foster trust between stakeholders. Breaking down silos is imperative to streamline processes and eliminate redundancies. Strengthening public-private sector dialogue and inter-agency collaboration facilitates knowledge sharing and harmonisation of processes, ultimately leading to greater efficiency.</p>		

N° 7		Leadership commitment
<p>High-level commitment plays a pivotal role in empowering all stakeholders to adopt robust procedures aimed at combating maritime corruption. It fosters a culture of collaboration and ensures concerted and continuous efforts in addressing corruption. This is essential for efficiently promoting transparent and accountable practices in the vessel clearance process as well as safeguarding the port authority's integrity.</p>		

N° 8		Electronic exchange of information
<p>Increasing the use of systems that enable electronic exchange of information between the ship and the port reduces the number of touch points and risk of corruption. Non-cash methods and electronic systems help in tracking and recording any relevant documentation, thereby increasing standardised information and transparency. This also links to the IMO resolution making the implementation of a Maritime Single Window mandatory for ports around the world from January 2024.</p>		

N° 9		
<h3>Whistleblowing mechanism</h3>		
<p>A whistleblowing or internal reporting mechanism is a set of policies or procedures that establish effective channels and comprehensive protection and support for all reporting persons or entities. All employees, and users of services, should be able to raise concerns and/or report violations without risk of reprisal, in line with provisions under UNCAC. Port authorities are encouraged to provide public information about the reporting channels available and the steps of the investigation process.</p>		

N° 10		
<h3>Grievance mechanism</h3>		
<p>Ensure that an investigation procedure is in place with timely resolution of grievances, also addressing misbehaviour, and including a follow-up and appeals process. A protocol of response to corrupt incidents may include a list of reactions deemed appropriate, of departments or relevant persons to be alerted under conditions of confidentiality and protective measures for the person or company reporting the alleged corrupt activity.</p>		



## ABOUT THE AUTHOR

**HANNA STELZEL** is Director Containers at the Port of Rotterdam Authority. She is responsible for the efficient and sustainable handling of containers throughout the supply chain operating via Rotterdam.

6:00



7:00



8:00



9:00



My day begins at 6am with the ritual of starting the coffee machine and enjoying my first and most essential cup of coffee. This hour, from 6am to 7am, is my sacred time. I read the news, send messages to friends and open my laptop. I check the agenda for the day, jot down must-achieves and review briefings and documents for upcoming meetings.



The second highlight of my day: waking up my son while my husband prepares breakfast. I'm not much of a breakfast person, but I cherish this family time at the table. My son serves as the morning DJ, often enlightening us with a mix of children's tunes or fascinating dinosaur facts.



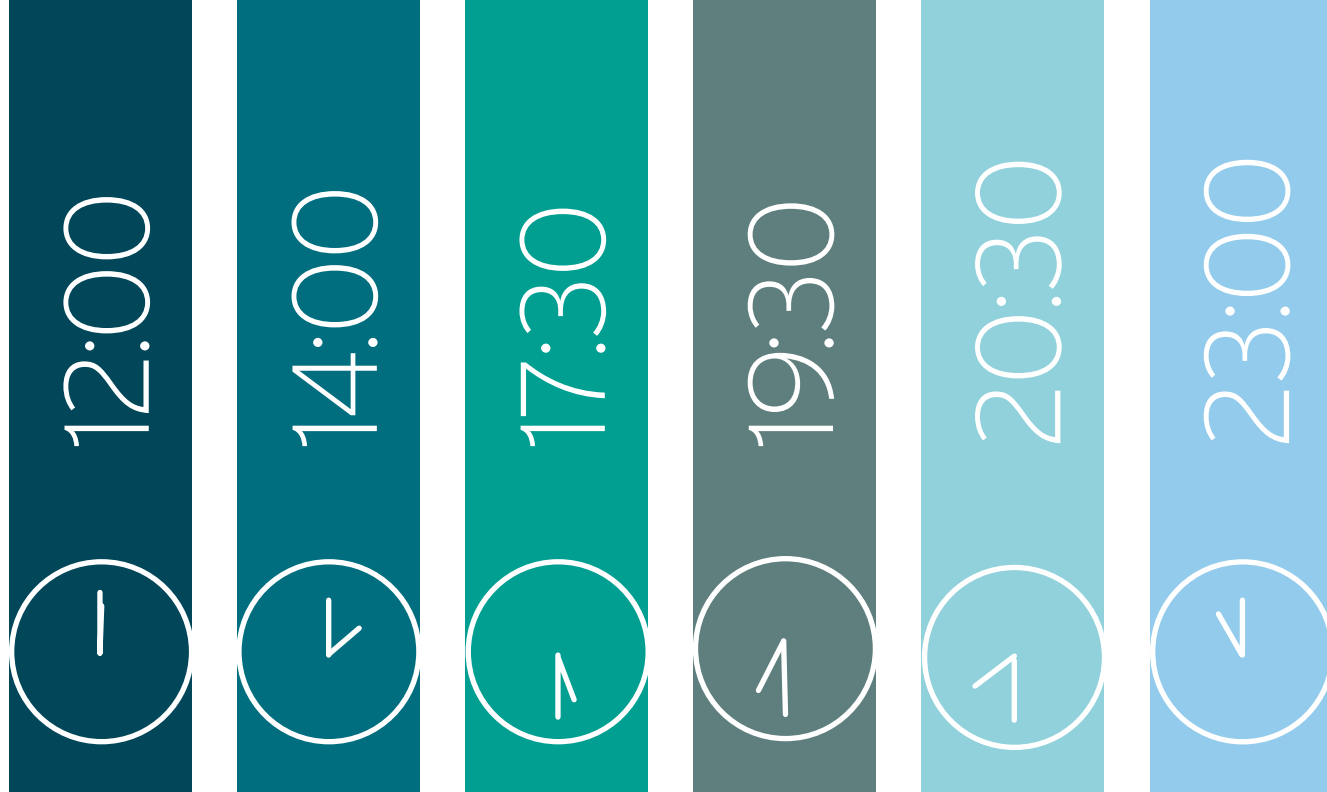
I leave the house for a short bike ride to the office, selecting a song of the day for my headphones. I truly enjoy my brief morning commute through the peaceful city, admiring the impressive Rotterdam skyline and the distinctive architecture that always captures my heart. Typically, I arrive at the office within one song's length – no busy roads or public transportation, no traffic jam, what a luxury! I start the day by tackling emails.



The first meeting of the day kicks off at 9am. Mondays start with a team check-in to review the past week, plan for the current one, discuss meetings, events and market developments. My mornings are filled with diverse meetings: 1:1s with colleagues, visitors, project discussions and board sessions. Despite a packed agenda, each day unfolds uniquely. I absolutely love this about my job.

# Nine to five

The Port of Rotterdam is the largest seaport in Europe, a bustling maritime hub that connects the Netherlands with the rest of the world. With so much going on, no two days at the port are the same, as Hannah Stelzel tells P&H



Lunchtime often involves meeting customers at one of the restaurants near our office. Having started my new role in March, I'm still acquainting myself with all stakeholders in the container ecosystem. These external lunches provide a perfect setting to connect with business partners.



Every day, I try to strike a balance between conducting external meetings and team interactions, whilst managing any strategic and operational challenges. At least once a week, I spend time at the port, visiting some of our customers. Today, I am visiting a deep-sea container terminal construction area on the Maasvlakte, exchanging heels for boots and getting into safety gear for a tour around the construction area.



The afternoon brings another round of meetings. Then I pick up my son from school and we often play a quick game of football on the way home. As we prepare dinner together, we chat about our day and in these moments my mind is happily free from work concerns.



Bedtime for my son is at 7:30pm. While no two days are alike, this routine remains constant.



Today, I'm scheduled for a boat tour with a group of stakeholders from Germany. We'll be embarking aboard our vessel at the Port of Rotterdam, where I'll guide them through a small port tour. They'll get a first-hand impression of the handling of nearly 40,000 containers daily.



Other evenings are filled with events, dinners, or socialising with friends and colleagues. However, I also enjoy quiet evenings on the sofa, sometimes catching up on emails, though I try to limit that to a maximum of two hours, aiming to be in bed before 11pm.

## CREATIVE SIDE MARITIME MOVIES

**T**hink of a box office blockbuster and there's a fair chance it was shot on location at the Port of Los Angeles. *Fast & Furious* and *The Usual Suspects* are two of a long list of feature films to showcase Hollywood's love affair with America's number one container port. It's brought with it illustrious icons of the screen, from Robert De Niro and Al Pacino in *Heat* to Will Smith (*Hancock*), Jack Nicholson (*A Few Good Men*) and Jim Carrey (*The Mask*).

Search on YouTube for the video 'Hollywood at the Harbour: Scenes Filmed at the Port of Los Angeles' and you'll catch a glimpse of other movies filmed at the port, including *Inception* (Leonardo DiCaprio) and *Gone in 60 Seconds* (Nicolas Cage and Angelina Jolie).

In fact, since 2008, film permits have been issued for more than 2,000 productions, including TV shows, movies, and commercials. Hit TV shows filmed at the port include *Perry Mason* (HBO) and *Grace and Frankie* (Netflix).

Hollywood's location teams are drawn to the port's space, facilities and stunning location. Situated in San Pedro Bay, 25 miles south of downtown Los Angeles, it encompasses 7,500 acres of land and water along 43 miles of waterfront.

The thriving seaport – the busiest in the Western Hemisphere – handles diverse commodities, from avocado to zinc, and features both passenger and cargo terminals, including cruise, container, automobile, breakbulk, dry and liquid bulk, plus warehouse facilities managing billions of dollars' worth of cargo each year.

But it's not only blockbusters getting filmed. In 2024, the port itself released its own historical documentary charting the story of the fishing and canning industry of the Los Angeles harbour area. Through archival photographs, film footage and interviews with fishing and canning veterans, *The Smell of Money* brings to life this once-thriving industry. The short film – named for locals' descriptions of both the industry's emanating aromas and lucrative economic benefits – premiered at the LA Harbour International Film Festival in March.

Today, it's now big Hollywood productions – as well as surging global trade volumes – bringing in the waft of money to the Port of Los Angeles. ■

**Pictured:** Filming the next blockbuster at the Port of Los Angeles Key Bridge  
Photo: Port of Los Angeles

# Hollywood at the harbour







**ARSENIO DOMINGUEZ**  
IMO secretary-general



**JENS MEIER**  
CEO of Hamburg Port Authority



**NIKOLAUS SCHÜES**  
BIMCO president

## Welcome to new members

*We are pleased to welcome as  
new members of the association:*

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- 🌐 www.mptgoa.gov.in/
- 👤 N. Vinodkumar, IPoS, Chairperson

# World Ports Conference



The IAPH World ports Conference will take place from 8th to 10th October in Hamburg, Germany. Here is a look ahead to some of the highlights

## ■ Ports and Shipping Delivering on the IMO 2024-2029 Strategic Plan

The top industry session of day one, IMO secretary-general Arsenio Dominguez will participate in a keynote panel discussion at the IAPH World Ports Conference in Hamburg this year, which will be held the week after MEPC 82. Joining him to examine how the ports and shipping industry can collaborate in achieving strategic objectives in the years to come will be BIMCO president Nikolaus Schües and Jens Meier, CEO of Hamburg Port Authority.

### Ports and Shipping Delivering on the IMO 2024-2029 Strategic Plan

**Tuesday 8th October, 9.45 a.m to 11.30 a.m.**

## ■ IAPH Sustainability Awards Gala Dinner

Join us for an evening of unparalleled elegance and recognition as we celebrate the pinnacle of sustainability achievements in the ports industry at the IAPH 2024 Gala Dinner and IAPH Sustainability Awards. Celebrate the outstanding achievements of leading port organisations from around the world in the field of sustainability. The most inspiring projects in each of the six categories will be awarded at this dedicated ceremony and gala event taking place at Schuppen 52 Hamburg.

**Wednesday 9th October, 9.00 p.m. to 11.30 p.m.**

## ■ Cybersecurity Workshops

The University of Plymouth Cyber-SHIP Lab team will present awareness-raising workshops focused on a port cyber attack scenario. This focus will be on maritime port facilities cyber risk

management with scenarios and exercises to help delegates understand cyber risk, attack impacts and the importance of strong, and evolving, management practices.

### University of Plymouth Cyber-SHIP Lab Maritime Cyber Attack Mitigation Workshop

**Tuesday 8th October, 11:45 a.m to 1:00 p.m.**

## ■ Port Endeavour

Who dares, wins! Since its launch in 2021, Port Endeavor has captured the imagination of over 1,600 port executives around the world. Played in three languages and curated by IAPH, UNCTAD TrainForTade and the Antwerp Flanders Port Training Centre of the Port of Antwerp Bruges International, conference participants will get the chance to experience the game themselves with prizes for the winning teams. Note: 2 games, max. 42 participants per game.

### Port Endeavour Gameplays

**Wednesday 9th October, 4:00 p.m. to 17:30 p.m.**

## ■ Onshore Power Visits

Hamburg Port Authority has been equipping its container terminals with onshore power systems (OPS) for some years. Join this lunchtime tour to learn more about the integration of OPS facilities into the port's terminal operations, some of the challenges faced, as well as technical descriptions on charging capacities, functionality of the converter stations and connection points.

### Port Solution Excursion - OPS Container Terminals

**Wednesday 9th October, 11:45 a.m. to 2:00 p.m.**

### Associate members

#### ESL.Consulting

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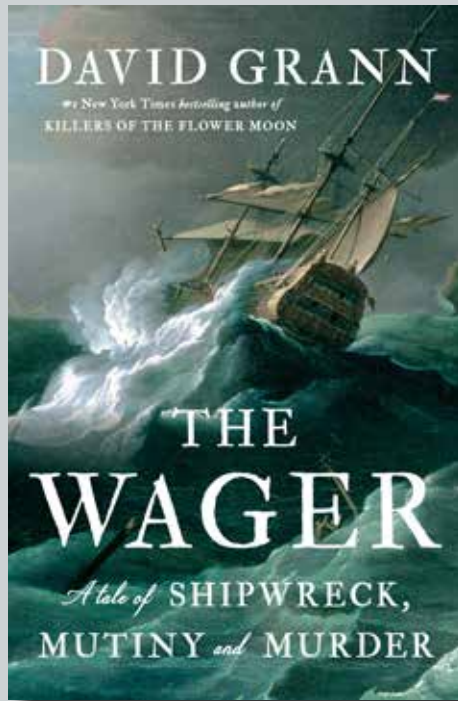
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### BOOK AUTHOR

**DAVID GRANN** is the author of the number one international bestsellers, *Killers of the Flower Moon*, *The Lost City of Z* and *The Wager*. His storytelling has garnered several honours including a George Polk Award. He lives with his wife and children in Westchester County, New York

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# THE REVIEW

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## The Wager: A Tale of Shipwreck, Mutiny and Murder

PATRICK VERHOEVEN



**F**requent visitors to the IMO headquarters in London will have had the pleasure of lunching in the nearby Garden Café, a lovely restaurant tucked away in the churchyard of St Mary-at-Lambeth, a deconsecrated 14th-century church, which since 1977 is home to the Garden Museum. Few may be aware though that one of the most legendary seafarers of all time is buried here.

If you have a table looking out on the inner courtyard you cannot miss an impressive tombstone at the centre of it. It contains the mortal remains of Captain William Bligh, the master of the HMS *Bounty*, who was the target of one of the most famous mutinies in maritime history. His story was filmed three times, with Charles Laughton, Trevor Howard and Anthony Hopkins playing the part of the not uncontroversial captain.

The mutiny on the *Bounty* occurred in 1781. Forty years earlier an even more spectacular mutiny took place, largely forgotten, until last year, when David Grann's account of what happened with HMS *Wager* was published. The *Wager* was a man-of-war in the service of the Royal Navy and carrying munitions for a squadron of six warships.

The squadron set sail from Portsmouth in September 1740 at the height of the British-Spanish colonial conflict, with the aim of launching an attack on the South American city of Cartagena and the secret mission to capture a Spanish galleon loaded with silver. Around Cape Horn things went horribly wrong however. Heavy storms and bad decisions caused the ships in the squadron to lose sight of each other and the *Wager* eventually wrecked off the south coast of Chile in May 1741.

The ship and her crew were assumed

lost, but in January 1742, 30 survivors washed up on the coast of Brazil in a ramshackle vessel of patched-together wood and cloth. Six months later, an even more decrepit boat, came ashore on the coast of Chile, containing just three castaways with their own, very different account of what happened. The 30 sailors who landed in Brazil, they claim, were not heroes - they were mutineers.

If you haven't drawn up your summer reading list yet, make sure to put *The Wager* on it. One of the author's earlier books, *Killers of the Flower Moon*, was filmed by Martin Scorsese, featuring Robert De Niro and Leonardo DiCaprio. *The Wager* will be Scorsese's next film, with DiCaprio again in one of the lead roles. The story of the unfortunate ship and her crew will thus get its place in Hollywood alongside that of the *Bounty*. ■

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