south asia's premier maritime business magazine

maritime gateway

OCTOBER 2025 WWW.MARITIMEGATEWAY.COM ₹200

The Gemini Cooperation
Redefining Ocean Logistics

Conversation with
BHAVIK MOTA
Director, Maersk Line India

INDIA MARITIME WEEK 2025

A NEW MARITIME ORDER

India Maritime Week 2025 did not happen by accident. It was born out of a moment in history when India needed to redefine its place in the global maritime order.

J M BAXI
THE PORT SPECIALIST
PORTS & LOGISTICS

Nhava Sheva Distribution Terminal

Stronger | Smarter | Greener!

Now Handling Up to 45,000 MT Displacement – Bigger Vessels, Better Efficiency.

Experience the transformation at **Nhava Sheva Distribution Terminal**, the only multipurpose terminal at **Jawaharlal Nehru Port Authority** handling Steel, Project, Breakbulk, Liquid Cargo, and Containers. **Starting this August, we're ready to serve you better than ever!**

- **Upgraded displacement capacity from 32,500 MT to 45,000 MT** – enabling us to handle larger parcel vessels with ease and giving your cargo operations a distinct advantage.
- **Enhanced navigational safety** with advanced berthing aids and leading towers – now capable of receiving vessels up to **208 meters** in length, ensuring precision and smooth berthing.
- **An expanded 95,000 square meter yard,** with an additional **20,200 square meter** being developed to meet evolving customer needs and optimize cargo storage efficiency.
- **A 49,000 square feet covered warehouse** built for superior cargo protection and designed with **solar panel roofing,** reflecting our commitment to sustainability and reduced carbon footprint.
- These developments reinforce our pledge to offer **efficient, safe, and environmentally responsible cargo handling solutions to all our customers.**

This August, let Nhava Sheva Distribution Terminal be your gateway to future-ready logistics with unmatched precision and care.

Nhava Sheva Distribution Terminal Private Limited
Shallow Water Berth & Coastal Berth, Jawaharlal Nehru Port Authority,
Nhava Sheva, Uran, Navi Mumbai 400 707, Maharashtra

B: +91 98703 00093 | ops-nsdt@jmbaxi.com

China's surging trade surplus and the new shape of global container flows

China's trade surplus crossing the one trillion-dollar mark in the first eleven months of 2025 is more than a statistical milestone. It signals how rapidly global container flows are being reconfigured. The headline figure masks a complex story of weakening transpacific demand to the United States and a powerful redirection of Chinese exports to new and fast-growing markets.

Throughout 2025, container liftings on the China–US corridor have been in structural decline. A mix of protectionist duties, supply-chain realignment, inventory corrections and a steady push toward near-shoring have all weighed on volumes. The impact has been sharp but not fatal. China has compensated by expanding its export reach across Latin America, Africa, the Middle East, Russia-adjacent economies and dynamic Asian markets. This pivot has reshaped the geography of container shipping in a single year.

The strongest signals of this transition are emerging on trades that once sat at the periphery of global liner networks. Services connecting Asia with Africa, Latin America and the Middle East have recorded double-digit expansion, prompting carriers to deploy larger vessels, add extra-loader sailings and increase frequencies. Intra-Asian and South Asian lanes have also absorbed a rising share of diverted volumes, intensifying competition and tightening capacity across the region.

Industry data underscores the scale of this shift. Bookings from China to the United States have softened, while bookings to Europe, Africa and ASEAN markets have risen sharply. Analysts note that China has not lost export momentum. Instead, it has diversified its customer base, broadened its trade corridors and reduced dependence on any single consuming market.

This recalibration has complicated network planning for container carriers. Fleets once oriented toward the transpacific and Asia–Europe corridors are being rebalanced toward longer and more diverse routes—creating new opportunities but also added operational complexity.

The record surplus ultimately confirms that China's export engine is not retreating. It is evolving. Containers are travelling farther, reaching more destinations and rewriting the traditional map of liner shipping. Trade is not declining—it is shifting. Those who adapt early will define the next stage of global shipping growth.

R Ramprasad
Editor & Publisher
ramprasad@maritimegateway.com

south asia's premier maritime business magazine
maritime gateway

Editor & Publisher
R Ramprasad, ramprasad@maritimegateway.com

Associate Editor
A S L Narasimha Rao, narasimharao@maritimegateway.com

Assistant Editor
Kalpana Pandey, kalpana@maritimegateway.com

Contributing Editor: S K Pradhan

Design Consultant: Nagaraju NS, Designzone

Marketing & Sales
Satish Shetti, satish@maritimegateway.com, +91 99207 05534
Nikhil Doshi, nikhil@maritimegateway.com, +91 98369 96293

Digital Strategy
Harsha, harsha@maritimegateway.com

Digital Marketing Executive
Sanskriti Jain, sanskriti@maritimegateway.com

HR & Events
Mayuri Tanna, mayuri@maritimegateway.com

IT & Administration: Kishore P V

Finance: Rakesh U

Client Relations
Madhukar, madhukar@maritimegateway.com, +91 93937 68383

Circulation & Subscription: Pavan

Maritime Gateway is printed and published by R Ramprasad on behalf of One Ocean Maritime Media Pvt Ltd, Plot No. 20, 2nd Floor, Capital Park Road, VIP Hills, Silicon Valley, Madhapur, Hyderabad, Telangana - 500 081

Printed at Kala Jyothi Process Pvt Ltd, Plot No.CFC-1&2, Survey No.18, E-City, SEZ, General Industrial Park, Raviryal and Srinagar, Maheswaram, Ranga Reddy District, Telangana – 501359.

Published at One Ocean Maritime Media Pvt Ltd, Plot No. 20, 2nd Floor, Capital Park Road, VIP Hills, Silicon Valley, Madhapur, Hyderabad, Telangana - 500 081

REGD. OFFICE: Flat No 32, Floor - 7, Building No. 3, Tata Mills CHS, Jagannathrao Bhatankar Marg, Parel, Mumbai, Maharashtra - 400012

CIN: U73100MH2024PTC424179

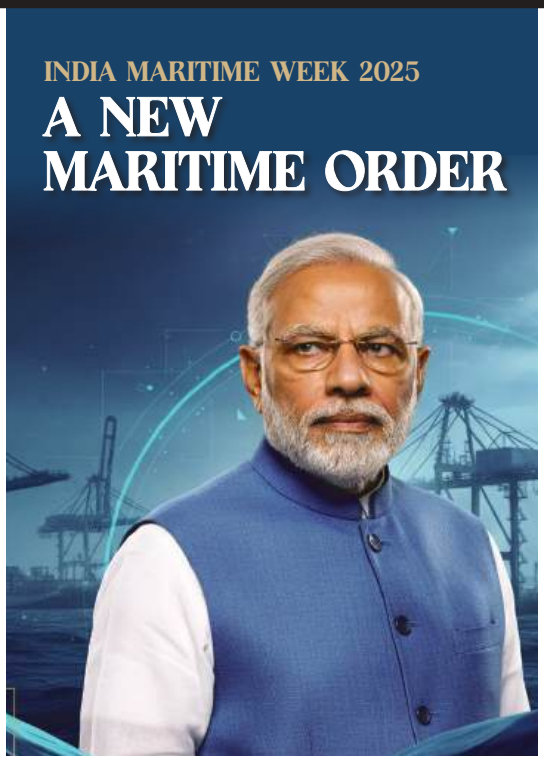
EDITOR: R Ramprasad

CONTENTS

OCTOBER 2025

VOLUME 15 | ISSUE 02

RNI NO: TELENG/2009/30633



INTERVIEWS

कॉनकॉर
CONCOR

लॉजिस्टिक्स की बात, कॉनकॉर के साथ
THINK LOGISTICS, THINK CONCOR

हमारा लक्ष्य, ग्राहक मूल्य सृजन | Our Ethos: Customer Value Creation

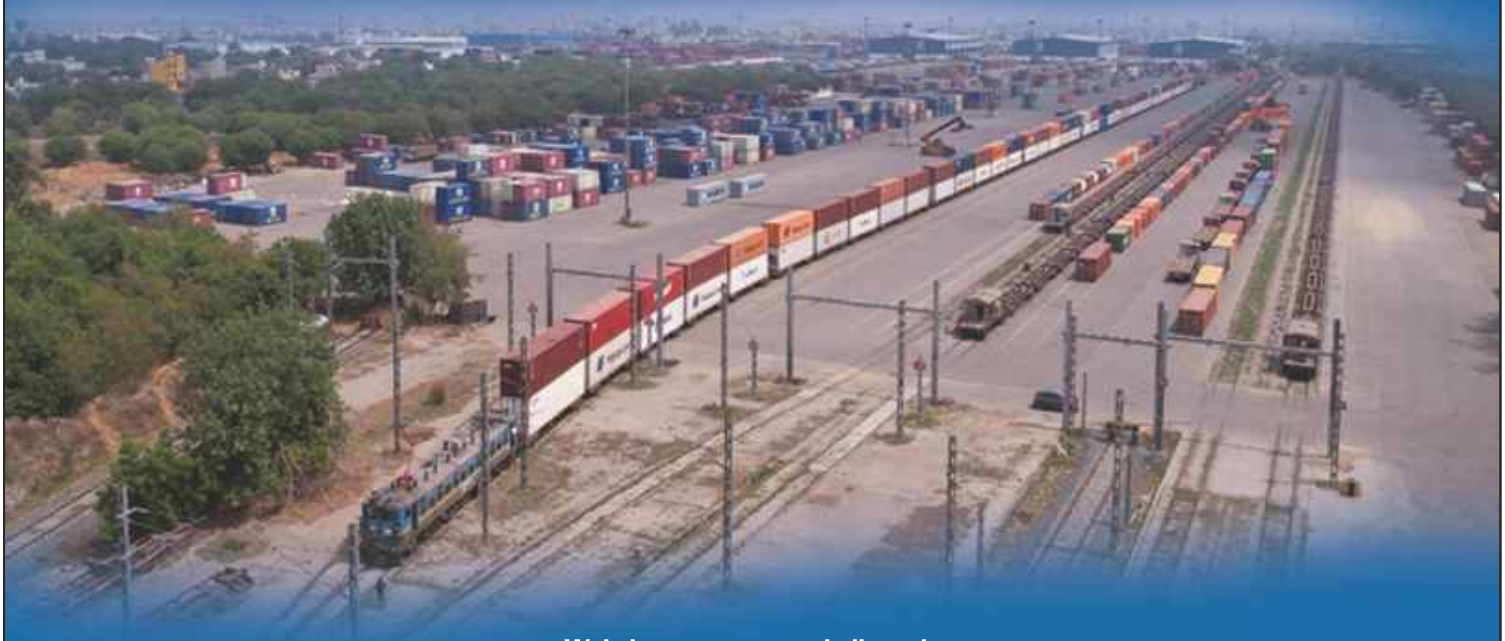
EK BHARAT SHRESHTHA BHARAT
एक भारत श्रेष्ठ भारत

IT INNOVATIONS

Warehousing & Distribution Logistics

Cold Chain Logistics: Ensuring Fresshness

67 Terminals, 16 Multimodal Logistics Parks , 4 on DFC



Website: www.concorindia.co.in

Sonowal flags-off steel cutting of India's first green tug for DPA, Kandla

In a landmark moment for India's maritime sector, Sarbananda Sonowal, Union Minister for Ports, Shipping & Waterways, virtually flagged off the steel cutting ceremony for India's First All Electric Green Tug, being built for Deendayal Port Authority, Kandla under the Green Tug Transition Programme (GTTP). The ceremony was graced by the virtual presence of Shantanu Thakur, Minister of State for Ports, Shipping & Waterways; Vijay Kumar, IAS, Secretary, Ministry of Ports, Shipping & Waterways; Sushil Kumar Singh, IRSME, Chairman, DPA; senior officers and staff of DPA Kandla, representatives of Netincon / Ripley, technical experts from Kongsberg and the engineering teams of Atreya Shipyard. Nilabhra Dasgupta, IRS, Dy. Chairman, and J.K. Rathod, CPES, CVO, DPA, joined the event through VC along with DPA officers from the Administrative Office Building, Gandhidham, while DPA representatives were present on-site in Goa to witness the steel cutting first-hand. Promoting the spirit of "Make in India, Make for the World," DPA's All-Electric Green Tug will be equipped with a 60-tonne bollard pull capacity, ensuring silent operations, zero carbon emissions and maximum efficiency. This next-generation tug is poised to set new benchmarks in sustainable maritime operations.

JNPA to launch India's first automated mooring system at GTI terminal

Gateway Terminals India (GTI), operating under the Jawaharlal Nehru Port Authority (JNPA), will trial India's first automated mooring system (AMS), marking a significant upgrade in the country's port technology landscape. The pilot, to be deployed at GTI's private container terminal, is aimed at transforming one of the most labour-intensive and high-risk activities in port operations. The AMS will replace manual handling of heavy mooring ropes with a fully mechanised system, greatly improving worker safety and reducing the hazards traditionally associated with securing and releasing vessels. The technology is also expected to deliver strong operational gains. Automating mooring and unmooring is projected to substantially cut turnaround times, enabling faster berthing and departure of vessels—an important advantage for JNPA, India's busiest container gateway. Terminal officials note that the system can also help increase berth utilisation without adding physical infrastructure. Because automated mooring requires less spacing between ships than conventional rope-based methods, it allows more efficient use of available quay length, a key consideration at space-constrained Nhava Sheva.

VOC port launches Digital Twin project to drive next-gen port operations

The V.O. Chidambaranar (VOC) Port Authority, Tuticorin, has embarked on a major digital transformation with the rollout of its Digital Twin project—an initiative set to modernise and future-proof port operations. The project will develop a comprehensive virtual model of the port's infrastructure, equipment, and operational workflows. By enabling real-time visibility, predictive insights, and data-driven decision-making, the Digital Twin is expected to significantly boost operational efficiency, safety, and sustainability across the port ecosystem. Scheduled for completion by March 2026, the initiative marks a major milestone in VOC Port's evolution into a smart, technology-led maritime hub.

Cabinet approves Export Promotion Mission to strengthen India's export ecosystem

The Union Cabinet chaired by the Prime Minister, Narendra Modi has approved the Export Promotion Mission (EPM) — a flagship initiative announced in the Union Budget 2025–26 to strengthen India's export competitiveness, particularly for MSMEs, first-time exporters, and labour-intensive sectors. The Mission will provide a comprehensive, flexible, and digitally driven framework for export promotion, with a total outlay of ₹25,060 crore for FY 2025–26 to FY 2030–31. EPM marks a strategic shift from multiple fragmented schemes to a single, outcome-based, and adaptive mechanism that can respond swiftly to global trade challenges and evolving exporter needs. EPM is anchored in a collaborative framework involving the Department of Commerce, Ministry of MSME, Ministry of Finance, and other key stakeholders including financial institutions, export promotion councils, commodity boards, industry associations, and state governments.

IIT Madras unveils India's first home-grown VTMS for ports

In a major step toward technological self-reliance in the maritime sector, IIT Madras has developed and deployed India's first indigenous Vessel Traffic Management System (VTMS) for ports. The solution has been created by the National Technology Centre for Ports, Waterways and Coasts (NTCPWC) at IIT Madras, based on specifications laid out by the Ministry of Ports, Shipping and Waterways. The system marks a significant advance in India's ability to design, operate and maintain critical port-management technologies without depending on foreign suppliers.

AP Govt extends deadline for Mulapeta Port

The Andhra Pradesh government has granted a 409-day extension for the Mulapeta Greenfield Port—previously known as Bhavanapadu Port—pushing the project's completion deadline to 30 November 2026. Notably, the extension comes without any liquidated damages, as the delays were assessed to be beyond the contractor's control. The additional time was approved after the project management consultant, TCE Ltd., conducted a detailed review and identified several uncontrollable factors that hindered progress. These included prolonged adverse weather, cyclone-related disruptions, restrictions on the availability of minor minerals, delayed access to work sites, and slower-than-expected handover of encumbrance-free land required for external infrastructure works. Phase-I of the project was originally sanctioned on 17 August 2021 at a total cost of ₹4,361.91 crore, under the landlord port model. The EPC contract was awarded on 2 August 2022 to Viswa Samudra Ports (JV), Hyderabad, for ₹2,949.70 crore, with the earlier target completion date set for 17 October 2025.

AKPL achieves all-time high single-day cargo handling of 1,32,800 MT

Adani Krishnapatnam Port Limited (AKPL), a flagship asset of Adani Ports and SEZ Limited (APSEZ), announced a historic milestone in cargo operations, handling its highest-ever single-day cargo volume of 1,32,800 Metric Tonnes (MT). This achievement surpasses the previous record of 1,31,966 MT, highlighting the port's continuous drive for operational excellence and efficiency. The new record was achieved through the collaborative effort of the port's operations, logistics, and engineering teams, underpinned by its advanced mechanized systems. AKPL also records its highest-ever monthly fertilizer cargo, reinforcing its role as a key gateway for agricultural imports and operational excellence. Key milestones achieved include single-day cargo record of 1,32,800 MT handled, and highest monthly fertilizer cargo of 0.43 million Metric tonnes (MMT) handled, significantly exceeding the previous record of 0.36 MMT achieved.

IBIA and HKSOA signed MoU to advance collaboration on marine energy

IBIA – The International Bunker Industry Association, the voice of the global marine energy value chain, and the Hong Kong Shipowners Association (HKSOA), a leading representative body for shipowners and operators in one of the world's premier maritime hubs, have signed a Memorandum of Understanding (MoU) during the IBIA Annual Convention 2025 in Hong Kong. The MoU establishes a framework for closer cooperation between the two organisations to address shared challenges and opportunities in the bunker/marine energy and maritime industries, with a particular emphasis on sustainability, innovation and professional development. Under the agreement, IBIA and HKSOA will explore joint initiatives in the following key areas including collaborating on studies, projects and initiatives related to green shipping, alternative marine fuels and sustainable bunker supply chains, developing joint training programmes, seminars, workshops and educational resources to build capability and knowledge across the bunker and shipping sectors and working together to represent industry interests on common regulatory, environmental and operational issues at regional and international forums.

Sunil Paliwal appointed as the new Chairman of IWAI

Sunil Paliwal (IAS: 1993: TN), an accomplished civil servant with nearly three decades of experience, has been appointed as the new Chairman of the Inland Waterways Authority of India (IWAI). Paliwal, who is currently serving as Chairperson of the Chennai Port Trust, will take over the national waterways body at a time when India is accelerating efforts to expand its inland water transport network as a cleaner, more efficient alternative to road-based logistics. In order to facilitate his appointment, the post of IWAI Chairman has been temporarily upgraded to the Secretary level. This administrative elevation underscores the strategic importance the government now places on inland waterways as part of its broader logistics modernization plan. With the PM Gati Shakti initiative, the National Logistics Policy, and multiple multimodal connectivity projects underway, IWAI's role has become pivotal in reducing logistics costs, improving freight movement, and supporting sustainable transport growth.

Singapore tops new global container port rankings

Singapore has emerged as the world's leading container port in the inaugural Leading Container Ports of the World (LCP) report, released by DNV and Menon Economics. The assessment places Shanghai and Ningbo–Zhoushan in second and third positions, followed by Rotterdam and Busan, underscoring Asia's dominance in global maritime logistics. The findings come at a time when nearly 90 per cent of global trade by volume moves by sea, and container ports alone handle over four-fifths of all non-bulk goods. The sector is in the midst of sweeping change, shaped by expanding trade volumes, rapid digitalisation, and rising pressure to decarbonise operations. The country also led all five pillars of the index: enablers, connectivity and customer value, productivity, sustainability, and overall impact. The report credited Singapore's performance to its world-class infrastructure, transparent governance.

INDIA MARITIME WEEK 2025

A NEW MARITIME ORDER

India Maritime Week 2025 did not happen by accident. It was born out of a moment in history when India needed to redefine its place in the global maritime order.

For decades, India's maritime narrative had been strong in potential and ambition, yet fragmented in execution. The global shipping map recognised India as a market, not as a maritime influence. IMW 2025 in Mumbai altered that equation. It brought the world's maritime community to India's shores to witness a nation ready to lead.

Across five days from October 27 to 31, Mumbai became the centre of the maritime world. More than one lakh delegates, five hundred exhibitors, and three hundred and fifty global speakers turned the city into a living laboratory of ideas, partnerships, and strategic alignments. Ministers, port authorities, shipbuilders, technology innovators, and coastal states gathered under one theme that reflected India's aspiration: Uniting Oceans, One Maritime Vision.

The scale of the event was not the story. But the intent was even more significant.

Why India Needed This Mega Event Now

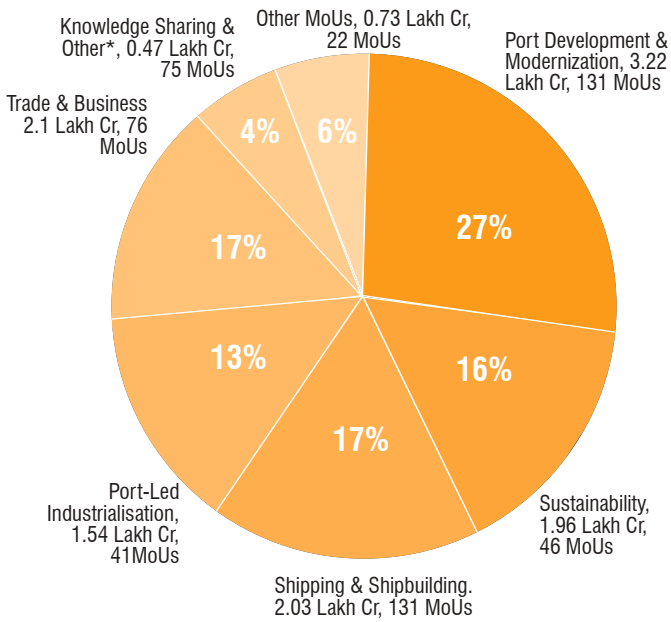
India Maritime Week emerged from a clear recognition. If India wants to climb from being a major maritime geography to becoming a maritime leader, it must own the global conversation. For years, Europe, East Asia, and the Middle East have influenced the standards, technologies, and business models that define modern shipping. India participated in these dialogues but rarely hosted them at scale.

The government understood that narrative drives investment confidence and global positioning. A trillion dollar economy racing toward a five trillion goal needed a platform that projected coherence, capability, and long-term vision.

MoUs ALIGNMENT WITH MIV 2030 AND MAKV 2047 THEMES

ALIGNMENT WITH MIV 2030

- Develop best-in-class Port infrastructure
- Lead the World in safe, Sustainable & Green Maritime Sector
- Enhance Global Share in Ship Building, Repair & Recycling
- Strengthen Policy & Institutional Framework to support all stakeholders
- Enhance Logistics efficiency through technology and innovation
- Drive E2E Logistics efficiency and cost competitiveness
- Enhance Cargo and passenger movement through Inland Waterways



ALIGNMENT WITH MAKV 2047

- Develop World Class Next Generation Ports
- Lead the World in Safe, Sustainable & Green Maritime Sector
- Become a Global Player in Shipbuilding, Repair & Recycling
- Promote Maritime Clusters
- Enhance Efficiency through Technology and Innovation
- Strengthen India's Global Maritime Presence
- Provide Maritime Professional Services

Source: Grant Thornton

Three compelling reasons made IMW 2025 inevitable

First, India's maritime transformation required global validation. The Maritime *Amrit Kaal* Vision 2047 had laid out sweeping ambitions: new mega ports, digitised logistics, expanded coastal shipping, and green corridors. But ambitious roadmaps need international buy-in. IMW was the platform where the world could witness India's seriousness.

Second, India needed a forum to court strategic partnerships. Europe is racing to decarbonise. Japan and Korea are searching for competitive manufacturing bases. Middle Eastern ports are expanding into Asia. South East Asia wants stronger connectivity to reduce dependence on existing hubs. India is the natural collaborator for all these ambitions, but global investors needed an entry point. IMW became that gateway.

Third, the domestic industry needed renewed motivation. Indian ports, shipyards, shipping lines, and logistics companies are in the middle of a generational shift. The scale and energy of IMW reassured them that they are part of a globally significant future. It created a sense of belonging to a larger transformation.

The Vision Behind the Event

When Prime Minister Narendra Modi articulated the MAHASAGAR vision, he made it clear that India's maritime rise would be built on four pillars: capacity expansion, shipbuilding revival, smarter logistics, and world class maritime skills. India Maritime Week was designed to demonstrate real action on all four.

The objectives were straightforward

To signal India's emergence as a maritime power: India wanted the world to acknowledge that it is not only a cargo generator but a serious stakeholder in global shipping. Announcements like the one lakh crore Galathea Bay Transshipment Port, the Great Nicobar corridor, and the Vadhvan mega port were centrepieces of this message.

To attract capital, technology, and talent: Over six hundred MoUs worth twelve lakh crore rupees were signed. Europe, Japan, Korea, the UAE, and Singapore saw IMW as a bridge to a fast growing market that needs port engineering, dredging, maritime equipment, smart logistics, offshore support vessels, and green technologies.

To redefine India as a hub for maritime innovation: Thought leadership sessions explored everything from multi fuel port strategies and inland waterway expansion to blue economy opportunities, ship recycling, and cruise tourism. India shifted from being a listener to being a host of global maritime ideation.

To build a unified maritime community: Policy makers, operators, seafarers, researchers, coastal states, investors, and global institutions were all placed in one ecosystem where national goals aligned with private sector aspirations.

Europe, Asia, and the Global Maritime Industry Rediscover India

Europe arrived in Mumbai with clarity. India is not just a buyer,

it is a builder. The continent's shipbuilding, renewable fuel, digitalisation, and automation companies recognised that India's next two decades offer one of the world's most attractive maritime expansion cycles.

For Denmark, Norway, Sweden, and the Netherlands, IMW became an entry point to help India build green corridors, next generation port infrastructure, and sustainable maritime clusters. European CEOs at the event echoed a consistent message: India is now a priority market, not an optional expansion.

Japan and South Korea saw an unprecedented opportunity in shipbuilding. Their collaborations in automobiles and electronics with India offer a template to replicate in vessel construction. Leading yards like HD Hyundai and Hanwha Ocean held strategic meetings exploring Make in India for the World shipbuilding partnerships.

From the Middle East, the UAE and Saudi Arabia focused on free trade zones, logistics corridors, and next generation port designs. Their sovereign wealth funds viewed India as an essential node in global supply chain diversification.

Russia approached IMW with renewed diplomatic alignment, especially around strengthening coastal shipping and joint maritime infrastructure. France deepened its engagement under strategic and Indo Pacific cooperation frameworks.

Singapore reaffirmed its role as India's closest maritime partner, focusing on cluster development, financing models, and digital trade ecosystems.

The message from the world was unmistakable. India is no longer an emerging market; it is an emerging maritime power.

India Maritime Week emerged from a clear recognition. If India wants to climb from being a major maritime geography to becoming a maritime leader, it must own the global conversation. For years, Europe, East Asia, and the Middle East have influenced the standards, technologies, and business models that define modern shipping. India participated in these dialogues but rarely hosted them at scale.

Thought Leadership That Elevated the Discourse

What distinguished IMW was not just the scale of deals, but the depth of conversations. The discussions brought intellectual clarity to India's future as a maritime nation.

Topics that dominated the agenda included:

- Making multimodal logistics a competitive advantage
- Developing inland waterways to reduce logistics cost
- Port automation and digital single windows
- Navigating trade uncertainty and supply chain realignments
- Building shipbuilding clusters through PPP models
- Establishing green hydrogen and green ammonia export hubs
- Building India's maritime workforce for Industry 4.0

India's cabinet ministers, global CEOs, and experts delivered messages that were sharp and future focused. Union Minister Sarbananda Sonowal reminded the world that India has increased operational waterways from 3 to 32 and is now ready for a quantum leap. Maharashtra Chief Minister Devendra Fadnavis highlighted the state's role as India's maritime gateway, welcoming global investors with a clear roadmap.

The domestic maritime community listened with renewed confidence. Visionary insights at IMW did not merely inform them, it energised them. India's private ports, logistics startups, digital solution providers, and shipyards left the event with a stronger sense of purpose.

Investments That Validate the Vision

The signing of twelve lakh crore rupees worth of MoUs was a defining moment. Investments covered shipbuilding, port expansion, logistics parks, cruise tourism, green fuel corridors, inland waterway terminals, and maritime skilling initiatives.

INDIA'S MARITIME & SHIPBUILDING REFORM PACKAGE - KEY HIGHLIGHTS

Launch of initiatives during IMW 2025 (₹70,000 Cr / $8.5 Bn)

SHIPBUILDING REFORMS

Financing assistance & long-term Maritime Development Fund

Infrastructure modernisation: Shipbuilding clusters & ancillary ecosystem

Policy & tax reforms: Expected impact: 4.5 mn GT shi-building/year, ₹4.5 lakh Cr ($54 bn) investment, 30 lakh jobs

LANDMARK PARTNERSHIPS

CMA CGM: 6 LNG dual-fuel container vessels (1700 TEU) order to CSL

HD KSOE & CSL: Ship Block Fabrication Facility, ₹3,700 Cr, 12,000 jobs

CSL & DP World: Offshore fabrication & ship repair clusters

Mazagaon Dock: Acquires Colombo Dockyard

SWAN DHI & Samsung Heavy Industries partnership

MARITIME SECTOR INITIATIVES

SCI: Expand fleet to 216 vessels & 10mn GT by 2047

Bharat Container Shipping Line: 51 vessels, 6 mn GT, ₹60,000 Cr investment

Oil & Gas PSUs: Orders for 59 ships, ₹47,800 Cr, 2.85 mn GT

Green Tug Program: 100 eco-friendly tugs, ₹12,000 Cr by 2040

Dredging Corp: 11 dredgers, ₹3,775 Cr

Out of the above, 350+ vessels worth over ₹2.2 lakh crore will be built domestically

Source: Grant Thornton

Notably:

- 60 MoUs focused on advanced port infrastructure
- Multiple agreements targeted coastal shipping and hinterland connectivity
- Investments were committed for new tugboat manufacturing under Make in India
- States like Tamil Nadu, Gujarat, and Andhra Pradesh secured large private sector interest
- The Tuna Tekra terminal and Kamarajar Port expansions caught global attention

With every partnership announced, India strengthened its credibility as a long term maritime market.

A Strategic Turning Point: Why IMW Matters for India's Global Future

India Maritime Week 2025 was more than an exhibition. It rewrote India's maritime identity. It achieved what no policy note alone could accomplish. It shifted global perception.

India positioned itself as:

- A transshipment challenger to Colombo and Singapore
- A future top five shipbuilding nation
- A centre for green maritime innovation
- A high growth market for maritime products, services, and technologies
- An Indo Pacific power shaping ocean governance

For the first time, the world saw India's maritime rise not as an aspiration but as an unfolding reality.

The Road Ahead

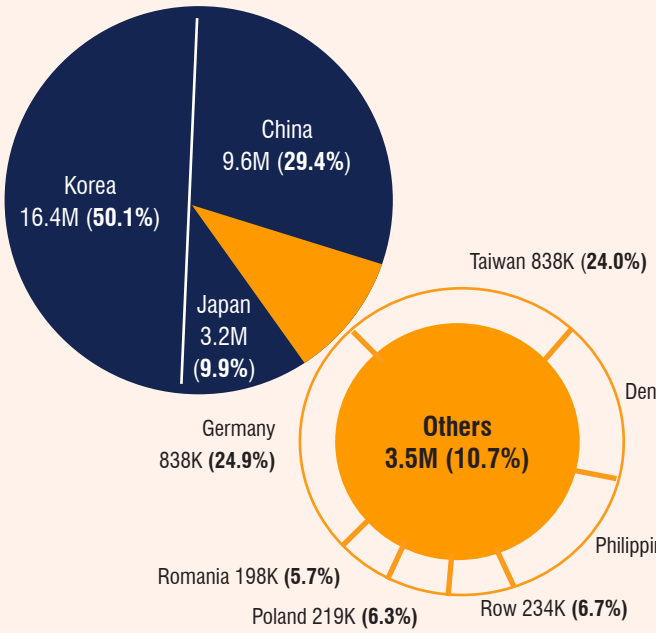
India now enters a decisive phase. The MAHASAGAR Vision and Amrit Kaal Maritime Vision 2047 have set foundations. IMW has built momentum. The responsibility now lies in execution.

The next decade will demand deeper reforms in port governance, accelerated multimodal connectivity, stronger private participation, and faster digitalisation. If India sustains the enthusiasm that IMW has ignited, the country will not just participate in the global maritime future. It will help define it.

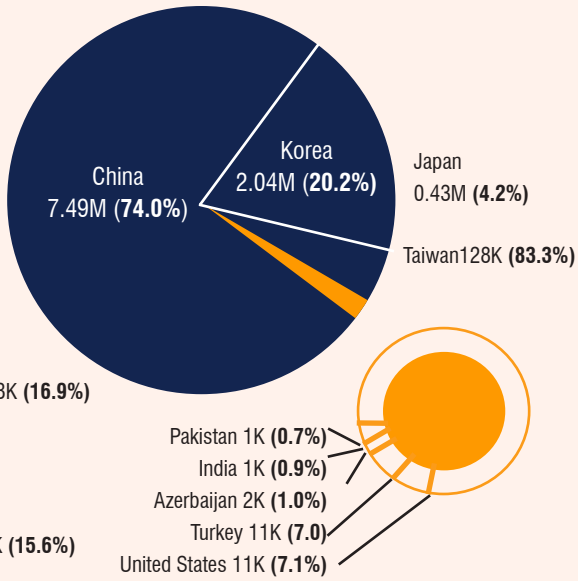
India Maritime Week 2025 stands as a turning point. It brought the world to India. And it showed the world that India is ready to lead.

CONTAINER SHIP FLEET BY BUILDING COUNTRY (TEU)

ACTIVE FLEET

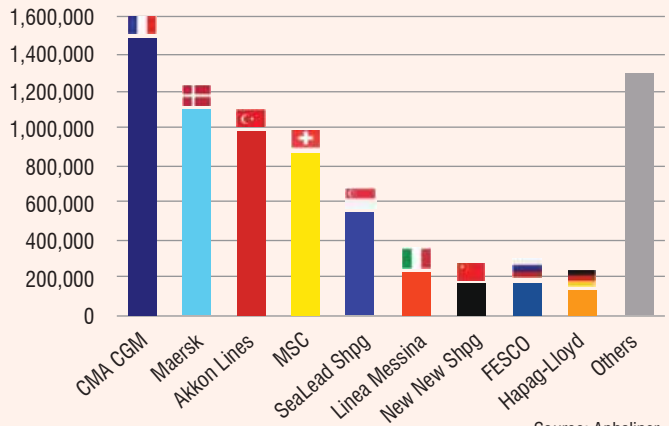


ORDER BOOK



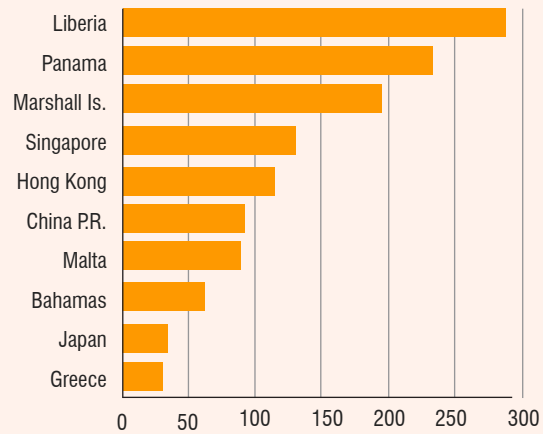
** Rest of the World aggregated building countries with container fleet <0.1 Mteu*

SUEZ CANAL TRANSITS BY CARRIER IN 2025 (TOTAL TEU)



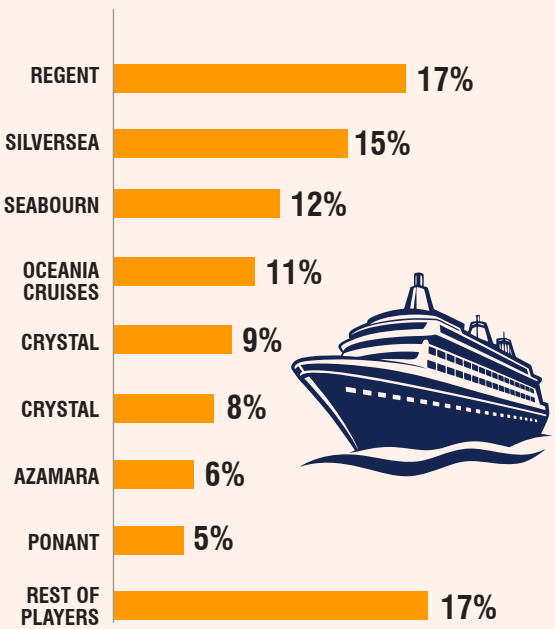
Source: Aphaliner

TOP 10 FLAG STATE FLEETS



TOP COMPANIES IN LUXURY CRUISE TOURISM MARKET

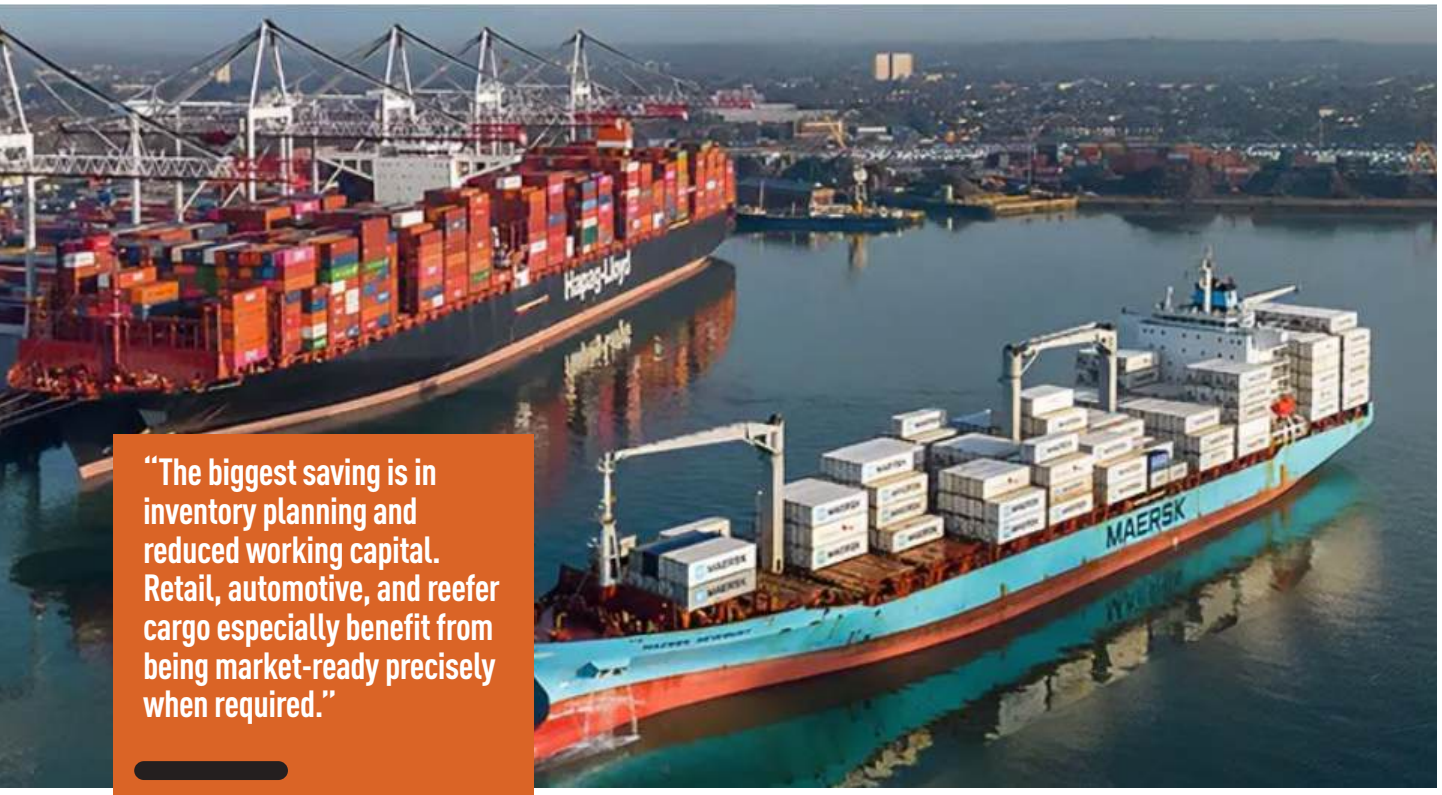
By Global Sales Share (%) - 2024



The Gemini Cooperation

Redefining Ocean Logistics

Bhavik Mota, Director, Regional Ocean Market (Indian Subcontinent, Middle East & Africa) Maersk Line India Pvt. Ltd, speaks to Maritime Gateway on the Gemini Cooperation network and how it is reshaping global container shipping through reliability, efficiency, and sustainability.



"The biggest saving is in inventory planning and reduced working capital. Retail, automotive, and reefer cargo especially benefit from being market-ready precisely when required."

Would you take a bus to work if it only arrived on time three days a week?" Bhavik Mota opens the conversation with a pointed analogy. "That has been the reality for shippers for years. In 2023, just 62 per cent of container vessels worldwide arrived on time. Maersk performed better, at 68 per cent, but clearly the industry needed a fundamental rethink."

Reliability, he notes, is the single biggest issue for customers. While most shippers can tolerate transit time variance of four to five days, what they cannot accept is the uncertainty of when cargo will actually arrive. Existing network structures – such as long strings with multiple port calls – made delays inevitable. A single disruption at an early port cascaded across the network.

This was the problem Maersk set out to solve with Gemini Cooperation, its joint network with Hapag-Lloyd. Designed with leaner loops, fewer port calls, and Maersk-controlled hubs, Gemini promises schedule reliability above 90 per cent. "It is a modular network, agile enough to isolate disruptions without disturbing the entire schedule. In essence, it's our bold move to redefine ocean logistics," Bhavik explains.

Launching such a fundamental redesign was no small feat. Bhavik recalls three immediate priorities in the first 90–120 days:

- Phasing in the fleet – Shifting both mainliner vessels and shuttles into the new network while managing expiring agreements and ensuring smooth equipment flows.
- Protecting customers during transition – Staying close to shippers to minimise disruption, while already crossing the 90 per cent reliability threshold early on.
- Embedding operational discipline – Aligning internal systems and ensuring on-time connections through tighter coordination.

"Delivering reliability during transition was as important as the end-goal itself," he emphasises.

The Gemini Cooperation set itself a bold KPI: 90 per cent schedule reliability, measured independently by Sea Intelligence. "Since we began phasing in from February 2025, we have consistently delivered 90 per cent," Bhavik says, underscoring that this is a clear step-change from industry averages.

Reliability bottlenecks, Bhavik explains, rarely arise from a single source. "Port strikes, weather, geopolitical tensions, demand volatility, hinterland congestion – all can trigger ripple effects." By creating a modular, hub-centric network, Maersk ensures that disruptions can be isolated without destabilising the entire chain.

"With fewer, strategically located stops, we gain more control. At these hubs, our investments in

technology and capacity mean productivity has nearly doubled since 2016. We're realising a capacity increase of 40 per cent by 2027, and congestion here has been negligible compared to other terminals," Bhavik highlights.

Digital scenario planning—running simulations two weeks ahead – further strengthens predictability and equipment availability.

Where do shippers feel the impact most? "The biggest saving is in inventory planning and reduced working capital. Retail, automotive, and reefer cargo especially benefit from being market-ready precisely when required," he notes.

For Indian exporters—such as grape growers targeting European supermarkets within an 8–10 week season—Gemini's reliability has been transformative.

In India, customers widely welcome Gemini as a "vastly improved ocean product." Dedicated services between India and Europe, coupled with optimized multimodal connectivity, have enhanced flexibility and cost-efficiency.

Yet, Bhavik admits, discipline comes with trade-offs. Strict controls on overbooking and reduced tolerance for rollovers initially caused some discomfort. "But customers are now appreciating that reliability requires discipline. It gives them the assurance that was missing for years."

Has Gemini altered Maersk's commercial stance? "Our focus initially was to deliver on the vision, not price discussions," Bhavik clarifies. But he expects that the demonstrated reliability will naturally lead to longer contract tenures and higher customer commitment in coming quarters.

On competitiveness, he is equally clear: "With added capacity and stronger reliability, our stance on key trades has improved. Customers are recognising the difference by design."

Reliability at sea reinforces dependability on land. In India, Maersk operates dedicated rail rakes for FMCG, retail, and reefer cargo out of NCR and Punjab, ensuring end-to-end time-tabling aligned with Gemini windows.

As for global risks–the Red Sea, Hormuz tensions, or canal blockages – Mota explains: "Today, we continue routing via the Cape of Good Hope. It's longer and costlier, but it guarantees safety and reliability for our crew and cargo."

What does success look like for Gemini? Bhavik is clear: achieving and consistently sustaining 90 per cent schedule reliability. In a volatile global environment, he says, there is no greater milestone for this new modular network.

With Gemini Cooperation, Maersk is betting that reliability will become the new currency of global shipping. For shippers weary of delays, unpredictability, and cost spikes, the network offers a future where confidence in ocean schedules is finally justified.

In India, Maersk operates dedicated rail rakes for FMCG, retail, and reefer cargo out of NCR and Punjab, ensuring end-to-end time-tabling aligned with Gemini windows.

Key hubs in the Gemini network

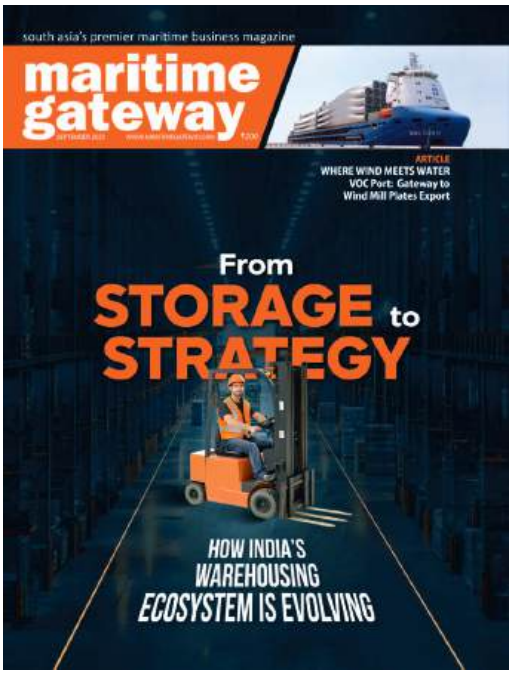
APM Terminals Maasvlakte II (Netherlands), Algeciras (Spain), Tangier (Morocco),

Suez Canal Container Terminal (Egypt)

Port of Salalah (Oman)

Tanjung Pelepas (Malaysia)

Bremerhaven (Germany)



5 REASONS TO SUBSCRIBE

TO SOUTH ASIA'S NUMBER 1 MARITIME MAGAZINE

- ✓ It is South Asia's most-widely read maritime publication
- ✓ It covers all issues of importance related to Ports, Shipping and Logistics
- ✓ It offers insightful analysis
- ✓ It reflects industry opinion
- ✓ It's a complete package for readers on maritime sector

TARIFF

ONE YEAR SUBSCRIPTION

12 ISSUES ₹**2,400**/-
Shipping Charges Extra

Yes, Maritime Gateway, is one-of-its kind maritime business magazine in South Asia that has become a vital source of information for all ports, shipping and logistics players in the maritime industry. This magazine addresses key issues and provides insights through analytical articles, comments and features. News, Port Scan, Interviews, Region Update, Technology, Policy, Equipment, Education are some of the regular incisive sections.

Join the Growing Community!

SUBSCRIBE TODAY!

Fill the form & mail

Scan & Pay with BHIM UPI QR
ONE OCEAN MARITIME MEDIA

oommpl@kotak

kotak Kotak Mahindra Bank

BHIM UPI

☐ payment enclosed ☐ send invoice (please tick your choice of subscription)

Name .....

Address .....

.....

City ..... PIN / ZIP ..... State .....

Country ..... Tel ..... Fax .....

e-mail .....

I am enclosing a Cheque/DD No .....

drawn on ..... (specify bank) dated .....

favouring One Ocean Maritime Media Pvt. Ltd. (payable at Mumbai) for Rs. .....

amount in words .....only.

South Asia's premier maritime business magazine

maritime gateway

One Ocean Maritime Media Pvt Ltd
Plot No. 20, 2nd Floor, Capital Park Road
VIP Hills, Silicon Valley, Madhapur
Hyderabad - 500081, Telangana
e-mail: subscribe@maritimegateway.com

All payments in Indian Rupees (INR) to be made in favour of **'One Ocean MaritimeMedia Pvt Ltd'** through A/C payee Cheque / DD payable at Mumbai.
Our NEFT/RTGS Details are: KOTAK MAHINDRA BANK, BKC Branch, Mumbai, India. **Current A/c. No. 9749254514; IFSC Code: KKBK0001405; MICR Code: 400485121**
All Payments in US Dollars (US$) to be made as Wire Transfers in favour of **'One Ocean Maritime Media Pvt Ltd'** Bank and wire transfer details will be provided on request.

for subscription related queries, please call:
Pavan: +91 8500858201

Maritime Gateway publishes 12 issues a year. Maritime Gateway may also publish occassional and special issues. Maritime Gateway cover price is ₹200/-. Please allow 6-8 weeks for commencement of your subscription. All enquires to be addressed to One Ocean Maritime Media Pvt Ltd. directly. All disputes subject to the exclusive jurisdiction of competent courts in Hyderabad only.

Odisha charts a bold course to become India's gateway to the east

In this interview, **Hemant Sharma, IAS, Additional Chief Secretary, Industries and I&PR, Government of Odisha,** shares insights on how the state is expanding its industrial ecosystem across diverse sectors—creating large-scale cargo potential for export through existing and upcoming ports.

Odisha is emerging as one of India's most vibrant maritime states. How would you describe the overall vision and roadmap for port-led industrialisation being pursued by the Government of Odisha?

Odisha is charting a bold maritime and industrial transformation along its 575-kilometre coastline, with a vision to emerge as the Gateway to the East and the ASEAN region. Guided by the Odisha Port Policy 2022, the State is developing new ports and terminals through innovative PPP and BOOST models, while aligning its Industrial, Logistics, and Renewable Energy Policies to promote seamless port-based growth. The establishment of the Odisha Maritime Board has created a single-window mechanism for approvals and investor facilitation.

The State aims to expand its port-handling capacity from 400 MTPA at present to 500 MTPA by 2047, as it advances the development of 14 more ports to complement Paradip, Dhamra, and Gopalpur. Recently, the State has also signed MoUs worth ₹50,000 crore in maritime sector: a reflection of the growing confidence of global investors.

Several new ports such as Subarnarekha, Astarang, and Bahuda are under various stages of development, while existing ports are expanding capacities. With this rapid growth, how is the state planning to generate sufficient cargo volumes to sustain these ports?

Odisha's cargo-generation strategy rests on strong industrial linkages and multimodal connectivity. Existing hubs such as Paradip, Dhamra, and Gopalpur are being expanded, while new greenfield locations like Subarnarekha, Astarang, and Bahuda are under development to capture rising trade volumes. Paradip Port, already India's largest on the east coast, is scaling up from 150 MTPA to 325 MTPA, with a dedicated green-hydrogen and ammonia terminal under implementation. Dhamra Port's LNG terminal, operating at 6.5 MTPA and expandable to 10 MTPA, will support gas-based industries and diversify cargo. Hinterland connectivity through the Coastal Highway, Haridaspur–Paradip Rail Line, and Sagarmala-linked

logistics corridors will ensure that every port is backed by a steady flow of industrial cargo and coastal shipping traffic.

Could you highlight the kind of industries being promoted near these ports — both in terms of type and scale?

Each coastal region of Odisha is being developed as a specialised industrial hub.

Paradip PCPIR, spread over 284 sq km and anchored by a 15 MTPA IOCL refinery and a proposed 3–4 MTPA naphtha cracker, is emerging as eastern India's leading petrochemical complex, complemented by a plastics park and a CIPET R&D centre. Near Dhamra, a 500-acre Technical Textiles Park in Bhadrak, anchored by IOCL's 300 KTPA polyester plant, is promoting apparel and synthetic-fibre industries. At Gopalpur, the Tata SEZ and Industrial Park (3,000 acres) offer plug-and-play infrastructure for multi-cargo manufacturing, chemicals and green-energy projects.

Meanwhile, Subarnarekha, Astarang, and Bahuda, including the proposed ₹21,500 crore Bahuda Port are planned as integrated logistics and processing hubs catering to energy, agro-marine, and containerised trade.

What is the estimated cargo contribution from these upcoming industries, and how do they fit into Odisha's overall EXIM growth targets?

Odisha's new industrial projects are expected to add significantly to the State's cargo movement and export growth over the next decade. The Paradip PCPIR will drive large volumes of petrochemicals and downstream plastics, while the Dhamra region will continue to handle major bulk commodities such as coal, limestone, and iron ore. The Gopalpur–Tata SEZ cluster is set to add multi-cargo capacity through green-hydrogen and ammonia exports. The proposed Bahuda Satellite Port in Ganjam district will help achieve Odisha's target of handling one-third of the country's total cargo.

The Dhamra–Paradip–Gopalpur coastal belt has evolved into the maritime growth spine of Odisha, seamlessly linking its industrial heartland with the Bay of Bengal through world-class multimodal infrastructure.

Together, these port-linked industries will form a strong and steady cargo base, helping Odisha raise its total port-handling capacity to 500 million tonnes by 2047. With the development of 14 non-major ports, improved highway and rail connectivity, and diversification into containers and green fuels, the State is building a balanced export ecosystem that aligns with its long-term EXIM growth targets and strengthens its position as the maritime gateway of eastern India.

How are coastal industrial corridors such as the Dhamra–Paradeep–Gopalpur belt evolving as logistics and manufacturing clusters?

The Dhamra–Paradip–Gopalpur coastal belt has evolved into the maritime growth spine of Odisha, seamlessly linking its industrial heartland with the Bay of Bengal through world-class multimodal infrastructure. The State is developing this stretch as a coastal logistics and manufacturing corridor, integrating highways, railways, ports, and industrial parks into one connected ecosystem. Key infrastructure initiatives such as the NH-16 (part of the East Coast Economic Corridor), the Biju Economic Corridor, and the upcoming Coastal Highway are creating uninterrupted connectivity from the mineral belts of Angul, Kalinganagar, and Jharsuguda to the ports at Paradip, Dhamra, and Gopalpur.

To anchor long-term cargo pipelines, Odisha is strategically leveraging greenfield industrial parks and private-sector partnerships. The Paradip PCPIR, Bhadrak Technical Textiles Park, and the Tata SEZ at Gopalpur are being developed as integrated port-linked estates with assured utilities, logistics infrastructure, and common warehousing. These industrial parks have been designed not just to attract manufacturing investment but also to generate steady cargo for nearby ports creating an in-built cycle of production, movement, and export.

Public–private partnerships play a central role in this model. Private developers like Tata Steel SEZ, Adani Ports, and Dhamra Port Company Ltd. are collaborating to co-create bulk terminals, container yards, and dedicated rail connectivity, ensuring that industrial output seamlessly transitions into maritime trade.

Odisha has tremendous renewable potential. How is the state integrating green hydrogen, ammonia, and methanol projects into its industrial and maritime development strategy?

Odisha is among India's frontrunners in integrating green energy into port-led industrialisation. The State has approved 16 green-hydrogen and ammonia projects worth over ₹2 lakh crore, with another ₹1 lakh crore in the pipeline. Most are concentrated around Paradip and Gopalpur Ports, ensuring direct access for exports and domestic offtake. Together, these investments are expected to create over 36,000 jobs and serve key sectors such as steel, fertilisers, and chemicals.

Standard designs, skilled hands: The path to a top-five shipbuilding nation

The money is allocated, the ambition is clear, yet capacity remains underused. **Antony Prince, Founder & Managing Director of SEDS Ship Design,** a veteran naval architect with over four decades of global shipbuilding experience argues that India can double output with the facilities it already has by fixing procurement, decentralising prefabrication to clusters of subcontractors, aligning steel supply with design, and treating training as investment, not cost—positioning India to build for itself and the world.

You've been part of several government committees and are now on the council of the India Ship Technology Centre in Visakhapatnam. How do you see the current phase of India's shipbuilding programme?

This time, I would call it the implementation phase rather than the policy phase. We already have a robust policy framework and a clear vision, but the challenge lies in execution.

For instance, a ₹4,000 crore shipbuilding subsidy fund was created, but only ₹400 crore has been disbursed. This clearly indicates gaps between intent and delivery. The government has taken this criticism seriously and is now focused on identifying what went wrong – whether it was procedural, structural, or due to lack of communication between policymakers and industry.

True implementation requires dialogue between people who understand shipbuilding. Unless professionals with hands-on shipyard experience are part of the process, no amount of policy will help.

Where do you think the biggest bottlenecks lie in Indian shipbuilding?

Procurement is the single biggest bottleneck. Ship design depends on knowing exactly what materials, machinery, and systems will be used. When these decisions are delayed or changed midway, drawings must be redone multiple times – wasting months.

I'll give you an example: Cochin Shipyard's turnaround happened only after we provided them with the entire design and material package upfront. Earlier, they had built 13 ships in 31 years; after streamlining processes, they built six ships in just over three years. So, the problem was never the workers or productivity – it was lack of proper planning and engineering synchronisation.

How do you assess India's shipbuilding infrastructure today compared to global leaders like Japan, South Korea, or China?

We have the physical infrastructure – docks, workshops, and berths – but we're not using it efficiently. Even with existing facilities, we can easily double our output. The key is to divide shipbuilding into parallel processes: design, material procurement, and prefabrication can happen before the hull assembly. A building dock is required for only three months – just to assemble and launch the ship. If we develop a network of subcontractors around shipyards who can fabricate and outfit modular blocks, the shipyard only needs to "stitch" them together. This is how Cochin Shipyard delivered six ships in three years – through high prefabrication and 95% block outfitting before launch.

Should India focus on building new mega yards or upgrade existing ones?

It should be a step-by-step approach. The low-hanging fruit is improving efficiency and capacity utilization at existing shipyards. In parallel, we must develop shipbuilding clusters and eventually mega yards. All three approaches are necessary – but in that order.

Shipbuilding is a highly skilled industry. Do we have enough trained manpower in India?

Not yet. Skill development has to be undertaken on a war footing. Fortunately, the government owns several shipyards – these must become training centers for welders, fitters, planners, and marine engineers. Training should not be seen as an expense but as an investment. I've personally trained hundreds of designers –it costs ₹10–30 lakhs to train one engineer, and many move abroad soon after. But as Minister Gadkari once told me: "Let them go – they'll bring foreign exchange and global experience back to India."

We need a similar mindset. Skill building must be rapid, continuous, and supported financially.

You mentioned China's example earlier. How did they manage large-scale skill creation?

When China suddenly needed workers for new shipyards, they passed a rule mandating all vessels over 30 years old to be scrapped. That created massive domestic demand for small crafts and barges. Farmers became welders, and new yards mushroomed along the coast.

They started by building 1,000–5,000-tonnes crafts and gradually moved up. Workers from small yards graduated to medium ones, and then to large ones. That's how they built a sustainable human capital pipeline.

Should India focus on specialised vessels, standard designs, or green-fuel-ready ships?

We must begin with standardised designs. That's our low-hanging fruit. At this stage, handling 15 different vessel types in one shipyard is inefficient. Japan mastered productivity through standardisation – one design, built 178 times since 1965. We should start with simpler bulk carriers, tugs, and coastal vessels before graduating to complex ships. Green-fuel and hybrid designs are important, but they can be developed in parallel using standard templates. In fact, we already have standard hybrid designs – for example, 12 European short-sea multipurpose vessels being built at Garden Reach Shipyard.

Should India follow the Korean mass-production model or Japan's quality-specialisation approach?

Neither – India must carve its own hybrid model: build for India, build for the world. We pay nearly $80 billion every year in freight to foreign shipping companies. Most of our trade is carried by foreign ships. So, first we must build our own fleet – for domestic use – and simultaneously take export orders.

Every major shipbuilding nation began by building for itself. That self-reliance brings operating experience, economic security, and credibility.

What policy actions would you recommend to accelerate India's shipbuilding vision?

The government has a clear and ambitious goal – to be among the top 10 shipbuilding nations by 2031, and top 5 by 2047. The vision and policies are already strong; the key challenge now is implementation.

Three priority actions are essential:

- Skill development – train at scale across all trades.
- Design capability – support indigenous design houses financially and institutionally.
- Material supply chain – create a coordinated system between shipyards, steel mills, and designers.

For example, ship designers know the optimal plate sizes and grades to reduce scrap. If steel mills roll plates based on that input and a central agency procures and distributes them, everyone wins.

Looking ahead, what kind of vessels will dominate the next decade?

The fundamentals will remain the same – bulk carriers, tankers, and container ships will continue to dominate global trade. Green and hybrid propulsion will grow, but not overnight. We designed India's first LNG-fueled bulk carrier back in 2014 – well before international gas rules came into effect. So, the capability exists. The key is to scale efficiently and ensure continuity in shipbuilding programs.

Finally, what's your message for the Indian shipbuilding community?

India has the brains, experience, and creativity to match any global shipbuilder. What we need is confidence and coordination.

We should stop assuming that European designs are superior. When I designed an LNG-fueled vessel in Kerala, the US Coast Guard Commandant asked if India really had that capability. I told him: "Maybe India doesn't, but Indians definitely do."

If we integrate our design talent, engineering skill, and government vision, India can be among the world's top shipbuilding nations.

Hyderabad airport rising as South Asia's pharma and cargo powerhouse

In this interview, **Pradeep Panicker, CEO of GMR Hyderabad International Airport Ltd,** outlines plan to expand beyond pharma and perishables into electronics, aerospace, and defense cargo, positioning Hyderabad as a strategic transshipment and diversified cargo hub.

How do you assess the growth of India's air cargo sector in the last few years, and what are the key drivers behind it?

India's air cargo sector has witnessed steady growth in recent years, driven by policy reforms, infrastructure development, and strong export momentum. The country handled over 3.7 million tonnes of cargo in FY2024–25 and is projected to reach 10 million tonnes by 2030, fueled by increasing demand for high-value, time-sensitive commodities such as pharmaceuticals, perishables, and electronics. This growth has been supported by initiatives like the National Air Cargo Policy Outline (NACPO), PM Gati Shakti, and airport modernisation efforts that have enhanced connectivity, efficiency, and multimodal integration.

Within this dynamic landscape, GMR Aero Cargo & Logistics, a specialized initiative of the GMR Group, has emerged as the leading air logistics player in India with a clear business advantage. In FY2024–25, GMR handled over 1.25 million metric tonnes, representing nearly 34 per cent of India's total air cargo, reaffirming its position as the country's Global Gateway. This leadership was achieved through strategic investments in safety, technology and digital agility, global network expansion, and sustainable operations, resulting in a year-on-year growth of 11 per cent outpacing the national average and reinforcing GMR's status as the preferred partner for customers worldwide.

What role do you see for Indian airports, particularly Hyderabad, in positioning India as a global air cargo hub?

India is strategically positioning itself as a global air cargo hub, leveraging its geographic location, policy support, and infrastructure development. The government's Mission 2030 aims to triple air cargo volumes to 10 million metric tonnes annually, supported by initiatives like Gati Shakti and the National Logistics Policy. These efforts focus on multimodal connectivity, digitalisation, and sustainability, making India attractive for global logistics operations.

Hyderabad International Airport plays a pivotal role in India's pharmaceutical supply chain and has become the preferred gateway for pharma and vaccines in South Asia. With 40% of India's pharma production and one third of global vaccine production, Telangana has emerged as India's capital for pharmaceuticals. Hyderabad International airport, with this advantage, serves as pharma cargo origin for the world. With strategic location in south central India and growing aerospace & defense and electronics industries, Hyderabad international airport is best positioned for becoming a cargo hub. Hyderabad Airport collaborates with international

bodies, implements globally recognized standards such as WHO-GDP, IATA ISAGO, TAPA, and CTPAT, and is investing in cold chain and perishable export facilities to strengthen its global standing.

What policy or regulatory changes would accelerate India's cargo growth story?

Key policy reforms and initiatives that would accelerate India's cargo growth story include:

- Double-dipping for freighters to enhance international reach.
- Government-backed export facilities like packhouses, irradiation centers, and plant quarantine units near airports.
- Promotion of green logistics and implementation of uniform GST for multimodal cargo to enable integrated, sustainable transport.
- Investment in air-rail corridors for improved hinterland connectivity.
- Streamlining customs processes via digital single window systems and expanding Express Cargo Clearance System (ECCS) for faster, paperless operations.

These steps bridge infrastructure gaps and enhance operational efficiencies, supporting India's ambition to become a global air cargo leader.

How has Hyderabad Airport performed in terms of cargo growth in the last financial year?

In FY24-25, Hyderabad International Airport handled 182,472 MT, with international cargo comprising 109,667 MT and domestic cargo at 72,804M. In FY 24-25, Pharma constitutes 72 per cent of exports positioning Hyderabad airport as a key gateway for India's life sciences sector. Hyderabad International Airport handled approx. 3300 Freighter movements with addition of 15 per cent Freighter Capacity who operate freighters to Middle East, Europe and Africa. The passenger belly capacity has also increased by 12 per cent further supporting the

growth of capacity requirement for Cargo. We are actively engaging with airline partners to explore new routes and enhance connectivity, especially for high-demand sectors like pharma, perishables, and express cargo. In International Cargo, 35-40 per cent cargo is handled on freighters and 60-65 per cent cargo is handled on belly cargo (passenger flights).

How does Hyderabad compare with other Indian airports in terms of cargo growth momentum?

GHIAL handled ~182k MT cargo in FY24-25 with a CAGR of ~9 per cent taking FY21-22 as base (i.e., post Covid).

Also, in FY24-25, we have grown by 16 per cent YoY which is the fastest growing airport terminal among major metro cities.

What new infrastructure projects are being planned or implemented at Hyderabad Airport to strengthen cargo handling capacity?

Our current terminal (CT1) with an annual capacity of 1,50,000 MT is being expanded by an additional 1,00,000 MT. The upcoming second terminal (CT2), expected to be ready by Q3, can also be scaled up to 1,00,000 MT, taking the total cargo capacity to 3,50,000 MT.

The upcoming expansion of the cargo's infrastructure is a strategic move to enhance operational efficiency, reduce logistics costs, and elevate customer satisfaction. Here's how the new terminals will help:

- **Domestic Terminal:** The new facility will significantly reduce congestion during cargo handling, improve cut-off and dwell times, and streamline operations with advanced Material Handling Equipment (MHEs). This ensures faster and more efficient movement of cargo from landside to airside, benefiting both forwarders and airlines.
- **International Courier Terminal:** By enabling direct handling of courier and express shipments at HYD, this terminal will eliminate the need for road transport to other airports. · Cargo Terminal 2: This is a major step forward in our commitment to building world-class infrastructure that supports growing cargo volumes and specialized handling needs. With a total capacity of 100,000 MT, this terminal is designed to deliver seamless, efficient, and future-ready cargo operations.
- **Transshipment Cargo Security Hold Area:** With new BCAS guidelines on TCSHA for air-to-air transshipments, Hyderabad Airport is planning to develop a dedicated transshipment facility on the airside which will support air-to-air transshipments without re-screening.

India is strategically positioning itself as a global air cargo hub, leveraging its geographic location, policy support, and infrastructure development. The government's Mission 2030 aims to triple air cargo volumes to 10 million metric tonnes annually, supported by initiatives like Gati Shakti and the National Logistics Policy.

Recharting the Bay of Bengal: How Coastal Shipping Can Redefine India–Bangladesh Trade Corridors

Ahamedul Karim Chowdhury
Independent Consultant, Former Head of ICD, Kamalapur, Head of Pangoan ICT

Bangladesh's maritime transformation is at a defining crossroads. The Matarbari Container Terminal (MCT) the country's first deep-draft facility capable of handling 8,000-TEU mainline vessels — symbolises the nation's entry into the era of direct global connectivity. Yet, deep ports alone do not make a maritime power; what truly matters is deep connectivity. Linking Matarbari to an integrated inland transport ecosystem through multimodal logistics corridors is now the most urgent task. The government's National Multimodal Transport Plan, guided by Mr. Sheikh Moinuddin, Special Assistant to the Chief Adviser for the Ministry of Road Transport and Bridges and Railways, envisions merging road, rail, and waterways under a unified data-driven system. Supported by the Asian Development Bank (ADB) and the World Bank, this plan seeks to cut logistics costs, improve reliability, and ensure greener trade connectivity nationwide.

Within this vision, Pangaon Inland Container Terminal (ICT) near Dhaka must evolve beyond its current limitations into a trimodal logistics hub integrating river, road, and rail access. Extending the Padma rail link directly to Pangaon would complete a vital chain, connecting Matarbari, Chattogram, Mongla, and Payra ports through both inland and coastal corridors. Such connectivity would ensure the continuous movement of containers even during adverse weather, when coastal shipping halts under Signal No. 4. For Bangladesh's ready-made garment (RMG) exporters, this would offer a predictable, cost-effective supply chain alternative that bypasses Dhaka's overburdened roads and reduces congestion in traditional logistics nodes.

The Coastal Shipping Agreement: A Foundation for Regional Integration

A major pillar supporting this multimodal future is the India–Bangladesh Coastal Shipping Agreement signed in June 2015, followed by a detailed Standard Operating Procedure (SOP) in November 2015. The agreement allows river-sea vessels to operate directly between the two countries' ports, substantially cutting both time and cost. Earlier, containers from India to Bangladesh or to India's northeastern states had to be transshipped through distant ports like Colombo or Singapore, taking up to 30 days. Under this framework, the same cargo can

now reach its destination in 6–7 days, at significantly reduced cost.

The agreement's objectives were multifaceted:

- To reduce transit costs and time for bilateral trade;
- To boost trade volume by introducing a direct maritime link;
- To enhance regional connectivity by allowing India to use Bangladeshi ports for access to its northeastern states; and
- To decongest congested land borders, such as Benapole–Petrapole, by shifting traffic to sea routes.

This was to be achieved through mutual recognition of crew identity documents, simplified customs procedures, and clear mechanisms for dispute resolution, as detailed in the 2015 SOP.

The First Kolkata–Pangaon Service and Its Collapse

The agreement's most visible milestone came in February 2017, when the first container vessel service between Kolkata and Pangaon was launched. Pangaon ICT built to relieve the overburdened Dhaka–Chattogram highway offered a sustainable inland alternative. However, the service did not continue successfully. Despite early optimism, the route became dominated by one-way traffic: vessels carried full loads of goods from India to Bangladesh but returned empty.

Several interlinked challenges caused the collapse. High operating costs were the primary issue with vessels returning without cargo, operators were forced to increase freight rates, making the service uncompetitive compared to trucking. Exporters were reluctant to use Pangaon because of unpredictable schedules, additional costs, and customs complexities. Businesses often faced procedural delays and even harassment during clearance, deterring further use.

A few incidents aggravated matters notably, when a container fell into the river and customs seized cargo for an extended period, eroding trust. Coupled with demurrage charges, these problems led importers to avoid Pangaon entirely. Furthermore, a lack of coordination among port authorities, customs, and logistics providers produced inefficiencies. The result was a cost-inefficient system where multiple layers of fees from mainline and barge operators to trucking syndicates made the route unattractive for most shippers.

A New Opportunity: RMG Exports to India

The current trade dynamics, however, have opened a new window of opportunity. Global retail giants such as H&M, Marks & Spencer (M&S), and IKEA have established outlets in India and are sourcing apparel directly from Bangladesh. Their supply chains naturally align with the Pangaon–Kolkata corridor, since RMG consignments can be shipped efficiently via coastal vessels instead of congested land routes.

Initially, these consignments moved through the Benapole–Petrapole border, but recently the Indian government redirected traffic through the Chattogram–Colombo–Mumbai Sea route a longer and more expensive path. If India recognizes the Pangaon–Kolkata container movement as a standard maritime trade route under the Coastal Shipping Agreement, it could reignite two-way traffic and unlock a new phase of bilateral logistics growth. This shift would not only restore cost-efficiency but also revive the Kolkata–Pangaon service, with potential extension further to Visakhapatnam (Vizag).

Such an initiative would have multiple benefits:

- It would create balanced two-way container flow, addressing the "empty-return" problem that doomed the 2017 service.
- It would enhance RMG supply chain efficiency, providing Indian retailers with a shorter and greener sourcing route.
- It would revitalize Pangaon ICT as a critical node in the multimodal network connecting inland Bangladesh to regional markets.

And most importantly, it would strengthen bilateral maritime trust transforming a previously underutilized corridor into a strategic regional asset.

Linking Matarbari and Pangaon through Multimodal Integration

The success of the Matarbari Port Project depends not only on deep-sea access but on seamless inland distribution. If Pangaon becomes the principal consolidation point for cargo moving to and from Matarbari, the two facilities can function as one synchronized logistics system. By connecting Pangaon's river terminals to Matarbari via inland water transport and complementing that with a direct rail corridor through the Padma link Bangladesh can establish a resilient "ocean-to-market" route immune to weather disruptions.

Moreover, under a Public-Private Partnership (PPP) model, bringing in global terminal operators like MSC or Maersk with Viability Gap Funding would inject international expertise and efficiency. A unified operator managing both Matarbari and Pangaon could synchronize vessel scheduling, digital tracking, and customs clearance through a single integrated IT system ensuring consistency across the entire multimodal chain.

The Way Forward: Shared Prosperity through Maritime Partnership

Bangladesh's maritime future will not be measured by how deep its harbors are but by how efficiently containers move from ocean to market. If Matarbari and Pangaon evolve together within the multimodal framework and India reopens and standardizes the Pangaon–Kolkata route for RMG exports the result could be transformative.

Propulsion for the next decade:

Reliability, efficiency and readiness for alternative fuels

In this conversation, **Amrita Singh, Account Manager – New Sales at Berg Propulsion,** shares her views on how shipowners approach propulsion decisions.

In recent years, Berg Propulsion has deepened its collaboration with shipowners across the world, including the long-standing relationship with Nakkaş Shipping. When asked what keeps owners coming back, Amrita Singh is very clear. Shipowners, she says, are not looking for vendors anymore. They are looking for partners. And that is the philosophy Berg has consistently followed.

Shipowners face varied operating conditions

According to her, shipowners today face highly varied operating conditions. Their vessels may be moving from coastal trades to longer voyages, or operating under different draft and cargo realities. A propulsion system that works only in ideal test conditions is of little help. It must deliver reliable performance every single day. In the case of Nakkaş Shipping, Amrita points out that their vessels operate under changing drafts and frequent manoeuvring situations. Berg systems have repeatedly shown strength in such environments by delivering both fuel efficiency and consistent durability. This trust deepens because Berg stays connected to the vessel long after delivery through remote diagnostics, service support and crew training. As she puts it, “We walk with the shipowner throughout the life of the vessel.”

Amrita also sees a distinct shift in the way shipowners approach propulsion decisions. Earlier, the discussion revolved around horsepower and capital cost. Today, the focus is on the entire lifecycle. Owners want systems that perform across the vessel’s real operating profile. They want predictability in maintenance and readiness for fuels of the future. She highlights that the growing interest in methanol, biofuels and ammonia is making flexibility and upgradability essential features of modern propulsion. At the same time, digital integration is becoming central to how owners manage vessels. “A propulsion system today,” she notes, “must be ready for a world where fuels, regulations and commercial expectations can change within a single vessel’s lifespan.”

Multiple fuel pathways advancing

Looking back at the broader evolution of the propulsion industry, Amrita describes a journey that has moved through several stages. Earlier decades focused on strength and robustness. Then efficiency became the priority as fuel costs climbed. The digitalisation wave followed, allowing owners to see, monitor and tune performance in real time. Today, the industry stands at the beginning of a fuel transition era that is reshaping every aspect of propulsion design. Multiple fuel pathways are advancing at the same time. Power systems must blend mechanical reliability with hybrid capability. Vessel designers are relying on advanced hydrodynamic tools and digital twins. Propulsion, she says, has become an integrated energy system rather than a purely mechanical component.

In this fast-evolving landscape, Amrita explains that Berg Propulsion has taken a pragmatic approach based on adaptability. Many shipowners are now ordering methanol-ready or ammonia-ready

vessels, and Berg works closely with engine suppliers, designers and class societies to ensure that shaft lines and control systems are prepared for these changes. The company has also invested significantly in hybrid solutions so vessels can rely on stored energy during manoeuvring or while operating in emissions-sensitive zones. “Our aim is not to push any single pathway,” she says. “It is to give owners confidence that their vessel can evolve with the industry.”

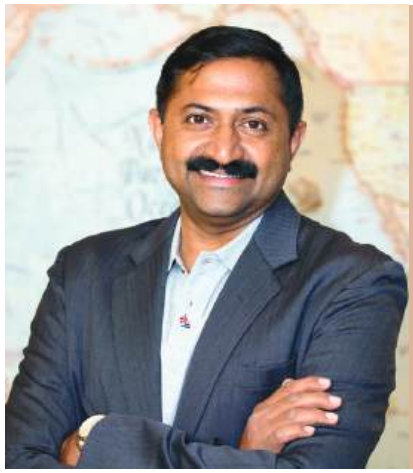
Market forces becoming increasingly influential

Amrita believes that innovation in the coming years will be shaped equally by regulation and commercial pressures. While regulatory timelines matter, market forces are becoming increasingly influential. Charterers, financiers and even cargo owners are beginning to reward vessels with lower carbon intensity. With emissions performance starting to affect freight economics, owners who invest early in future-ready propulsion will stay competitively ahead. She expects major advancements in hydrodynamic design, smarter control systems that adjust to real-time conditions, and wider integration of battery and shore power systems. In this future, propulsion becomes a strategic differentiator.

Amrita believes that innovation in the coming years will be shaped equally by regulation and commercial pressures. While regulatory timelines matter, market forces are becoming increasingly influential. Charterers, financiers and even cargo owners are beginning to reward vessels with lower carbon intensity. With emissions performance starting to affect freight economics, owners who invest early in future-ready propulsion will stay competitively ahead.

Her message to shipowners planning investments for the next decade is consistent and direct. A vessel must be viewed as an energy ecosystem, not a collection of components. Owners should choose partners who can guide them through uncertainty, support them throughout the vessel’s life, and offer systems that combine reliability, efficiency and adaptability. Only then can propulsion investments stand the test of time.

Amrita also reflects on Berg’s growing engagement with India, which she sees as a rising force in the global maritime sector. Indian shipowners, she says, are extremely pragmatic. They want technology that improves operational reliability and offers measurable value. Berg has been steadily strengthening its presence by expanding service coverage, building local technical skills and working closely with shipyards and designers. India is also becoming a centre for crew training and operational excellence, which fits naturally with Berg’s lifecycle support philosophy. “India is not just a high-potential market for us,” she says. “It is an important long-term partner in our global service and innovation network.”



Global Logistics Solutions: India's first AI-powered logistics provider driving predictive, and sustainable growth

Jiss Mathew, Global Logistics Solutions India Pvt.Ltd, shares how the company–India's first AI-powered logistics provider–uses predictive analytics, intelligent automation, and multimodal expertise to deliver faster, cost-efficient, and sustainable solutions powered by human-centric innovation, empowering SMEs and global trade growth.

Global Logistics Solutions positions itself as the first AI-powered logistics service provider. Could you explain how you are applying AI, intelligent automation, and predictive analytics in your operations?

When we started Global Logistics in 2006, our vision was clear, to offer solutions that are Easy, Efficient, and Economical. Since then, we've stayed true to that goal, delivering premium quality services at cost-effective prices.

Today, technology is the key enabler of this vision. Our focus on being 'AI-powered' isn't a slogan, it's reflected in practical, results-driven applications that enhance how we work and deliver value.

I have always believed in combining smart work with hard work. After all, why strike two stones to make fire when you already have a matchbox?

That's where AI becomes a real game changer, driving efficiency, innovation, and impact across our four core AI implementation areas.

Predictive analytics for consolidation: As one of India's largest neutral LCL consolidators, our core strength is optimising container space. Our proprietary AI models analyse historical shipping data, seasonal trends, and market fluctuations to predict cargo volumes with high accuracy. This allows us to create the most efficient consolidation plans, ensuring faster transit times.

Intelligent document processing: We have deployed automation bots that handle the immense volume of documentation. This reduces manual errors by over 99 per cent and cuts processing time from hours to minutes.

Fund flow optimisation: Predictive analysis of receivables, driven by contractual agreements, customer credit profiles, and historical payment trends, empowers us to accurately forecast cash flows, streamline fund management, and optimize overall financial efficiency.

Trade route optimisation: In our LCL consolidation operations, our systems enable us to accurately predict and plan shipment volumes across each trade lane, helping optimize space utilisation, stowage, and even the launch of new service routes. Our AI-driven tools dynamically calculate the most efficient and cost-effective schedules and routing for every shipment whether FCL, LCL, or air cargo, ensuring maximum efficiency and reliability.

What tangible benefits does this bring to your customers in terms of efficiency, visibility, and cost savings?

The benefits are direct and significant. Efficiency is seen in dramatically reduced documentation delays, operational efficiency and optimized transit times. Our predictive LCL consoles planning means an exporter's cargo isn't waiting in a port or warehouse; it's moving on the earliest possible vessel. Our operational efficiency combines with predictive planning ensures that import shipments are delivered within 24 hours of container arrival at the terminal, a turnaround that's 3–5 days faster than the industry average. In other words, we save our customers at

least three days in transit time on every import shipment.

For visibility, we provide our customers with a proactive, predictive tracking system. Instead of just seeing where their container is, they receive alerts on potential delays and revised ETAs before they even occur. We have also launched a customer loyalty program called Global Privilege. Alongside this, our ChatGPT-powered text-based tracking system offers GP clients real-time visibility and the flexibility to generate tailored reports and insights effortlessly. This transforms their supply chain planning from reactive to proactive.

Ultimately, cost savings are realised through the combined impact of these efficiencies. Optimized operations, faster transit times, and smarter consolidation planning help our customers reduce stock turnaround time, saving at least ₹5,000 per import shipment, while improving cash flow for exports. This enables us to uphold our founding principle of being an economical solution, now strengthened and supercharged by technology.

You have been a Multimodal Transport Operator (MTO) since 2006. What progress has been made in India's multimodal logistics sector over this period?

The progress has been immense. When we began, multimodal transport often meant managing a chain of disconnected vendors. Today, there's a structural shift. The government's focus on infrastructure like the Dedicated Freight Corridors (DFCs) would be a game-changer, making rail a faster and more reliable link in the chain. The implementation of the Unified Logistics Interface Platform (ULIP) under the National Logistics Policy is another crucial step, enabling seamless data exchange between different modes.

From our own experience, we've expanded from simple road-sea combinations to sophisticated sea-air and road-rail-sea models. This evolution is what allowed us to grow into a network with 19 branches across India, enabling us to offer truly integrated solutions.

Despite advancements, what are the biggest challenges you continue to face in multimodal operations—whether regulatory, infrastructural, or market-driven?

The skeleton is getting stronger, but the nervous system needs more work. Infra-structurally, while major corridors are improving, last and first-mile connectivity remains a bottleneck, especially at inland container depots (ICDs), Container Freight Stations (CFS) and ports.

Regulatorily, despite the PM Gati Shakti initiative, we still face a maze of clearances and compliance requirements across different states and transport modes and even within the same custom circle linked to the port. A truly unified digital system for approvals is the next frontier.

The market-driven challenge is the inertia in legacy practices. Encouraging all stakeholders from small truckers to large manufacturers to adopt a fully digital, transparent way of working remains an ongoing effort. This is where our hands-on approach and investment in user-friendly customer platforms are focused.

LCL cargo has always been a critical segment for SMEs and growing exporters. How do you see the growth of LCL cargo operations in India?

Less than Container Load or LCL cargo accounts for nearly 8 per cent of global trade, and its growth trajectory in India is exceptionally strong forming the very foundation of our success. Some of India's strongest export sectors i.e., pharmaceuticals, textiles, garments, and chemicals rely heavily on robust LCL support, making it a critical enabler of the country's export growth.

India's SMEs, which contribute around 45 per cent of total exports, are the real drivers of this momentum. As these enterprises become increasingly competitive on the global stage, LCL stands as their logistics lifeline. We've witnessed this transformation firsthand, expanding our business year after year by empowering this vital segment.

Ultimately, cost savings are realised through the combined impact of these efficiencies. Optimized operations, faster transit times, and smarter consolidation planning help our customers reduce stock turnaround time.

Today, we are proud to be the only India-based consolidator offering direct LCL services to 40 global destinations and inbound services from 30 locations a true reflection of the growing demand and trust in our network.

I firmly believe that our nation's prosperity depends on the sustained growth of exports. To achieve consistent double-digit expansion, our logistics strategy must be truly holistic integrating manufacturing, branding, and distribution. By controlling the entire logistics chain, we ensure that both agility and long-term growth remain firmly within our control. This is why the idea of "Move in India" is just as crucial as "Make in India."

The future of logistics isn't just about moving higher volumes it's about strategic management and smarter partnerships. We're evolving toward "LCL as a Managed Service," a model that transforms traditional cargo handling into a strategic, end-to-end solution.

Through this approach, we manage the entire LCL export and import process, giving SMEs the visibility, reliability, and flexibility they need to compete on equal footing with larger corporations.

Vietnam sets course for a global logistics breakthrough

New national strategy aims to transform logistics into a high-value, sustainable growth engine by 2035.

Vietnam has taken a decisive step toward positioning itself as a major logistics hub in Asia and beyond. On October 9, 2025, Prime Minister Pham Minh Chinh signed Decision approving the National Strategy for the Development of Vietnam's Logistics Services for 2025–2035, with a vision to 2050.

The landmark strategy marks the first time the country has adopted a comprehensive, long-term framework to build a globally competitive logistics sector—one that supports international trade, drives digital transformation, and promotes green and sustainable growth.

Under the new plan, logistics is recognised not just as a supporting service, but as a key economic sector with high added value and strategic importance to Vietnam's overall economic competitiveness.

Ambitious goals for a modern logistics economy

The strategy envisions logistics becoming a dynamic pillar of Vietnam's economy by 2035. Between 2025 and 2035, the value added by the logistics sector is targeted to reach 5–7 per cent of GDP, growing at an average 12–15 percent annually. By 2050, logistics services are expected to contribute 7–9 percent of GDP, maintaining growth of 10–12 per cent per year.

By mid-century, Vietnam expects to operate at least 10 world-class logistics centres, establishing itself as a regional and international transshipment hub.

Eight strategic orientations for sustainable growth

To achieve these goals, the strategy defines eight major orientations supported by corresponding policy and implementation measures:

1. Strengthening the legal and institutional framework: The government will review and amend outdated regulations, and streamline administrative procedures, and attract both domestic and foreign investment.
2. Developing modern infrastructure: Priority will be given to synchronised multimodal infrastructure including seaports, airports, smart warehouses, urban logistics, and agricultural distribution centres.
3. Enhancing regional and international connectivity: Key economic zones in Hanoi, Ho Chi Minh City, Da Nang, and Hai Phong will be linked through North–South economic corridors and expanded ASEAN connections.
4. Expanding logistics markets and supply sources: Vietnam aims to attract multinational corporations, establish free trade zones, and strengthen export and cross-border e-commerce logistics.
5. Boosting enterprise competitiveness: The government will support businesses in adopting 4PL and 5PL models, improving service quality, and integrating green and digital solutions.

6. Driving research, innovation, and green transformation: New technologies such as automation, AI, and big data will be deployed to optimise logistics and improve transparency in customs and trade.
7. Developing skilled human resources: Comprehensive training programs, from vocational to postgraduate levels, will be rolled out in partnership with universities and international organizations.
8. Empowering associations and leading enterprises: Strong industry associations and large domestic firms will be encouraged to build globally competitive supply chains and logistics networks.

A coordinated implementation framework

The Ministry of Industry and Trade (MOIT) will lead implementation, guiding relevant ministries, local authorities, and industry associations. The Ministry of Finance will coordinate budget allocation and investment mobilisation, while provincial governments will tailor action plans based on local strengths and conditions.

Each year, by December 10, implementing agencies must submit progress reports to MOIT, which will compile national-level updates for submission to the Prime Minister. This systematic coordination aims to ensure accountability and consistency across all levels of government.

Building the foundations for a regional logistics hub

Vietnam's ambition is rooted in its strategic geographic location, strong manufacturing base, and rapidly expanding trade links. The country sits at the crossroads of major regional supply chains connecting China, ASEAN, and the Pacific.

To leverage this advantage, the strategy calls for the construction of at least seven logistics centres in Ho Chi Minh City by 2025, and a well-connected logistics system across the Southeast region. These centres will integrate transport, warehousing, and digital operations, supporting multimodal connectivity between ports, industrial zones, and border trade routes.

Vietnam Logistics Strategy

Outsourced Logistics Adoption

70–80% of enterprises to use outsourced logistics services by 2035

90% adoption by 2050

Logistics Cost Reduction

Logistics costs to fall to **12–15%** of GDP by 2035

Further reduced to **10–12%** of GDP by 2050

Global Ranking Targets

Enter the Top 40 in the World Bank Logistics Performance Index (LPI) by 2035

Improve to Top 30 by 2050

Digital Transformation Goals

80% of logistics firms to adopt digital solutions by 2025

100% digital adoption by 2050

Human Capital Development

70% of the logistics workforce to be professionally trained by 2035

30% to hold university degrees or higher by 2035

Digital platforms as gateways to global markets

On Amazon alone, Vietnamese sellers have listed around 17 million products over the past two years, with revenues growing over 50 percent. The trend highlights both Vietnam's growing export capability and the importance of logistics in sustaining global competitiveness.

To meet this demand, logistics providers must embrace digital transformation—from warehouse automation and AI-driven inventory management to real-time cross-border tracking and customs clearance integration.

A strategic turning point

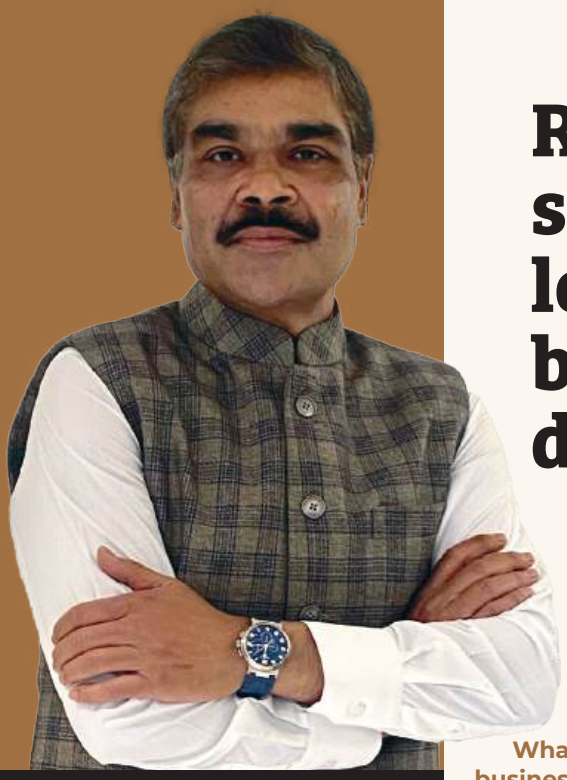
Experts have described the strategy as a "turning point" for Vietnam's logistics industry and a powerful catalyst for broader economic growth. They note that reducing logistics costs will significantly enhance business competitiveness, paving the way for the country's exports to exceed $1 trillion in the near future.

Efficient logistics accelerates the flow of goods, enhances productivity, and lowers operational costs—all essential for sustaining export growth and attracting foreign investment.

More broadly, the new strategy is designed to spur investment, generate employment, and drive digital transformation across production, trade, and distribution. It aligns closely with Vietnam's long-term vision of achieving sustainable, innovation-led economic growth.

Toward a global supply hain hub

If implemented effectively, Vietnam's logistics strategy could redefine the nation's position within global supply chains. The combination of policy reform, infrastructure investment, enterprise digitalization, and green transition is expected to propel the logistics sector into a new era of competitiveness and value creation.



Rhenus India strengthens integrated logistics play with bold investments and digital expansion

In this interview, **Vivek Arya, Regional CEO of Rhenus Logistics India,** outlines how technology, safety, and skilled teams are driving the company's push toward sustainable, customer-centric, end-to-end logistics solutions that support India's long-term growth.

What are the key vertical business units under Rhenus India?

Rhenus India operates through a network of strategic Business Units designed to provide comprehensive and customised logistics solutions to our customers. Our core Business Units include Air & Ocean, Customs Brokerage, Road Freight, Warehousing Solutions, Supply Chain Solutions and Inland Waterways. These units work in synergy to deliver Integrated Logistics Solutions, enabling us to serve diverse industries with flexibility and precision. Looking ahead, we are expanding into 4PL services and Automotive logistics, reinforcing our commitment to innovation and end-to-end supply chain management. At Rhenus India, our focus remains on being a trusted partner, offering solutions that empower businesses to thrive in a dynamic global market.

How would you describe the relative importance of these verticals to Rhenus' overall growth in India?

At Rhenus India, we see our Business Units as interconnected pillars of growth. Each Business Unit complements the others, creating a strong, integrated ecosystem that delivers holistic solutions to our customers.

Our investment strategy is clear, we will continue to invest in businesses that align with our customers' evolving requirements, ensuring flexibility, innovation, and long-term value. We have recently invested in Inland Waterways. This initiative will significantly enhance cargo movement efficiency and reduce carbon footprint. There will also be investments in 4PL services and Automotive logistics, ensuring that our solutions evolve in line with customer requirements.

Can you throw some light on the Inland Waterway Business?

Rhenus India will introduce its Inland Waterways Transport solutions, barge scheduled services that will facilitate cargo transport on two Indian rivers, the Ganga River and the Brahmaputra River. These sustainable and cost-effective logistics solutions will allow for seamless cargo movements across India and beyond. In this venture, Rhenus is expanding its existing expertise for port operation and inland navigation from Europe to India.

To start, Rhenus India intends to operate barge services on National Waterways NW-1, NW-2, NW-16 and the Indo-Bangladesh Protocol route (IBP), with plans to gradually scale up to include other national waterways in the country.

A combination of pushers and barges, to suit low-draft navigation in the waterways, will be used to transport both Bulk and Break-Bulk cargo across North & East India, North-East India, and subsequently neighbouring countries. With 1,000 vessels in operations daily on all navigable waterways in Europe, Rhenus will now tap into its Port Logistics experience, in particular in European inland navigation, as well as resources from its European Waterways fleet to further support India's IWT sector. In Europe, Rhenus has been active in the inland navigation sector since its foundation year 1912, operating in many rivers across Europe.

Rhenus has signed a MoU with Inland Waterways Authority of India (IWAI). The formal exchange of the MoU took place in the presence of the Hon'ble Minister for Ports, Shipping and Waterways, Government of India, Sarbananda Sonowal, at his office on 6th May, 2025 and at the Maritime Week Event in Mumbai in October 2025. The Minister's presence underscored the government's strong commitment to strengthening inland waterways as a key pillar of India's logistics ecosystem. At Rhenus, we're proud to support India's Maritime Amrit Kaal Vision 2047 and lead the way in shaping the future of sustainable logistics and contribute to India's logistics transformation.

Rhenus has a long legacy of working with the chemical industry. How has your client portfolio evolved in recent years?

Rhenus India has long been recognised as a chemical logistics expert, and we will continue to lead in this space. Our high safety standards, state-of-the-art warehouses, and experienced team make us a trusted partner for customers in this sector.

While this expertise remains core, we have significantly diversified our industry portfolio in recent years. Today, we serve a wide range of sectors including consumer goods, retail, engineering, automotive, and healthcare. This expansion reflects our commitment to meeting evolving customer needs with tailor-made solutions.

Earlier this year, we launched the Central Distribution Center (CDC) for IKEA in North India, catering to their northern market and strengthening our capabilities in retail and e-commerce logistics. This combination of deep specialisation and broad diversification ensures that Rhenus India continues to deliver integrated, innovative solutions across industries.

Where do you stand today in your warehousing infrastructure journey?

We are in a phase of strategic expansion and modernisation at Rhenus India. Our warehousing footprint is not only increasing in size but also in capability. Today, we operate advanced Warehouse Management Systems and are continuously enhancing them with automation and digital tools to improve efficiency. Digitisation and real-time visibility for customers remain at the forefront of our strategy, ensuring transparency and control across the supply chain. Safety is equally critical to us. We have introduced a dedicated Safety App to track near misses and other safety requirements, reinforcing our commitment to operational excellence and employee well-being. Looking ahead, we have set an ambitious goal: to grow our warehousing footprint to 5 million sq. ft. in the next 2–3 years. This expansion will be supported by technology-driven processes and customer-centric solutions, ensuring that our infrastructure remains future-ready and aligned with global standards.

Could you highlight some of your latest facilities and the role they play in your integrated logistics network?

Rhenus India has recently strengthened its infrastructure with new facilities in Bhiwandi, Dahej, Sanand, Gurgaon, Bengaluru and Chennai. These warehouses are strategically located in high-demand industrial belts and near major consumption hubs, making them ideal for distribution networks and consolidation points. Each facility is designed to support smooth flow of goods, meeting stringent safety and compliance standards while ensuring operational efficiency. Their strategic positioning enables faster turnaround times, optimized transportation routes, and cost-effective solutions for customers.

Rhenus has been part of India's logistics landscape for over 70 years, and our journey has always been about adapting to change and anticipating future needs. India is one of the fastest-growing economies in the world, and logistics is a critical enabler of that growth. Our long-term role is to be a trusted partner delivering integrated, technology-driven, and sustainable solutions that support this transformation.

In a highly competitive market, what would you say are Rhenus India's key differentiators in delivering customer satisfaction?

People, technology, and HSSEQ (Health, Safety, Security, Environment, and Quality) are the strong pillars of our growth and our unique differentiators. These pillars define how we operate and deliver value to customers.

Our people bring deep industry expertise and a customer-first mindset, ensuring that every solution is tailored to specific needs. Technology enables us to provide real-time visibility, automation, and digitisation across the supply chain, making operations more efficient and transparent.

The future of methanol as a marine fuel

In this conversation, **Hannes Lilp, CEO, SRC Group,** shares about the most talked-about innovations in the methanol space: the Methanol Superstorage tank concept.

The global shift toward cleaner marine fuels has intensified over the last few years, but few companies sit as close to this transition as SRC Group. At the center of this change is Hannes Lilp, whose team has developed one of the most talked-about innovations in the methanol space: the Methanol Superstorage tank concept. In a wide-ranging conversation, Hannes offers a clear-eyed view of why methanol is rising, where the industry is headed, and what owners should think about before making the switch.

What is accelerating methanol adoption

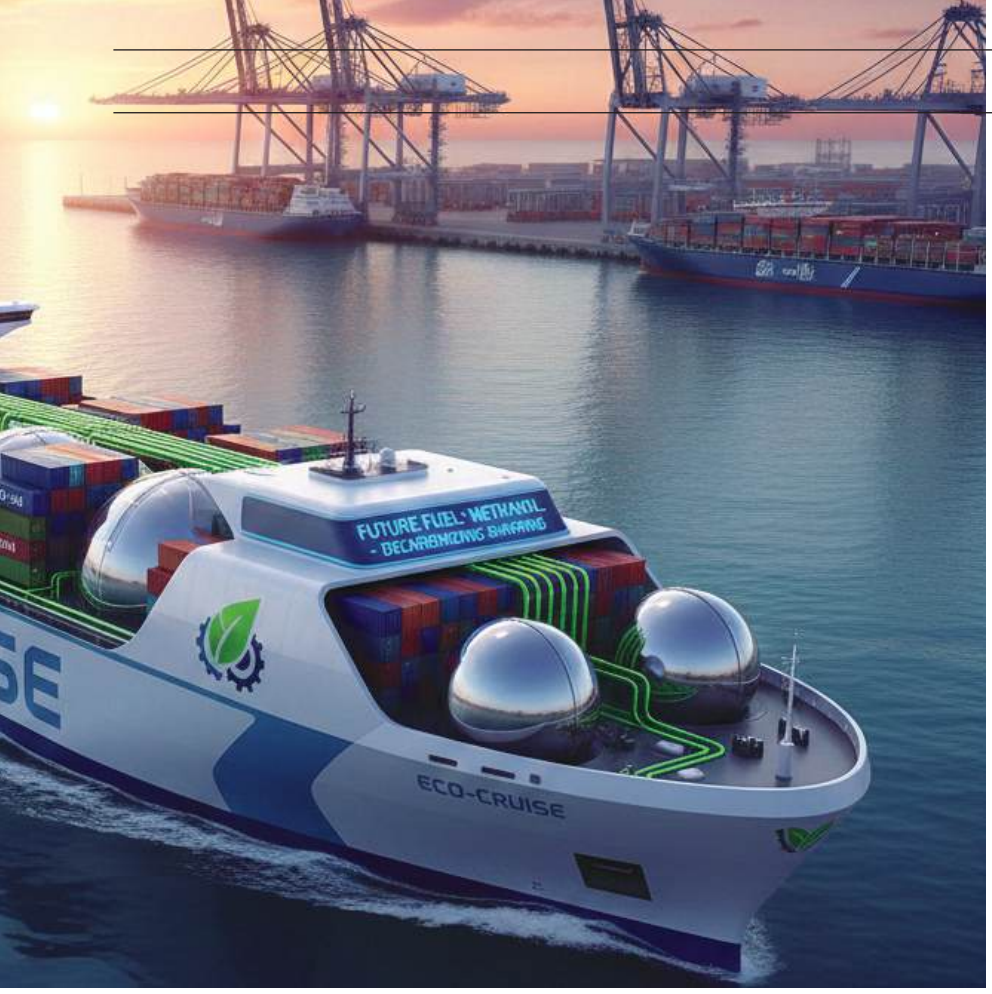
When asked what is truly accelerating methanol adoption, Hannes says the movement is being led by a mix of practical and strategic factors. “Containers were the early adopters,” he explains. “The next big pocket is owners who carry methanol as cargo and also want to use it as fuel. We’re now seeing strong interest from ferries, Ro-Ro vessels and even parts of cruise because when you have passengers on board, low toxicity and familiar systems matter. Even superyachts are exploring methanol for the same reasons.” Bulk and offshore players are evaluating projects, he adds, but the most visible momentum today is in containers, chemical and product tankers handling alcohol fuels, and the ferry segment.

With several alternative fuels competing for attention, Hannes believes methanol has earned its place in the near term. “LNG is still the lowest-risk choice today because of its mature supply chains,” he says. “Methanol is a clear number two when you look at the orderbook and the number of methanol-ready vessels. Ammonia and hydrogen are promising, but they are early in terms of technology, safety and infrastructure.” He also notes that ethanol is quietly entering the picture, especially because of Brazil’s long experience. “From a technical point of view, methanol and ethanol are very similar. The same combustion technology supports both, with only minor injector adjustments.”

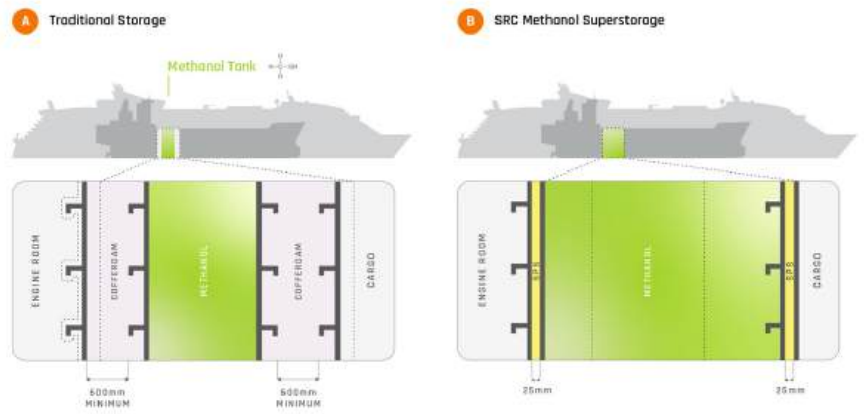
Why alcohol fuels are attracting attention

Engineering and operational simplicity is one of the biggest reasons why alcohol fuels are attracting so much attention. Hannes describes it plainly. “You can store them at ambient temperature. That means you avoid cryogenic or high-pressure systems, which simplifies integration hugely. And existing combustion engines can be adapted with modest changes. That practicality is why we focused so much on solving the tank volume challenge so owners don’t lose range.”

That challenge led to one of SRC’s most important innovations: Methanol Superstorage. Hannes explains the concept with visible pride. “It’s a tank design based on Sandwich Plate System technology. Traditional low-flashpoint fuels require a wide cofferdam, often 600 to 900 millimetres. We replace that empty space with a thin elastomer-steel composite, roughly twenty five millimetres across. The result is eighty percent more usable fuel volume in the same footprint.” The technology itself is not new to shipping. “SPS has been used in maritime structures for more than



AI Generated Image



two decades. We simply applied it to methanol, and now ethanol, and fuel storage."

Safety and lifecycle benefits, he says, are just as important as space savings. "You get A-60 fire equivalence built in. The material is leak-tight, so it doesn't absorb methanol or ethanol to any meaningful extent. And there is no cofferdam to inspect or maintain, which eliminates operational headaches. The real value for owners is that they don't sacrifice cargo space. With more usable fuel volume on board, they also get far greater flexibility in routing and bunkering."

Retrofits are another area where SRC sees strong demand. Hannes explains why Superstorage works well in these scenarios. "The installation mirrors everyday steel replacement work that yards already do. We're not asking anyone to learn a new craft. That is why it scales well for retrofits."

Class approvals and regulatory movement are steadily progressing too. "We have Approval in Principle," he says, "and we are fully aligned with class on the engineering approach. On the regulatory side, the IMO's working group on alternative fuels is working toward clear, harmonised methanol rules. Once those come out, owner decision-making becomes potentially much clearer and more projects move from pilot to program."

Owners often describe SRC as exceptionally fast and precise on EPCI and complex conversions, and Hannes sees that as a natural fit for methanol projects. "Methanol conversions are integration projects. They are not only about tanks," he says. "We cover concept and basic engineering, detailed design, procurement, installation and commissioning.

Innovation extends beyond superstorage

SRC's innovation pipeline extends beyond Superstorage. "We are focused on removing practical roadblocks to decarbonisation," Hannes explains. "You will see more from us on shore-power integration packages, and we recently introduced an offshore fairlead remote-locking system. Other concepts are in development, but we prefer to speak once they are validated with partners and class."

As for owners who are still debating whether to move into methanol now or wait, Hannes offers simple, direct advice. "Treat this as a system decision. It is about the fuel, the tanks, the integration, and the operations. If methanol suits your trade, remove the volume constraint and keep your cargo intact. That is what Superstorage is designed for. With clear IMO rules coming and class pathways in place, the business case improves when you can match diesel-like range without sacrificing payload and convert on a timeline that fits your dry dockings."

CBAM projected to create a modest drag on India's GDP

CBAM will increase costs for India's carbon-intensive exports, challenging MSMEs and pushing faster decarbonisation. India's CCTS will help align carbon pricing with EU norms. Despite near-term strain, CBAM may drive cleaner production, stronger supply chains, and long-term competitiveness.

The European Union's Carbon Border Adjustment Mechanism (CBAM) represents a major shift in global trade policy aimed at addressing climate change by pricing the carbon emissions embedded in imported goods. For India, which is a significant exporter to the EU, CBAM presents both challenges and opportunities that will shape its industrial future, particularly in carbon-intensive sectors.

Designed to prevent carbon leakage

CBAM is designed to prevent "carbon leakage," where production relocates to countries with less strict climate regulations, undermining global emission reduction efforts. Starting in 2026, importers to the EU will have to buy carbon certificates linked to the carbon content of goods like steel, aluminum, cement, fertilizers, electricity, and hydrogen. This effectively puts a carbon price on these imports, leveling the playing field with EU producers who already pay for their emissions under the EU Emission Trading System (ETS). Countries that are under duress due to this entire ordeal include Russia, China, UK, Mozambique, Ukraine, Indonesia, and Taiwan. These, along with India, rely heavily on the EU for their exports, and are susceptible to the carbon leakage damage. Countries with little or no domestic emission pricing and large carbon-intensive export sectors to the EU will bear the brunt of these risks.

Hard hit industries from India

India's steel and aluminum industries, among the largest exporters to the EU, face significant exposure to CBAM due to their carbon-intensive manufacturing processes. While large firms such as JSW Steel and Hindalco are already adopting sustainability measures—investing in renewable energy and energy efficiency—many small and medium enterprises (MSMEs) are less equipped to track and report emissions accurately or to invest in clean technologies. This creates a capacity gap that could constrain the competitiveness of Indian exporters in CBAM-affected sectors.

Economically, CBAM is projected to create a modest drag on India's GDP—approximately 0.02 to 0.03 per cent between 2026 and 2030. This is mostly due to revenue outflows related to carbon payments under CBAM and higher costs for carbon-intensive exports. The impact will be concentrated in the industrial manufacturing verticals tied to steel, aluminum, and cement production, which dominate India's CBAM-relevant exports.

To meet these challenges and seize potential gains, India is moving towards establishing its own carbon pricing framework. The Carbon Credit Trading Scheme (CCTS), set to begin compliance in 2026, aims to create an intensity-based carbon market that balances emissions reductions with economic growth. A domestic carbon price aligned with EU requirements could lessen the financial impact of CBAM on Indian companies and help secure international market access.

Navigating CBAM:

India's heavy industries gear up for smart, data-driven compliance

Marc Bernitt, Senior Vice President, Customs EMEA & Asia Pacific, Kuehne+Nagel, discusses how CBAM challenges India's steel, aluminum, and cement sectors, emphasizing emissions transparencvy, digital reporting, cleaner production, and collaboration to maintain competitiveness and drive sustainable trade growth.

Which sectors within India are likely to experience the greatest challenges as a result of the EU's CBAM?

India is explicitly named among the EU's top five affected trading partners because of its big steel, aluminium and cement exports. Downstream sectors that depend on carbon-intensive materials, such as the automotive, construction, and machinery industries, will also feel indirect effects, including higher input costs and the need for supply chain adjustments.

How is the introduction of CBAM expected to influence India's GDP and urban consumers, and which market verticals will be most affected?

Kuehne+Nagel analysis shows that the mechanism could increase the cost of Indian steel exports to the EU by approximately 15 per cent in 2026, rising to 51 per cent by 2034. Aluminium exports may face increases between 6 per cent and 17 per cent over the same period.

Urban consumers would feel CBAM's effects only indirectly. Consumer-facing sectors like electronics, agriculture or basic services are outside CBAM's current scope.

What has been the response from Indian businesses, and how are major EU trading partners reacting to the new mechanism?

Major exporters in steel, aluminium, and cement are piloting emissions-tracking tools with EU partners or climate-compliance providers. At Kuehne+Nagel, several Indian firms are using Climease platform solution to gather, verify, and structure product-level carbon data in anticipation of CBAM requirements. However, many still rely on manual spreadsheets or default EU emissions values due to limited data systems. A large portion of exporters have yet to build the internal processes needed for CBAM compliance to meet upcoming deadlines.

The EU's biggest exposed partners India, China, Türkiye and Ukraine – are reacting by assessing CBAM's trade costs. These countries face similar challenges in filling the carbon-cost gap. By contrast, nations with stringent domestic

carbon rules (like Switzerland or the US) are less directly hit by CBAM.

What themes are dominating the global conversation around CBAM at present?

Global discussions increasingly focus on carbon transparency, supply-chain decarbonization, and fair carbon pricing. Deeper data partnerships are being developed by suppliers and buyers, with a focus on verified product-level emissions data. A shift toward carbon-accountable trade is indicated by the emergence of CBAM-style policies in the UK and Norway. Standardized monitoring and reporting guidelines, striking a balance between default and real emissions statistics, and ways to assist developing countries with clean technology assistance or transitional measures within a just carbon transition framework are some other recurrent topics.

What steps need to be taken by businesses in vulnerable countries to safeguard their products? In countries that lack scalable and sustainable technology, what can be the way out of this policy?

Businesses in exposed (vulnerable) countries must move aggressively to gather and report accurate emissions data and to reduce their product carbon intensity. Key steps include:

- **Adopt digital emissions tracking tools:** Companies should adopt product-level carbon accounting to avoid high default EU emission values. Kuehne+Nagel's Climease platform automates supplier data collection, verification, and CBAM-compliant reporting. Its user-friendly design enables accurate reporting even for small or non-technical exporters.
- **Collaborate with EU importers:** Exporters should share verified shipment emissions data with European buyers. Transparent communication helps cut CBAM by replacing high default values with real data.
- **Invest in lower-carbon production:** Businesses should boost energy efficiency, adopt cleaner technologies, and use low-emission materials. Partnering with international buyers to co-invest in lower-emission production enhances EU compliance and competitiveness.

In regions without advanced clean technology, transparency and efficiency are key. Firms can use audits, third-party checks, or conservative estimates to show lower real emissions. Higher CBAM costs are likely in the short term, but domestic carbon pricing and clean-tech incentives can help. For now, compliance and credible data collection remain the best approach.

Urban consumers would feel CBAM's effects only indirectly. If steel, cement or aluminium becomes noticeably more expensive, cost increases could eventually filter into products and services in cities for example, higher input costs in construction (affecting housing and infrastructure) or in automobile manufacturing (affecting vehicle prices).

In regions where sustainable technologies are not yet widely accessible or affordable, what strategies could be pursued to navigate CBAM requirements?

In regions where sustainable technology remains limited, companies should emphasize data credibility, supplier support, and collaboration rather than major technological upgrades. By leveraging accessible CBAM tools, digital platforms, and data templates, firms can ensure compliance and engage with international partners for knowledge transfer and cleaner practices. Prioritizing data quality is equally crucial—documented estimates or conservative reporting generally reduces CBAM costs compared to default values. Gradual progress, such as installing basic energy meters, builds credibility over time. Industry associations and governments can further ease compliance, sharing costs, expertise, and developing supportive sustainability policies. Businesses may also explore supply-chain shifts, sourcing from low-carbon regions or seeking CBAM waivers for certified low carbon exports. Above all, firms must treat CBAM compliance as essential to long-term survival. By investing in process transparency and verifiable documentation, they can significantly cut risk and enhance market competitiveness. As highlighted in Kuehne+Nagel's analysis, non-compliance carries steep financial consequences, making a proactive, data-driven approach the most practical and resilient path forward.

Innovative water-lubricated bearings for maritime sustainability

In this conversation, **Craig Carter, VP of Business Development, Thordon Bearings Inc.,** shares insights into the company's innovative water-lubricated bearing systems.

Thordon Bearings is known globally for its water-lubricated bearing systems, but the scale and diversity of its markets often surprise people. When asked which segments drive the company's work today, Craig Carter explains that the portfolio spans three very different worlds.

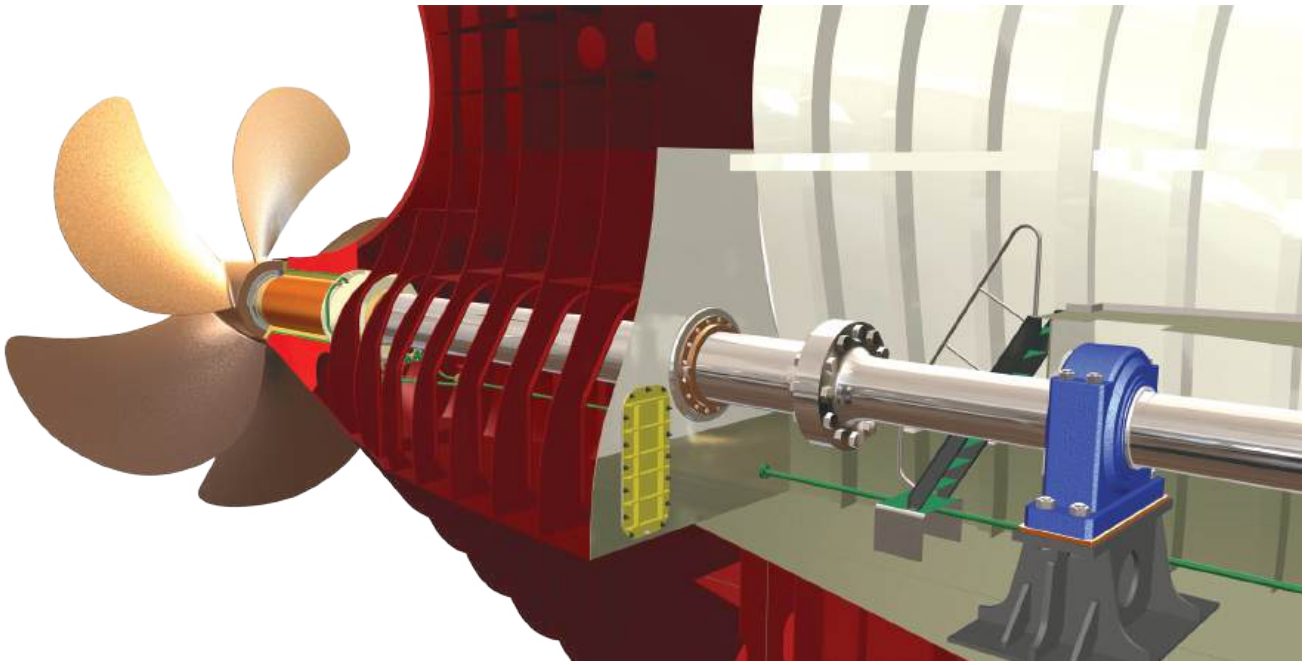
"We work across three distinct markets," he says. "The first is Navy and Coast Guard fleets, including India, where reliability and predictable maintenance really matter. The second is the workboat market in places like the Mississippi River in the US, and the Manaus and Paraguay river systems in Latin America. These rivers are full of extremely abrasive, sandy water, and our bearings are built to perform in exactly those conditions. The third is the merchant fleet: containerships, tankers, bulkers, LNG carriers and cruise ships. Each segment has different needs, so we tailor our bearing grades to the water quality and vessel profile."

At the heart of Thordon's product line are its polymer, water-lubricated propeller shaft bearings. Craig describes them as proprietary elastomeric polymers that combine the abrasion resistance of rubber with the mechanical strength of plastic. "We manufacture different bearing grades because a vessel sailing in clean ocean water needs something different from a workboat running through mud and sand. And in addition to shaft bearings, we also produce water-lubricated seals and grease-free polymer bushings for deck equipment like winches and fairleads. It allows ships to eliminate grease lubrication in multiple places."

What makes Thordon's bearings stand out in a competitive market? Craig says the difference becomes clear when customers evaluate lifecycle performance. "In abrasive environments, many conventional bearings last maybe three years. Ours often run for six years or more. That means one less dry docking cycle, and that alone is a major commercial advantage. Even if our initial price is slightly higher, the operating cost is far lower. There's no lubrication oil to buy, no risk of oil leaks, no environmental penalties and much less maintenance work for crews. Ultimately the total cost of ownership is the lowest in the propulsion bearing space."

As ship design evolves toward hybrid systems, shaft generators and new propulsion layouts, Thordon has been rethinking the shaftline architecture itself. Craig describes a recent engineering leap made in collaboration with ABS, Cedari of China and the National Technical University of Athens. "We've designed a stern-tubeless water-lubricated shaft system. By eliminating the traditional stern tube, the propeller shaft becomes shorter and ship designers gain more flexibility. That extra internal space can be used for cargo, for a larger engine room or to integrate shaft generators. The whole system reduces capital and operating costs, improves EEDI and boosts fuel efficiency. ABS granted Approval in Principle in 2022, and we've already quoted major shipyards in China, South Korea and the U.S."

One of the features Craig considers most transformative is the ability to conduct maintenance



while the vessel remains afloat. "This is one of the biggest commercial advantages," he says. "Because the maintenance area is accessible from inside the vessel, you don't need to drydock to inspect or replace the bearing. Operators can trim the vessel to raise the propeller or use underwater sealing support from certified diving teams. We're talking hours instead of days, and no revenue lost during maintenance."

Sustainability is driving ship design worldwide, and Craig emphasizes that Thordon's systems directly support those goals. "There's zero oil discharge below the waterline, so pollution risk disappears. The lower shaft friction we've proven with NTUA testing delivers fuel savings, and vessel efficiency improves because you can carry more cargo or gain room for systems like shaft generators, carbon capture or wind-assist. It's a decarbonization solution that also cuts operating costs, which is exactly what shipowners want."

India plays an increasingly important role in Thordon's global footprint, and Craig speaks warmly about the company's presence in the region. "India is a very important market for us. We have strong partnerships with the Indian Navy and Coast Guard, who value reliability and reduced maintenance disruption. The country's maritime sector is also growing in ship repair, workboat operations and port services, where water-lubricated, low-maintenance systems are a perfect fit. We are expanding our technical service capability, working closely with public and private shipyards and supporting operators who are focused on lifecycle efficiency and sustainability compliance. India isn't just a customer base. It's becoming a strategic partner in maritime innovation."

> "India is a very important market for us. We have strong partnerships with the Indian Navy and Coast Guard, who value reliability and reduced maintenance disruption."

Despite the strong case for water-lubricated systems, Craig acknowledges one challenge: shipyard bandwidth. "Most major shipyards are full until 2028, which reduces their appetite for design changes even when the benefits are clear. Owners are already convinced. The next step is working closely with shipyards and naval architects to integrate these solutions into their standard designs. We're making progress, and we believe the first full commercial installations will happen soon."

As the industry pushes toward greener, smarter propulsion, Craig Carter sees a clear role for Thordon's technology. It is a role grounded not only in environmental responsibility but in hard commercial logic. "When you can improve sustainability, reduce operating costs and avoid unnecessary dry dockings, the conversation becomes very simple. Owners want solutions that make sense on every level. That's what we aim to deliver."

Shaping the intelligent bridge

In this conversation **Pascal Göllnitz, Product Line Manager - Integrated Bridge Systems, Sperry Marine,** shares the future of autonomous and zero-emission vessels is arriving in careful, deliberate steps.

The future of zero-emission and more autonomous vessels is arriving in careful, deliberate steps. According to Pascal Göllnitz, who leads the Integrated Bridge Systems product line at Sperry Marine, the transition is happening, but not in a sudden leap. It is evolving through a series of trust-building stages that keep mariners firmly at the center.

"It will be a stepwise evolution," he says. "The human remains at the center today. We build automation that assists mariners and earns their trust. As confidence grows, we move to higher levels of automation and ultimately to selective autonomy where it clearly adds safety and efficiency value."

For Pascal, navigation systems and bridge architecture are the heart of that transformation. Better sensors are providing sharper situational awareness around the vessel, but what truly unlocks capability is how those inputs are fused and presented. "Navigation systems turn raw data into decisions," he notes. "Our design principle is a modular, upgradable bridge so owners can add capabilities over time without ripping and replacing. Standardized interfaces are fundamental, and we are actively contributing to those standards."

Framing the future interaction between mariners and marine technology ship is the industry's move toward the S-100 universal hydrographic data model. Pascal sees this as a pivotal moment. "S-100 is foundational. It transforms today's largely offline chart paradigm into a richer, near-real-time data ecosystem," he explains. Sperry Marine is already preparing for this dual environment. "We are engineering our ECDIS and ship bridge actor stack to handle both S-57 and S-100, ensuring operators have a smooth transition as new data layers are rolled out in the second half of the decade."

Among the projects that reflect this future-ready philosophy is the company's role in SAMSKIP's hydrogen-powered, autonomy-ready container vessels. Pascal describes the owner's brief as both challenging and exciting. "Zero emission and autonomy-ready by

design, with a platform that can accept new tech and new rules over time," he says. "We could deliver because we own the critical IP end to end — radar, sensors, gyros, autopilot and steering — and we package it in a modular bridge system. As technology and regulation evolve, the ship can evolve with them."

Although hydrogen brings the largest emissions reductions in these vessels, Pascal points out that the bridge has a significant role in operational efficiency. "The IBS contributes by optimising routes and speed profiles and by making those tools easy to adopt. We partner closely on voyage and route optimization so skippers can realize the gains every day."

A recurring theme in Pascal's approach is open architecture. With autonomy standards still being shaped globally, Sperry Marine has chosen to build an ecosystem that welcomes future technologies rather than locking owners into fixed structures. "We prioritize structured data exchange and open interfaces from day one," he says. "We are active in collaborative programs, including Project Aurora with Fraunhofer CML, authorities and customers. It is important to help shape scalable standards, not just wait for them."

One of the newest systems emerging from Sperry Marine's innovation pipeline is the NAVPILOT 4500N. Pascal describes it as a versatile evolution. "It is our latest autopilot and track control system, designed for everything from conventional cargo ships to high-speed craft. It uses energy-efficient control algorithms and integrates deeply with the bridge, including joystick control. Operators can switch seamlessly between manual steering, joystick and track control and even create temporary routes on the fly."

With higher digitalisation comes higher cyber risk, and Pascal stresses that resilience is built into Sperry Marine's systems from the start. "Cyber is in our DNA," he says. "Our Secure Maritime Gateway is engineered to meet or exceed recognized IMO and IEC frameworks. Our engineers also help shape those standards, so the hardening measures are native, not bolted on after the fact."

Another fast-changing area is camera-based situational awareness. Pascal sees adoption accelerating rapidly. "We are seeing strong adoption of 360-degree bird's-eye camera systems. On very large container vessels, where full visibility from bridge-wings visibility can require a 20-meter run, these systems deliver a complete view directly from the conning position and it enhances berthing safety by improving distance awareness, and even allows live verification of tug operations."

He recalls a recent example in which an owner added an ORCA AI camera system late in the project. "Because our platform is open, we integrated it into the existing displays instead of adding extra screens. The crew can now toggle between radar, ECDIS, alarms and camera views on the same interface."

Asked what the Bridge of 2030 will look like, Pascal describes something that is more connected and more adaptive. "Screens will still exist, but the human-machine interface becomes more flexible and more contextual. The ship-shore data loop becomes continuous. The bridge will present more information, but more intelligently, reducing cognitive load while expanding capability."

Sperry Marine is also expanding its work in India through local integration partners who interface with Cochin Shipyard. Pascal calls this a strong model. "It ensures local execution with global product support. As projects scale from pilot to series, that approach is very effective."

As the conversation draws to a close, Pascal reflects on how owners should think about newbuilds in the coming years. He places special emphasis on radar performance, future-ready ECDIS and integrated awareness and control, but he returns repeatedly to the importance of trust and gradual transition. His final thought captures this philosophy well.

"Autonomy is reinforcement first. Build trust with crews, prove safety and efficiency, then scale to higher autonomy where it makes operational sense. That is how we unlock value without losing the mariner's expertise at the core."

SMART PORT 5.0 DIGITALIZATION

INSPIRING NETWORKS

SURAJ INFORMATICS

- HMI-Proximity Warning and Alert System
- Remote Crane Management System, RCMS
- Traffic and Parking Management
- Fuel Management System
- Locationing Solution
- Object identification and counting
- Crowd Management,
- IT Infrastructure and Data Centre
- Design and Implementation
- Assets and Inventory Management
- Bespoke Solutions
- Mobility Solution
- Video Surveillance & Entrance Management
- Visitor Management System
- AI & IoT Platform
- Smart Ports 5.0 System
- Terminal Automation System
- Digital Twin
- Gate Operating System
- Truck OCR
- Rail OCR,
- Crane OCR
- WMS
- YMS
- Unmanned Weighbridges

Contact Us

91-22-40309800

info@surajinformatics.com
www.surajinformatics.com

facebook.com/surajinformatics
twitter.com/surajinfo001

E 203, Tower No 7 CBD Belapur,
Navi Mumbai 400614.

TIMKEN

BUILT FOR THE LONG HAUL, ENGINEERED FOR ENDURANCE

Strength That Never Rests

Marine gearboxes face relentless stress, saltwater, shock loads, high RPMs.

Timken's spherical and cylindrical roller bearings, along with Lagersmith sealing and housing solutions, deliver proven durability and peak performance in the world's toughest waters.

Fewer breakdowns. Longer voyages. Maximum reliability.

SCAN FOR MORE DETAILS

CONTACT US

Timken India Limited
(CIN: L29130KA1996PLC048230)
Tel: +91 (80) 41362000 I Email: salesbangalore@timken.com

www.timken.com/en-in

Stronger. By Design.