south asia's premier maritime business magazine

maritime gateway

JUL - SEP 2024 WWW.MARITIMEGATEWAY.COM

₹100

DATE OF PUBLICATION:11/11/2024

INTERVIEW

N SIVASAILAM, IAS (RETD)
FORMER SPL SECRETARY (LOGISTICS)
DEPT OF COMMERCE, GOI

AI IN SUPPLY CHAINS DRIVING VALUE

Supply chain systems powered by AI are helping companies optimize routes, streamline workflows, improve procurement, minimize shortages and automate tasks end-to-end.

The Pioneer in EXIM Digitalization

A Single Unified Platform

Streamline Compliance, Enhance Efficiency, Secure Your Data

OUR NETWORK

15+ Countries

40,000+ Companies

100+ Shipping Lines/ NVOCCs

70,000+ Users

Invoice and Payments Reconciliation

Quick Import Release

Localized Document Cargo Compliance

Contact Us Now for SCMTR Filing!

9th Floor, Kailas Corporate Lounge
Vikhroli Hiranandani Link Road
Mumbai – 400079

+91 9863 122 122

support@odexglobal.com

www.odexglobal.com

COASTAL SHIPPING REKINDLED

The bill is expected to benefit Indian ship owners, non-vessel operating common carriers, cargo owners, Indian seafarers and shipyards.

Government of India in its recent cabinet meet announced several policies to address challenges in the shipping and port sector. Prominent among them is giving green signal to Coastal Shipping Bill 2024, which is intended to streamline regulations and make the coastal shipping industry more accessible.

The bill which is expected to be presented before Parliament soon, contains several landmark reforms like Indian vessels will no longer need a license to operate in domestic waters, and will create a more seamless and cost-effective transport chain by connecting India's rivers and coastal ports. The aim of the bill is to increase the market share of Indian vessels in coastal shipping. It also envisages to establish a committee to formulate the National Coastal and Inland Shipping Strategic Plan and creation of a coastal shipping database.

The bill is expected to benefit Indian ship owners, non-vessel operating common carriers, cargo owners, Indian seafarers and shipyards. Provisions in the Coastal Shipping Bill, 2024, may assist protect historically underrepresented groups, but their success will depend on how well it is implemented and how actively these communities are engaged to make sure they are not left as victims in the changing marine environment. The effectiveness of the bill however will depend on strong implementation and enforcement mechanisms to ensure that the rights of vulnerable groups are protected.

Union Budget 2024-25 presented earlier in Parliament has also stressed on government’s intent to take proactive steps aiming to position India as a global leader in maritime innovation, sustainability and economic growth. The budget announced reforms to improve the share of the Indian shipping industry and generate employment. These reforms aimed at facilitating easier ownership, leasing, and flagging of vessels, which are expected to generate significant employment opportunities and strengthen India’s maritime capabilities. Budget also mooted reforms in GST to be simplified and standardised to improve export competitiveness and reduce total logistics cost, lower production costs, and enhance the competitiveness of India’s shipbuilding and repair industry.

Let us hope that policies and reforms initiated by the government will boost India’s maritime trade, and will place it among the leading maritime trade nations.

R Ramprasad
Editor-in-Chief and Publisher
ramprasad@maritimegateway.com

south asia's premier maritime business magazine

maritime gateway

EDITORIAL ADVISORY BOARD

EDITOR AND PUBLISHER
R RAMPRASAD, ramprasad@maritimegateway.com

ASSOCIATE EDITOR
A S L NARASIMHA RAO
narasimharao@maritimegateway.com

DESIGN CONSULTANT
NAGARAJU NS, DESIGNZONE

MARKETING & SALES
SATISH SHETTI, satish@maritimegateway.com +91 99207 05534

DIGITAL STRATEGY
HARSHA, harsha@maritimegateway.com

IT & ADMINISTRATION
KISHORE P V

CLIENT RELATIONS
MADHUKAR, madhukar@maritimegateway.com +91 93937 68383

EVENTS
VINAY

FINANCE
RAKESH U

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 M/s PVB Printers, 11-5-418/A, Ground Floor, Skill Adobe Apartment, Redhills, Lakdikapool, Hyderabad - 500004. 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

FEEDBACK: Readers are advised to send all feedback and comments to editor@maitimegateway.com

We take care of your logistics so you focus on your business.

Chartering RoRo Freight Systems

Chartering RoRo is a worldwide provider of complete freight and logistics solutions with a firm belief in ethics, total commitment to our clients and a quest for excellence in delivering solutions set us apart from the rest in the field.

OUR USP

Market Intelligence
Deep market connect with local & hinter land markets - global destinations.

Supporting Demands
Special liner contract & own fleet to support customer's complex demands with 1st class service.

Cargo Specialist
Over 2 decades of experience handling cargo & stowage across 17 countries.

Global Consultant
Registered Expert with global consultant to advise on ports & infrastructure.

OUR SERVICES

Liner & NVOCC Agency

- Deep market connect presence.
- Own bond & PDA in ports & terminals
- Special rates with CFS/CD
- All directions - one stop shop for trade
- Team specialises in destination markets
- Customised solution for EXIM cargo

Freight Forwarding - Containers

- FL forwarding/ LCL forwarding (sea/air/land)
- Tier - 1 rates on MLO for long haul destination
- House BL- duly compliant with US trade bond
- Spot rates on feeders service (ME+ ISC+ SEA+ FE)

Break Bulk & RoRo Forwarded

- Strong Broker network & direct liner relations
- Cars in Containers & RoRo
- Track Record with OEM (CO)

Supporting services & advisory

- Feeder slots/ space forwarding
- Container Trading (SOC) on demand
- Vessel deployment/ Spot fix & chartering
- Leasing

Corporate Head Office
205, 2nd Floor, Antariksh Thakoor House, Makwana,Road, Marol, Andheri East, Mumbai -400059, Maharashtra, India.

Main Office: +91-22-285-31001 / +91-961-988-0328
US Office (Toll Free): +1-855-634-1500
General: info@CRFreightSystems.com; **Booking:** pricing@CRFreightSystems.com

KOLKATA PORT MECHANISES BULK CARGO HANDLING

The mechanisation aims to streamline dry bulk cargo handling at the port, further reinforcing Haldia Dock Complex's position as a critical gateway for maritime trade.

Syama Prasad Mookerjee Port, Kolkata (SMPK) has issued a Letter of Intent (LoI) to M/s Bothra Shipping Services Pvt. Ltd. for the project "Mechanisation of Berth No. 5 (erstwhile Berth No. 4B)" at Haldia Dock Complex (HDC) of SMPK on a Design, Build, Finance, Operate & Transfer (DBFOT) basis.

The issuance of the LoI marks the commencement of the project, which aims to streamline dry bulk cargo handling at the port, further reinforcing HDC's position as a critical gateway for maritime trade.

The project involves the development and mechanisation of Berth No. 5, with a robust and modern system that will include the installation of rail-mounted Mobile Harbour Cranes with a capacity of 1000 TPH, conveyor systems of 2000 TPH, stacker-cum-reclaimer units of 2000 TPH, and a mechanised Silo-based rapid wagon loading system with a rated capacity of 2000 TPH. The facility will also feature a comprehensive rail and road evacuation system, along with supporting infrastructure such as a backup area covering approximately 44 acres. The total project cost amounts to ₹365.88 Cr with an expenditure of ₹343.58 Cr. The construction phase is expected to span 30 months, followed by a concession period of 30 years.

Once operational, the berth will boast a cargo handling capacity of 5 MMTPA, facilitating the handling of diverse dry bulk cargoes, including coal and limestone. Congratulating the team at HDC, the Chairperson, Rathendra Raman, said, "The project's completion will significantly boost the port's dry bulk handling capacity, meeting the rising demand for efficient cargo operations at Haldia Dock Complex. This mechanisation initiative, paired with enhanced infrastructure, is expected to bring long-term benefits to SMPK and its stakeholders by streamlining cargo operations and increasing throughput efficiency."

"SMPK handled 31.16 MT of cargo during the first half of this financial year, compared to 30.91 MT during the same period of FY23."

Raman further added, "I would like to thank our stakeholders, the consortium of M/s Bothra Shipping Services Pvt. Ltd. and M/s Ripley & Co. Stevedoring & Handling Pvt. Ltd., M/s JSW Infrastructure Ltd., and M/s Orissa Steavedores Ltd., who have given importance in expanding the capacity of SMPK and meeting the evolving needs of global trade. The mechanisation of Berth No. 5 is set to become a landmark development, further strengthening Haldia Dock Complex's position as a premier dry bulk cargo handling hub in India.

The port already has in progress has two PPP projects related to bulk cargo handling in various stages of completion — facilities at Shalukkhali to increase the liquid cargo handling capacity of the Haldia dock complex (HDC) and mechanisation of berth 2 at HDC for handling dry bulk cargo — at an estimated cost of over ₹700 crore.

SMPK, formerly known as Kolkata Port Trust, has cargo handling capacity of 87.35 million tonnes (MT) with its two dock systems, KDS and HDC. "We are planning to increase the combined capacity by around 30 MT in the next seven years through 12 PPP projects," said SMPK Chairman Rathendra Raman. Notably, projects worth around ₹620 crore have been completed at the port since 2019, including the construction of a liquid cargo handling jetty at HDC, a second railway line from Durgachak to HDC, and a rail overbridge at Ranichak at HDC, among others.

SMPK handled 31.16 MT of cargo during the first half of this financial year, compared to 30.91 MT during the same period of FY23.

RCEP WILL HELP INDIA GARNER MORE TRADE

While India's growth over the past decades has appeared impressive, the contribution of trade to that acceleration has been small and is decreasing.

Indian policymakers have traditionally scorned advice from overseas, especially from multilateral agencies such as the World Bank. Suggestions from the latter's most recent India Development Update are therefore likely to be ignored.

That would be a mistake. The report's primary recommendation, that India reconsider its pessimism about plurilateral trade deals, deserves a sympathetic hearing.

The Bank's concerns are easy to understand. While India's growth over the past decades has appeared impressive, the contribution of trade to that acceleration has been small and is decreasing.

The degree of India's participation in global value chains has been similarly disappointing. Meanwhile, other developing countries with less restrictive attitudes toward trade — particularly in Southeast Asia — have seen jobs and prosperity expand thanks to their membership in large trade blocs.

What will raise hackles in New Delhi in particular is the Bank's suggestion that India could do better by joining the Regional Comprehensive Economic Partnership, the giant trade agreement that spans the 10 member states of the Association of Southeast Asian Nations alongside their partners in East Asia and Oceania.

India took part in RCEP negotiations for years before dramatically pulling out at the last minute. The Japanese, in particular, continue to be disappointed: They were hoping India's presence in RCEP would help balance out China.

At the time, policymakers thought that signing up to a trade deal that centered the People's Republic was a mistake. It wasn't just that India was — and is — paranoid about its manufacturing being relatively uncompetitive compared to the mainland's.

Back in late 2019, there was simultaneously a certain hubris about India's ability to replace China in global value chains. And leaders didn't want to give Washington the impression they preferred to cooperate more closely with Beijing.

Today, those assumptions no longer hold. A US-led move toward greater economic integration seems entirely unlikely. The limited ambition of President Joe Biden's Indo-Pacific Economic Framework has driven that point home.

India has also become far more rational about evolving supply chains. Given the sheer heft of Chinese manufacturing, it would be absurd to maintain policies that essentially ignore the gravitational pull of the mainland.

If you intend to offer an alternative to China in global value chains, you first need to participate in them. Every time a new trading power has supplanted another, it has done so with the compliance of the corporations, investors, and traders of the older manufacturing hub. British investment industrialised the US in the 19th century. Japanese companies were pivotal in China's rise.

Nor can Indian manufacturers continue to be paralysed by fear of Chinese competition. For one thing, India already has a free-trade agreement with ASEAN — countries that are, in turn, closely integrated with China.

It's hard to pinpoint, in today's value chains, where value is being added. It's doubly hard for slow-moving bureaucracies such as India's. In other words, local producers are already pretty exposed to Chinese competition through trade with Southeast Asia, but without any of the benefits of participation in RCEP, from increased investment to export markets.

Politically, India is far more distrustful of China than it was five years ago. But it has also begun to reconsider its approach to investment from the mainland and Hong Kong. Some restrictions have already been lifted. Senior policymakers have admitted that setting up manufacturing ecosystems without investment and knowhow from the Chinese private sector might be impossible.

Nobody in government has yet talked about revisiting RCEP. Given grudging acceptance of the role that corporate China will have to play in India's development, however, that is the logical next step.

"Waiver of inter-state transmission charges for a period of 25 years will be allowed to the manufacturers of Green Hydrogen and Green Ammonia for the projects commissioned before 30th June 2025."

Things might be different if India had the kind of surging private-sector investment or job growth that could sustain high domestic demand. Or if it had shown greater enthusiasm for integration with partners in the West, particularly the European Union.

But neither is the case. For India to keep growing, it will need trade. And it will need to become part of value chains that, for the foreseeable future, will have a large Chinese component. If there's no escaping this fact, then surely being inside RCEP is better for India than staying out?

What if India joins RCEP?

Joining the partnership could help India inch closer to its ambitious $1 trillion export target by 2030. India would have had to gradually slash tariffs by about 90% on goods traded with other member nations over the next two decades, and they'd do the same in return. Lower tariffs would mean cheaper imports, which cuts costs for businesses that rely on goods and parts from abroad. And that translates to lower prices for consumers, too.

Beyond cost-saving, Indian businesses will also have access to a much larger market, as the RCEP nations comprise 30% of the global population. Furthermore, the FTA ensures that Indian businesses operating in different member countries won't have to navigate complex cross-border trade regulations.

And given that RCEP member countries account for at least a quarter of all international trade, you could say that it's a pretty big deal!

On the flip side, India would also have to open up its borders, letting in a wave of goods from other member countries. And that's where the concerns start.

However, this is not the first time the offer has popped up.

Back in 2019, India was in the same boat. It had to decide whether to join the RCEP. And it chose to step back instead.

Fast-forward to today, and the debate is back in full swing Should India reconsider its decision?

And guess what? The World Bank thinks it should.

Its logic is simple. China has been shifting away from low-skill, labour-intensive manufacturing. Rising wages and a focus on high-value sectors have pushed them in a new direction. And the World Bank sees this as a perfect opportunity for India to step in and grab a bigger slice of the global manufacturing pie.

But there's a warning too.

India's exports have been moving toward capital-intensive goods like high-tech electronics, which are great for innovation but not so great for job creation. In contrast, labour-intensive industries like apparel, leather, textiles and footwear generate almost 40% of formal manufacturing jobs. And they've got the potential to create even more, which is exactly what India needs right now, given that urban unemployment is still hovering around 17%.

So yeah, the World Bank thinks we can significantly up our game in the manufacturing sector by tugging on the RCEP.

Moreover, by staying out of the RCEP, India might be missing out on a golden opportunity to get more deeply involved in global supply chains. Like one key advantage of RCEP is the way it handles something called the "Rules of Origin" and the "Cumulation Rule".

Phase 1 of the Galathea Bay is proposed to be commissioned in the year 2028 with handling capacity of 4 Million TEUs, increasing to 16 Million TEUs in the ultimate stage of development by 2058.

GALATHEA BAY: ANOTHER TRANSSHIPMENT AMBITION

The centre has notified the international transshipment hub at Galathea Bay in the Andaman & Nicobar Islands as a 'Major Port'. With this, the proposed ₹ 44,000 crore mega project is officially under the administrative control of the union ports, shipping, and waterways ministry. It is also eligible for central funding and will be developed under the public-private partnership model.

Once operational, the Galathea Bay project will help capture a large share of transshipped cargo which is handled at ports outside India.

The proposed facility is envisaged to be developed in four phases with Phase 1 is proposed to be commissioned in the year 2028 with handling capacity of 4 million TEUs, increasing to 16 million TEUs in the ultimate stage of development by 2058. The first phase is expected to be built at a cost of ₹18,000 crore.

The detailed project report for the first phase has been readied and all necessary clearances are in place.

"Phase 1 includes construction of breakwaters, dredging, reclamation, berths, storage areas, building and utilities, procurement and installation of equipment, and development of port colony."

The Finance Ministry has already given an in-principle approval, while environment clearances have been received. Phase 1 includes construction of breakwaters, dredging, reclamation, berths, storage areas, building and utilities, procurement and installation of equipment, and development of port colony. Core infrastructure will be developed with government support, with the Shipping Ministry following a landlord model and is scheduled for completion in 2028.

"Work on Phase 2 will be taken up post completion of phase I and after assessing the demand. Separate tenders will be floated for Phase 2. In all likelihood, we are anticipating a maximum of seven years gap between Phase 1 and Phase 2, but if demand pick ups, this time gap would be brought down," said the ministry officials.

India, on its part, has been pushing for developing transshipment hubs and deep draft port projects in its bid to attract more international container cargo. Nearly 75 per cent of India's trans-shipped cargo is being handled in ports outside of the country with Colombo handling the majority of international trans-shipped cargo. This is where the proposed port becomes one of strategic importance.

Strategic importance

Ministry officials said the Galathea Bay Port, due to its strategic location in proximity to the East-West shipping corridor of the world, is suitable to attract both gateway and transshipped cargo.

Located strategically between Singapore and Colombo – two major trans-shipment ports on the international sea trade / shipping route – the greenfield port at Galathea Bay will act as a feeder to these two; apart from itself being a transshipment port to shipments from Bangladesh and Myanmar.

Apart from this port, four others – Deendayal, Vadhavan, Tuiticorin, Paradeep - will have a draft in the range of 18 to 23 meters by 2030. Further, three ports, that include Navi Mumbai, Cochin and Jawaharlal Nehru Port would be drafted in the range of 20 - 23 meters by 2047 in order to align with global standards and allow access of larger vessels.

BUILDING INTEROPERABLE DIGITAL INFRASTRUCTURES

"In addition to in-house R&D, Ocean Network Express (ONE) participates in industry initiatives like DCSA (Digital Container Shipping Association), and SGTraDex which focus on building interoperable digital infrastructures to streamline logistics processes across the industry," reveals Kosuke Wada, EVP Technology, Ocean Network Express

At what stage is the shipping and logistics industry in using technology? What is the timeline by when we can confidently say our industry fully runs on technology like other industries?

The shipping and logistics industry is undergoing a rapid transformation, driven by the increasing adoption of technology to enhance operational efficiency, visibility, and resilience. ONE has already transitioned 99% of its customer bookings to digital platforms and aims to achieve 100% by 2025. The full adoption of technologies such as electronic bills of lading (eBL), with a target of 100% eBL, is expected by 2030. This marks a steady but gradual transition towards a fully digital future for the industry.

How is Ocean Network Express using next generation technologies - Artificial Intelligence, Machine Learning and IoT in its operations? What has been the impact on time and cost efficiencies?

ONE leverages next-generation technologies to optimize its operations and improve customer experience. These technologies are used for real-time data processing, enhancing system architectures to handle big data, and improving supply chain visibility. The machine learning models generate various demand and supply predictions, the resulting efficiencies have led to reduced operational costs, improved time management, and streamlined processes, contributing to more agile and resilient operations.

How do you keep yourself abreast of the emerging technologies and their applications, to get the best of first mover advantage?

ONE stays ahead of emerging technologies through continuous innovation and collaboration with industry partners and stakeholders. Our Digitalisation Roadmap identifies areas of improvement based on customer feedback and evolving technological trends, ensuring that we remain at the forefront of digital solutions.

What are the Key Performance Indicators (KPIs) you use for measuring the effectiveness of technology solutions being implemented?

ONE is committed to delivering exceptional customer experiences through digital innovation. In 2023, we have successfully transitioned the booking channel primarily to digital interfaces, and we are focusing on real-time communication channels. To achieve this, we have established quantitative goals for metrics like 'First Response Time' and 'Average Handling Time' to ensure prompt responses and timely resolutions of customer inquiries and requests. Our goal is to have 70% of our customers' interactions handled through digital communication channels, such as chat and self-service tools by 2025.

To streamline operations and improve efficiency, we have implemented Robotic Process Automation (RPA) solutions, particularly for bill of lading processes. RPA has also enabled ONE to maintain high quality standards despite increased volumes. Additionally, we are driving the adoption of electronic bills of lading (eBL) since 2023, with a goal of reaching a 20% adoption rate by the end of 2024.

These key performance indicators (KPIs) are instrumental in measuring the success of our digital transformation initiatives and underscore our commitment to becoming the industry leader in customer satisfaction and operational excellence.

How does Ocean Network Express invest in technological innovation?

ONE invests heavily in technological innovation through its in-house research and development initiatives, and by collaborating with industry partners to develop and deploy new digital tools and platforms. We also participate in industry initiatives like DCSA (Digital Container Shipping Association), and SGTraDex which focus on building interoperable digital infrastructures to streamline logistics processes across the industry.

AI IN SUPPLY CHAINS DRIVING VALUE

Supply chain systems powered by AI are helping companies optimize routes, streamline workflows, improve procurement, minimize shortages and automate tasks end-to-end.

Using artificial intelligence (AI) in supply chains can revolutionize the planning, production, management and optimization of supply chain activities. By processing vast amounts of data, predicting trends and performing complex tasks in real time, AI can improve supply chain decision-making and operational efficiency. Even in the relatively nascent area of sustainability tracking and measurement, AI adoption is as high as 62%, according to an EY study.

How does AI in supply chain work?

A supply chain can become complicated, especially for manufacturers of goods who oftentimes rely on their partners to ship their goods in a timely and organized fashion. AI can keep all parts of a supply chain in balance with its ability to find patterns and relationships unlike a traditional non-AI system. These patterns can help optimize logistics networks all the way from the warehouse to cargo freighters to distribution centers.

Modern supply chains are expansive and require thorough oversight to avoid unnecessary disruptions. AI systems can offer assistance in forecasting, such as demand planning or being able to predict production and warehouse capacity based on customer demand. Some are using AI to gain insights from a broader data set collected from Internet of Things (IoT) devices deployed across the supply chain.

AI can also be used in supply chain operations for tracking inventory levels and market trends. In inventory management, AI can enhance supply chain visibility, automate documentation for physical goods and intelligently enter

data whenever items change hands.

It can help with transparency for the manufacturer and provide valuable data for all stakeholders in the supply chain. AI's enhancement of supply chain transparency offers unmatched time and cost savings. It also helps companies meet ethical and sustainability standards, which have historically been time-consuming and expensive.

Benefits of AI in supply chains

An AI-powered supply chain has many potential benefits for building supply chain resilience and a stronger base for manufacturers.

Lower operating costs

AI can learn and understand complex behaviors and can learn repetitive tasks, such as tracking inventory, and complete them quickly and accurately. AI solutions can reduce overall operating costs by identifying inefficiencies and mitigating bottlenecks.

Advanced real-time decisions

AI uses historical and real-time data to make real-time decisions, oftentimes with conversational answers. AI processes the data and can analyze the root of the problem and suggest a solution, in that moment.

Cut down on errors and waste

One of the benefits of AI technology is its ability to spot behaviors and patterns. By doing so, manufacturers and warehouse operators can train algorithms to find flaws, such as employee errors and product defects, long before bigger mistakes are made. Furthermore, AI can help streamline an ERP framework and can be directly embedded.

More tailored inventory management

AI can help forecast demand with its extensive use of inventory information. It can help manufacturers and supply chain managers gauge a customer's interest in a product and determine whether a customer's demand is rising or falling and adjust accordingly. It can aid in a manufacturer's decision-making process and improve the accuracy of demand forecasting.

Improved warehouse efficiency

AI, specifically ML models, helps lay out warehouses more efficiently by being able to evaluate the quantity of materials coming in and improve service levels. The AI system can also plan the optimal routes for machinery and for workers and be an overall warehouse management powerhouse.

"The findings of the report show that the maritime sector, often perceived as traditional and resistant to change, is now embracing AI with remarkable enthusiasm. This shift is driven by the need for greater operational efficiency, enhanced safety, and a commitment to sustainability."

MARK WARNER
GLOBAL CONTENT AND COMMUNICATIONS DIRECTOR, LLOYD'S REGISTER

Better supply chain sustainability

By using the predictive analytics that AI offers, companies are able to make supply chains more sustainable and better for the environment. Manufacturers can use AI and ML models to optimize truckloads, predict the most efficient delivery routes and reduce product waste in the marketplace.

Optimized operations through simulation

Supply chain managers are always looking to better understand their operation. With AI-powered simulations, they're able to not only gain insight, but also understand and find ways to improve. AI, working alongside digital twins, can visualize potential supply chain disruptions and visualize through 2D visual models external processes that might create unnecessary downtime.

Machine Learning

A subset of AI is machine learning (ML), which is the process of a system taking in data sets and learning processes from them, as opposed to being programmed with built-in instructions. ML can go far beyond what traditional software can do. It can forecast customer demand, discover patterns, make market predictions, interpret voice and written text, and analyze a multitude of factors that can optimize a supply chain's workflow. More use cases are emerging than ever before in application of ML. For instance, Hafnia, the world's largest product tanker owner, is behind one of shipping's most keenly watched foundational AI joint ventures, Complexio.

Across industries, pioneering organizations are already harnessing AI and ML technologies to transform their supply chains. During the peak of the Covid-19 pandemic, Amazon leveraged AI-driven predictive forecasting to respond to unprecedented demand spikes, while Procter & Gamble employed demand-sensing tools to fine-tune its supply chain responses in real-time. In the automotive sector, BMW is using generative AI to optimize spare parts inventory management, maintaining optimal stock levels while reducing holding costs. UPS has developed an AI-powered algorithm called ORION for last-mile tracking and optimization, and Maersk utilizes IoT and AI to monitor cargo location, temperature, and humidity, predicting delays and ensuring safety.

Generative Artificial Intelligence

While this technology gained popularity, further advancements such as generative AI and tools such as chatbots/ChatGPT have taken off and shown how beneficial the systems can be for supply chain management. GenAI creates new content, such as numerical data, images, text, audio or video, based on data on which it has been trained. Recent advances make it simpler to use and realize value from, but the technology isn't new. Already around 40% of supply chain organizations are investing in GenAI, focusing on knowledge management applications.

Global Fortune 500 companies

and government organizations are developing GenAI tools with partners to map and navigate complex supplier networks. These tools make it easier to plan for alternative suppliers in the event of a disruption and offer product tracing platforms to meet regulatory or ESG requirements.

Leading US retailers and many European container shipping companies are using bots powered by GenAI to negotiate cost and purchasing terms with vendors in a shorter time frame. The retailer's early efforts have already reduced costs by bringing structure to complex tender processes. The technology presents the opportunity to do more with less, and when vendors were asked how the bot performed, over 65% preferred negotiating with it instead of with an employee at the company. There have also been instances where companies are using GenAI tools to negotiate against each other.

McKinsey reports that early adopters of AI-enabled supply chain management (SCM) have achieved impressive improvements, including 15% reductions in logistics costs, 35% decreases in inventory levels, and 65% increases in service levels. These technologies are transforming key areas of SCM, from demand sensing and supply chain visibility to risk identification, leading to increased efficiency, reduced costs, and enhanced customer satisfaction.

In 2024, Asia-Pacific is expected to account for the largest share of 36.9% of the AI in supply chain market. This market is projected to reach $24,214.6 million by 2031. Asia-Pacific's large share is attributed to the proliferation of advanced supply chain solutions, the rising deployment of AI tools across the region, and efforts by major market players to implement AI technology across various sectors. Developing APAC countries, including Thailand, the Philippines, and Vietnam, are formulating comprehensive national policies to promote the adoption and regulate the deployment of AI. Government strategies in countries such as Japan and Singapore are focused on fostering AI ecosystems and managing projects effectively.

In 2024, China is expected to account for the largest share of the AI in supply chain market in Asia-Pacific. China's large market share is mainly attributed to the growing use of Cloud services, the increasing government focus on technology development, and rising labor costs in the country.

A new research by British consultancy Thetius estimates that the maritime artificial intelligence (AI) market has nearly tripled in size in the space of just one year and is now valued at $4.13billion, with a projected five-year compound annual growth rate of 23%.

The report commissioned by Lloyd's Register, highlights six critical areas of AI application, including data-driven condition-based maintenance and port management.

When deploying AI technologies, the report argues that it makes sense to do so in iterations to ensure best risk management. For example, start by using AI and machine learning to automate repetitive easy processes, giving people the opportunity to focus on more complex tasks. An easy example, according to Thetius, is email organisation.

"Streamline time-consuming processes, then move on to bigger tasks before tackling the seriously complex ones," the report advises, adding: "Implementing AI solutions incrementally allows for testing and optimisation at each stage. This approach helps to identify potential issues early and make necessary adjustments without disrupting operations."

Commenting on the new study, Mark Warner, global content and communications director at Lloyd's Register, said: "The findings of the report show that the maritime sector, often perceived as traditional and resistant to change, is now embracing AI with remarkable enthusiasm. This shift is driven by the need for greater operational efficiency, enhanced safety, and a commitment to sustainability. AI technologies are being harnessed to optimise voyages, predict maintenance needs, enhance navigational safety, and manage energy consumption more effectively."

Frank Coles, the Former Head of Wallem Group, pointed out that AI

Top 5 Indian Companies Offering AI Solutions

LogiNext: Founded in 2014 by Dhruvil Sanghvi and Manisha Raisinghani, LogiNext provides AI-enabled solutions for logistics and on-field workforce planning, tracking, and optimisation.

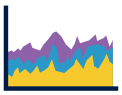
Pickrr: Founded in 2015 by by Rhitiman Majumder, Gaurav Mangla, Ankit Kaushik and Ronak Agrawal. Gurugram-based Pickrr is a SaaS-based logistics startup.

GoBOLT: Founded in 2015 by Sumit Sharma, Parag Aggarwal, Naitik Baghlaall, GoBOLT provides technology and solutions in supply chain management covering warehousing, transportation and supply chain management.

Locus: Founded in 2015 by Nishith Rastogi, Geet Garg, Locus provides smart logistics solutions, including route optimisation, real-time tracking, truck allocation, insights and analytics.

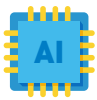
Shipsy: Founded in 2015 by Soham Chokshi, Dhruv Agrawal, Himanshu Gupta, Sahil Arora – all IIT alums, Shipsy is the SaaS-based smart logistics management platform.

Companies Harnessing AI, ML Tech in SCM



Amazon leveraged AI-driven **predictive forecasting**

Procter & Gamble employed **demand-sensing tools**



BMW uses **GenAI** to optimize spare parts inventory management

UPS developed an **AI-powered algorithm** for last-mile tracking, optimization

Maersk utilizes **IoT, AI** to monitor cargo location, temperature, and humidity

remains rather opaque for many in shipping. "A lot of what is called AI in the maritime marketing blurb is more machine learning than the generative AI using neural networks in deep learning," Coles wrote, adding that generative AI could disrupt shipping in ways nobody has even considered at the moment.

Commentators have been waxing lyrical about how AI is set to transform the maritime industry, and with good reason. Increasingly compelling use cases are emerging in applications such as route optimisation, safety of navigation, fuel efficiency, compliance, predictive maintenance, cargo management and many more.

However, amidst the hype there is a need for concerted industry effort in developing collaborative forum and policy frameworks. "We are seeing early adopters within maritime sector embrace AI with varying degrees of effectiveness. There however seems to be a trend to stick GPT at the end of maritime terms and rush out applications as businesses hurriedly take their seats in the maritime AI theatre," commented Manish Singh, CEO of Aboutships. "Often this is happening pre-maturely, without optimal data architecture and before appropriate policy and resilience frameworks are put in place."

Lasse Kristoffersen, President and CEO of Wallenius Wilhelmsen, predicts,

"A lot of what is called AI in the maritime marketing blurb is more machine learning than the generative AI using neural networks in deep learning,"

FRANK COLES
FORMER CEO, WALLEM GROUP

"Generative AI in shipping will start to deliver real impact and many companies will start utilising technology like Copilot from Microsoft."

Foundational AI

Foundational AI's main focus is to enable human-machine collaboration by connecting to all areas of a company's infrastructure and providing a centralised hub that serves as the primary point of AI-driven analysis and decision-making. This transformational approach takes the role of AI from isolated applications in separate departments to build a unified, integrated system that enhances the entire organisation's performance and productivity.

"90% of global workforces spend 60% of their time on recurring tasks. In an AI-first world, we can greatly reduce this by automating the processing of routine tasks, like assembling a ship's clearance package and simultaneously provide our leadership teams with enhanced macro views of business operations, enabling them to identify areas to improve upon," commented Mikael Skov, CEO, Hafnia.

Challenges

While it's important to embrace AI, it's also imperative to understand all the benefits and challenges that can come with it before introducing a new system into a supply chain. Manufacturers and logistics providers should take the necessary steps to prepare their supply chains for AI systems and understand that an optimization of this magnitude can take time and resources.

Upgrades can be time-consuming and expensive, with McKinsey reporting an average of 2.8 years and €55-100 million to fully implement a new supply chain system. Data quality is also crucial, as the effectiveness of AI models hinges on the accuracy, consistency, and relevance of the data they are trained on. Explainability and trust are key concerns, as the opaque nature of some AI systems can hinder stakeholder buy-in. Bias is another issue that must be addressed to ensure ethical decision-making in the supply chain.

The success of AI in SCM will rely on data professionals with domain knowledge driving the technology forward. Organizations must foster comprehensive learning programs, upskill their workforce, and create cross-functional teams to bridge the gap between technical and operational expertise. The adoption of AI will require a strategic plan that aligns with the goals and vision of the organization, as well as a data strategy that prioritizes data quality and representativeness.

INDIA'S EXPORT-LINKED JOBS ON A DECLINE

India's labour-intensive sectors such as textiles, leather, gems and jewellery, and marine products are experiencing a sharp decline.

Jobs in India generated directly and indirectly connected to international trade have declined over the last decade, the World Bank said, adding that the country has missed out on the export opportunity presented by China's withdrawal from labour-intensive manufacturing sectors.

World Bank economists noted that India's share in global exports of labour-intensive sectors such as apparel, leather, textiles, and footwear has declined. Meanwhile, countries like Bangladesh, Vietnam, Poland, Germany, and France have managed to increase their global export share in major job-creating sectors by up to 2 per cent between 2015 to 2022.

In May, it was reported that India's labour-intensive sectors such as textiles, leather, gems and jewellery, and marine products are experiencing a sharp decline. India's shipments from these four high job-generating sectors have dropped nearly 12 per cent compared to pre-pandemic levels five years ago (FY18).

India's textile and garment exports have remained stagnant at around $35 billion, while Vietnam and Bangladesh have gained market share, bolstered by free trade agreements (FTAs) and Least Developed Country (LDC) status, which provide a 10-15 per cent duty concession in the Western countries.

The Bank observed that while India is the fastest-growing major economy, with an 8.2 per cent growth rate in the last fiscal year, urban youth unemployment remains high at 17 per cent. The Bank suggested that to create more trade-related jobs, India should integrate more deeply into global value chains, which would also create opportunities for innovation and productivity growth.

The World Bank stated that the global trade landscape is challenging and undergoing significant changes, yet India has considerable untapped potential to leverage international trade for development despite dynamic services exports.

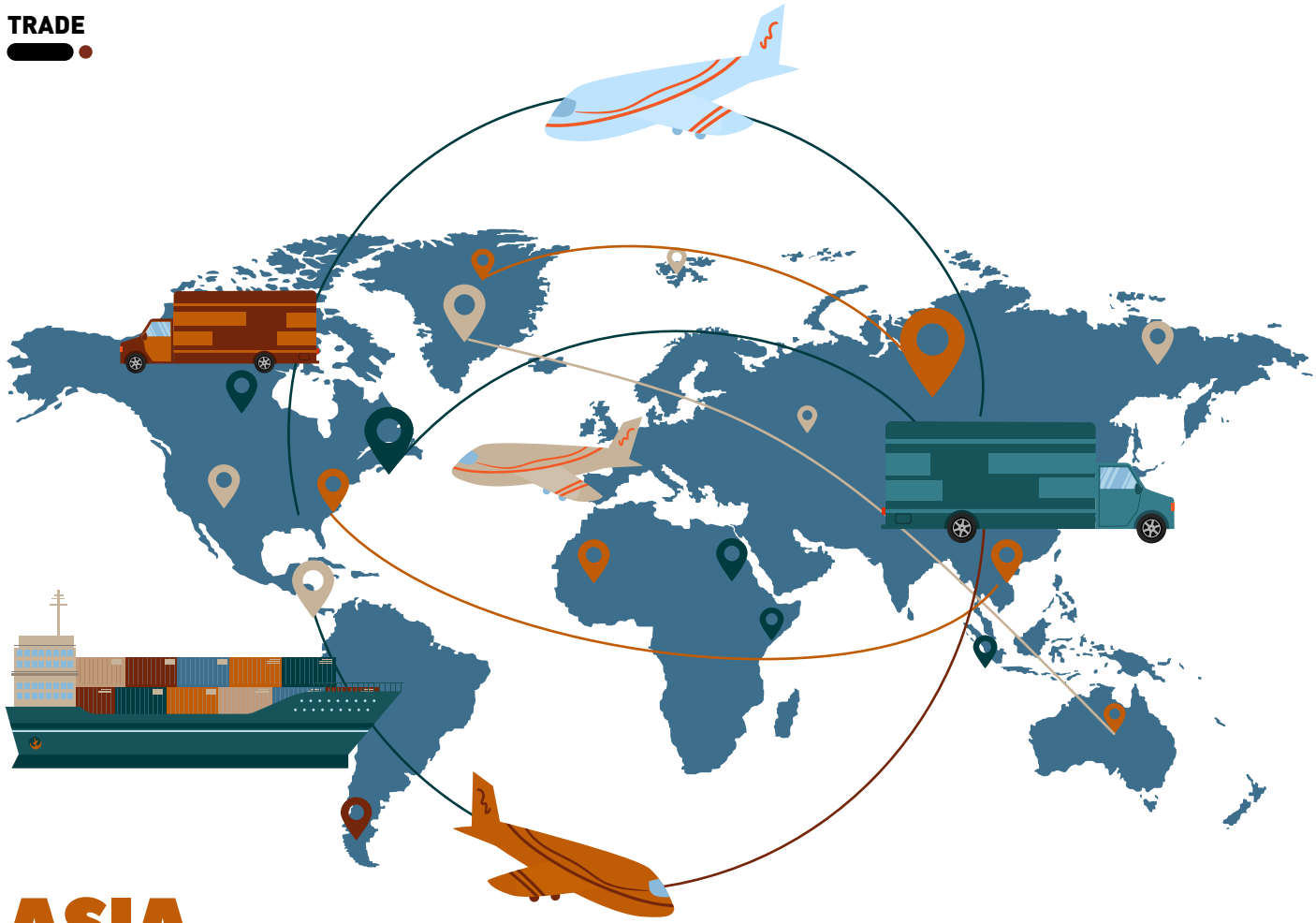
"India could further leverage Global Value Chains (GVCs) to their full potential, generating more jobs and enhancing productivity," the Bank said.

The Bank noted that Indian firms could benefit significantly from integrating into GVCs; however, India's share in GVCs has declined due to "policy barriers and other limitations."

World Bank economists suggested that India could benefit from a new strategic plan to diversify exports, leverage the changing geopolitical landscape, reduce trade costs, and improve trade facilitation. "India has made progress in facilitating trade and re-engaging with global markets, but progress is limited by new barriers affecting goods, services, and investments," the Bank said.

New diversified markets helping India's exports

Increasing exports to markets such as Brazil, South Africa and Saudi Arabia are boosting the growth of the country's outbound shipments, FIEO said. Federation of Indian Export Organisations (FIEO) President A Sakthivel said the Economic Survey has rightly highlighted India's growing and diversifying merchandise trade.



ASIA

THE EPICENTRE OF GLOBAL TRADE SHIFTS

Four trends in geopolitics and global trade patterns suggest a leading role for Asia as globalization enters its next phase.

The world remains deeply connected by virtue of global trade, but the geometry of economies' connections has been shifting. Some major economies are moving toward trading more with geopolitically closer partners, while others continue to deepen their international trade networks both geographically and across the geopolitical spectrum.

Asia is at the forefront of this shifting geometry of global trade in all its shapes. How changing trade patterns will play out is far from certain, but four key trends in the region are already evident. Understanding these trends can help business leaders anticipate the shape of the region's economic landscape and the region's role in global markets.

Trade connections within Asia are intensifying economic interdependence

Asia is now the world's second-most integrated trade region, after the European Union. In 2022, nearly 57 percent of the value of Asia's trade originated within the region, up from 54 percent in 2000. This stands in contrast to most other regions, which have witnessed declines in the intraregional share of trade. Asia's regional trade integration has been driven by the rapid growth of manufacturing supply chains

across borders. About two-thirds of intra-Asian trade is in "intermediates"—parts used in the manufacture of other goods.

The deepening economic interdependence of China and the Association of Southeast Asian Nations (ASEAN)—each other's largest trading partners—stands out. ASEAN accounted for 15 percent of China's total trade in 2023, up from 10 percent in 2010, while China accounted for 20 percent of ASEAN's total trade in 2023, up from 12 percent in 2010. Further integration could be propelled by the Regional Comprehensive Economic Partnership, the world's largest free-trade agreement, which covers 15 economies in the Asia–Pacific region.

As Asian economies' trade expands, some choose geopolitically close trading partners

Asian economies are increasingly participating in trade, and geopolitics may be influencing the shape of this growth. Globally, between 2017 and 2023, the value of goods traded grew by around 5 percent each year, on average. Many Asian economies' annual trade grew faster: by 6 percent in ASEAN, by more than 7 percent in China and India, and by 8 percent in Vietnam.

Geopolitics may be exerting an increasing influence on the shape of this growth. The McKinsey Global Institute has developed a measure of the "geopolitical distance" of trade—an analog of geographic distance—that quantifies how geopolitically close an economy is to its trade partners. According to this metric, between 2017 and 2023, the average geopolitical distance of trade fell by 4 percent for China; for Japan and South Korea, geopolitical distance fell by 4 percent and 6 percent, respectively. This indicates that the trade of these economies has shifted to geopolitically closer partners. However, this is not a universal trend. Notably, geopolitical distance has remained stable for ASEAN and India; their trade continues to span a broad geopolitical spectrum, although geopolitics may reshape their trade ties in the coming years.

Certain Asian economies are emerging as global connectors

Between 2017 and 2023, trade between the United States and China fell, but ASEAN emerged as a "connector" between these two economies. In this period, ASEAN imports from China surged while ASEAN exports increasingly went to the United States. In the case of Vietnam, the value of imports from China doubled—an addition of $50 billion—and its exports to the United States increased by $60 billion. A similar, although less pronounced, trend can be seen in Malaysia, the Philippines, and Thailand.

In the case of India, its trade with Russia grew substantially, reflecting a 12-fold increase in imports of energy resources. Meanwhile, India has been increasing exports such as electronics, pharmaceuticals, rubber, and plastics to both Europe and the United States. Despite geopolitical tensions, China's position as the world's largest exporter remains strong, and its export share has increased slightly in recent years, from 13 percent in 2019 to 14 percent in 2023.

Trends in foreign direct investment may indicate further trade reconfiguration

Foreign direct investment (FDI) can presage shifts in trade. Announced greenfield investments into India have surged, increasing by around 35 percent in 2022–23 compared with prepandemic averages, according to fDi Markets data, with the manufacturing, electronics, IT, healthcare, and renewable-energy sectors largely driving this rise. Announced greenfield FDI into ASEAN increased by 10 percent in the same period. These changes suggest that the connector role of some Asian economies—indicated by the shift of investment away from China and toward other Asian economies—may strengthen further. The surge of investment into India provides a basis for expecting continued growth as a global supplier of goods and services.

China plus one strategy shifts investment patterns towards India

India and Vietnam are benefiting the most from the China plus one strategy, which is anticipated to create new growth opportunities for Asian economies, as per a report by Nomura. The report predicts that India's exports will surge to $835 billion by 2030 from $431 billion in 2023, driven by its large domestic market that attracts firms seeking supply chain alternatives to China.

"Firms in electronics, apparel & toys, automobile & components, capital goods and semiconductor manufacturing are looking to invest in India. Given India's large domestic consumer market, firms setting up shop in India are attracted also because of the captive domestic market."

Firms in electronics, apparel & toys, automobile & components, capital goods and semiconductor manufacturing are looking to invest in India. Given India's large domestic consumer market, firms setting up shop in India are attracted also because of the captive domestic market. The report forecasts a 10% annual growth in exports over the period, with electronics becoming the fastest-growing sector, achieving a compound annual growth rate of 24% and nearly tripling in value to $83 billion by 2030. Machinery exports are expected to more than double to $61 billion by 2030 from $28 billion in 2023.

Nomura report opines, the low production linked incentive (PLI) disbursements are not a good reflection of India's potential on global value chain integration. Its large market size, faster growth, lower labour cost and political and economic stability make it an attractive investment destination for consumer goods production to both cater to domestic demand and also for exports. Japan and Korea are also investing in India's auto, consumer durable and electronics sectors to take advantage of the growing domestic demand and to use it as a manufacturing base," the report said.

Nomura concludes that the strengthening of India's manufacturing sector and its increasing share in exports will help the corporate sector sustain 12-17% earnings growth over the medium term.

PROPOSED POLICY IS TO ADDRESS ISSUE OF ANTI-COMPETITIVE NATURE OF VSAs

N Sivasailam IAS (Retd), Former Special Secretary (Logistics), Department of Commerce in the Government of India in an exclusive interaction with Maritime Gateway Magazine, explains the proposed policy that on 5 per cent TEU incentivisation for Indian Flag vessels in VSA and its potential logistical and operational impact.

How do you assess the impact of the strategic incentivisation of the 5 per cent TEU allocation for Indian flag vessels under VSAs on existing or planned operations?

Negative

What will be the effect of incentivisation of 5 per cent TEU allocation for Indian NVOCCs in the long run?

Surely, the practical effect of the policy aims and promotes at best a minimalist participation of Indian Non-Vessel Operating Common Carriers (NVOCCs) (can this be considered positive in the context of the promoting the renaissance of Indian Shipping?) in Vessel Sharing Agreement (VSA) consortium and / or Foreign shipping lines may open an Indian subsidiary or as NVOCCs (this may be a positive development, if major foreign lines formally establish in India which has not happened till now!) which however entirely depends on how much the Indian Shipping lines or NVOCCs with Indian flag carriers are 'accommodative' of VSA consortium interests or at least not inimical to VSA consortium interests.

What are the potential logistical and operational impacts of the 5 per cent TEU allocation for Indian flag vessels and NVOCCs? Pls Comment.

The TEU Allocation for Indian Flag Vessels only prima facie appears to be addressing the issue of anti-competitive structure of the VSAs but a deeper examination of the proposed incentive of a mere 5 per cent Incentive may end up not serving the intended purpose of addressing the vexed issue of anti-competitive nature of VSAs which is the raison-de-etre of the proposed policy itself. The mere 5 per cent incentivisation for Indian flag vessels / Indian NVOCCs, potentially will have the effect of co-option of the Indian Shipping lines / NVOCCs with India Flag Vessels in the anti-competitive VSA structure and thereby effectively strengthening the External monopoly over the Indian Export-Import Trade over the Sea while the Indian Shipping Industry remains dwarfed for an unspecified period and limited by the 5 per cent 'Quota' determined for them by the State itself.

The expressed endeavour of the proposed policy is to address the issue of anti-competitive nature of VSAs presently structured that is inimical to competition and therefore, the anti-competitive structuring needs to be addressed as a matter of public policy. When there is prima facie finding that the present VSA structure is anti-competitive in nature, it stands to reason that the legitimate public expectation would be that the State formulate policies and interventions that takes down i.e., dismantles by policy, the anti-competitive edifice of the VSAs. It is implicit that anti-competitive structures need to be broken down to foster competition. It is only in the framework of the new public policy interventions, regulations and appropriate institutions that anti-competitive behaviour of VSAs can be addressed.

"When there is prima facie finding that the present VSA structure is anti-competitive in nature, it stands to reason that the legitimate public expectation would be that the State formulate policies and interventions that takes down i.e., dismantles by policy, the anti-competitive edifice of the VSAs"

The proposed policy rightly

determines that one such option is by ensuring that India Flag vessels are part of the VSA. To this extent, there can be no quarrel with the proposed policy. But my endorsement of the policy does not proceed further to this over-arching policy statement that anti-competitive structure of VSAs that has practically kept out Indian Shipping interests who are assumed to serve the Indian Sea Trade interests, need to be provided a stake that will potentially take down the inherent anticompetitive structure of VSAs at present. The real issue therefore, is the quantum of TEUs of VSAs in Indian flag vessels that will effectively address the non-competitive structuring of the VSAs presently constituted.

As they say, the devil is in the details and the detail forming the kernel of the policy is the 5 per cent Incentivisation for Indian flag vessels in VSA. Therefore, the moot question that arises is whether the incentivisation of 5 per cent for India Flag vessels in the VSA may effectively address the Competition question or on the contrary work substantially in not only undermining the intended purpose of dismantling anti-competitive VSA structure as at present structured, but also defeat the policy support for India flag carriers without making any dent on the issue of anticompetitive nature of the VSAs of which the Indian companies / NVOCCs with Indian flag vessels are intended to be made a part and further affecting India's trade interest adversely.

In my considered view, the policy ends up strengthening the anti-competitive structure and the low incentive quantum of 5 per cent for India Flag vessels in the consortium merely serves to co-opt the Indian Shipping Industry into the anti-competitive VSA structure, effectively leaving the structure and its anti-competitive edifice largely unscathed. Indeed, the proposed policy seems to suggest that anti-competitive structure of present VSAs is fine as long as the Indian interests are subsumed in it even in a token manner which is what the low level of incentivisation practically implies and impacts, in ordinary business parlance.

The Indian Shipping companies and Indian NVOCCs are expected to safeguard Indian Sea-trade interests in a commercial setting and expected to be an ally of the India Exporter - Importer Trade interests.

There is another important issue of public policy, which is the impact of the present policy on any future State action. The quantum of 5 per cent Incentivisation while hardly addressing the issue of anti-competitive nature of the VSAs presently structured may actually become an impediment for any effective future challenges to the anti-competitive behaviour. The future challenges to the 5 per cent incentivisation may also be severely stifled because it is so determined by the State itself by the proposed policy that a mere 5 per cent TEU incentivisation for Indian Flag vessels addresses the issue of anticompetitive structure of the VSAs as far as the Indian State is concerned which may be difficult to revise in the future in an international context and the State may be stopped from revising the quantum of incentivisation with regard to anti-competitive nature of VSAs. Hence the proposed policy may end up achieving quite the opposite result of what was originally intended to be addressed by the policy with regard to the anti-competitive structures of the VSAs largely unscathed for eternity, leave alone dismantling it in any manner.

In my view, to address the issue of non-competitive nature of the VSA as presently constructed, the incentivisation for Indian flag vessels by Indian Shipping lines / NVOCCs, needs to be at least 30 per cent (elaborately discussed below). It is believed that this level of 'local content' requirement achievable over a reasonable period of about 15 years, is sufficient to address competition issues even ensuring competition among Indian entities to be part of international consortiums.

With an incentive of mere 5 per cent, Incentive for the VSAs to invest in Indian Flag vessels would be marginal because of limited volumes required for Regulatory compliance which objective of the VSAs is achieved by co-option of Indian shipping interests or limited investment in Indian flag carriers, if need be with attendant negative impact on logistics costs. Also, in this situation, even Indian Companies / NVOCCs with Indian Flag vessels may only marginally benefit which may be through 'rent seeking' through demand for higher premiums for their ships since a virtual monopoly is being created through the incentivisation for Indian Flag vessels, although marginal, for mandatory participation in VSA consortium as required by the Notification favouring Indian flag vessels. In the circumstances, the likely scenario that may emerge is that, the VSA instead of protesting against the policy (or protest may be token to ward of changes in the policy) will be happy to use it as a ruse to raise fares, tariffs and levy or increase other charges too since Indian Shipping interests are part of the International consortium and lowering logistics costs through negotiating fares, tariffs, charges etc in the interest of the Indian Export-Import Trade would not be on the agenda even of the Indian interests in the consortium. (Even today it is presumed that the Indian NVOCCs are obtaining the best negotiated fares and Tariffs for the Indian Sea Trade although for all practical purposes, it is virtually cost-plus fares, charges and tariffs as far as the Indian Exporter / Importer is concerned if anything for want of adequate data, documentation or verifiable evidence / literature on the role of Indian NVOCCs

in obtaining the best rates for Indian Trade generally). The Indian Shipping companies and Indian NVOCCs are expected to safeguard Indian Sea-trade interests in a commercial setting and expected to be an ally of the India Exporter - Importer Trade interests. The policy of providing a mere 5 per cent TEU allocation for Indian Shipping lines / NVOCCs leasing Indian ships, Co-opts the Indian Shipping interests in the VSA fold retaining the inherent non-competitive nature of the VSA and absorbing the Indian Shipping interests in a global anti-competitive arrangement which will be to the detriment of the Indian Exporter - Importer Trade interests. After all the whole issue of anti-competitive structure is with regard to the monopoly determination of availability of containers and container space, etc for the Indian Trade. The low level of incentivisation adversely affects the interests of the Indian Exporter / Importer who will thus be sacrificed to secure a co-option of the Indian Shipping interests in the anti-competitive VSA structure, since there is no interest to the Indian Logistics Trade arm comprising of Indian Shipping lines and NVOCCs co-opted in an international anti-competitive VSA to obtain competitive rates as their interests becomes aligned with the monopoly VSA interests which gets consolidated to the utter detriment of the Indian Export Import Trade.

Hence for the policy of Incentivisation to be effective to reasonably address non-competitive nature of the VSA presently structured, the requirement of Indian flag vessels needs to be increased to 25 per cent over the next five years @5 per cent per annum and 1@ per annum thereafter to reach 30 per cent over the next 5 years.

Do you foresee any issues in coordinating between foreign and Indian shipping lines under the new VSA requirements? Pls Comment.

The mere 5 per cent TEU reservation in my considered view effectively only strengthens the monopoly and anti-competitive nature of the VSA instead of diluting it and also provides them guaranteed support of Indian Shipping Lines and NVOCCs to the detriment of the Indian Export Import Trade due to the monopoly pricing of fares, tariffs and charges which are the real issues plaguing the Indian Trade with a plethora of charges not forming part of any service or Bill of Lading. I have reason to believe that objection to the proposal by the Foreign Shipping lines will be merely to register a 'protest' (they cannot be seen to be welcoming a proposal that labels them to be indulging in anti-competitive acts detriment to the country's Trade interest) against 'State Intervention' and denying any anti-competitive behaviour on the part of the consortium constituting the VSA, but it will be welcomed in 'closed chambers' of the Foreign Shipping Lines since the proposal with a 5 per cent incentive for Indian Flag carriers only effectively strengthens their anti-competitive stance for all practical purposes and the proposed policy of the State providing a marginal stake of 5 per cent TEUs for Indian flag vessels in the VSA consortium and considering it to be satisfactorily addressing anti-competitive structuring of the VSAs presently structured, is akin to letting off the VSAs with a 'rap in the knuckles' as the 5 per cent incentivisation has limited impact in dismantling the anti – competitive VSA structure, which would actually require a higher level of incentivisation for Indian Flag vessels (the extent of 30% TEUs over a period of about 15 years in a phased manner is suggested in this Paper that is considered by the author to address the anti-competitive structure of VSAs).

Two scenarios are likely to play out, in my view. As regards the Indian Shipping Lines, the proposal being a legal requirement, Indian shipping lines and NVOCCs with Indian Flag vessels may demand a premium for their participation with the low incentivisation proposed in the policy as it will be in the interest of the VSAs to secure compliance which does not affect decision structures through co-opting Indian Shipping companies or NVOCCs with leased Indian flag vessels. Alternately, the VSAs to protect the continued monopoly and institutional structure and avowed action of not admitting new members or if the 'demand' of the Indian interests based on the aforesaid policy become too exacting from the VSA point of view, it may lead to the VSAs themselves opening NVOCCs in India and registering ships for plying under the Indian flag to the required 5 per cent TEU allocation (which is not at all difficult to comply but which is sufficient to permanently silence the Indian regulatory system for eternity) and used for short haul transhipment locations with attendant consequences for increasing logistics costs further.

If VSA as presently structured is inherently restricting competition of Indian Shipping Lines and NVOCCs leasing Indian Vessels or leasing foreign vessels for plying under Indian Flag, its inherent non-competitive nature cannot be overcome by co option of Indian Shipping interests on a marginal basis.

If VSA as presently structured is inherently restricting competition of Indian Shipping Lines and NVOCCs leasing Indian Vessels or leasing foreign vessels for plying under Indian Flag, its inherent non-competitive nature cannot be overcome by co-option of Indian Shipping interests on a marginal basis. If there is already a prima facie conclusion that VSA is intrinsically non-competitive, it is to be determined as to the extent of Indian participation that will make it competitive. A mere 5 per cent of TEU allocation to Indian flag vessels and

Indian NVOCCs plying leased vessels under Indian Flag hardly addresses the present non-competitive nature of VSAs. On the contrary, such a policy of marginal inclusion of Indian interests in a clearly non-competitive VSA has the opposite effect of compromising the Indian Trade interests since an essential partner in Indian Trade namely the Indian Shipping Lines and the Indian NVOCCs are co-opted into the external monopoly interests. The anti-competitive VSA interests will be strengthened by the co-option of the Indian NVOCCs and Indian Shipping lines to the detriment of the Indian Exporters/Importers.

What are some best practices or recommendations to ensure smooth implementation and compliance with the notification? Pls Comment.

The TEU Allocation for Indian Shipping lines / Indian NVOCCs with Indian Flag vessels would need to be at least 30% as discussed above to address the anti-competitive nature of the VSA. It shall be open to the VSAs to have Indian Flag vessels operated through their registered NVOCCs operated as subsidiaries of the parent company or as a independently registered Indian companies. Addressing the VSA competition issue is an opportunity to promote Indian Flag vessels and in the absence of adequate number of Indian Shipping lines having the requisite number of ships, the best option is to get the NVOCCs to ply vessels under the Indian Flag to comply with the regulation in the first instance. The inter-play of interests of the Indian Shipping companies / Indian NVOCCs and the foreign shipping lines to operate NVOCCs in India as subsidiaries of their parent companies with India Flag vessels will create the necessary competition in the matter of compliance with the requirement of complying with the Minimum TEU of 30 per cent to be carried by Indian flag vessels of Indian companies or NVOCCs with Indian flag vessels.

The financial and reporting arrangements to ensure compliance with the notification of TEU commitment needs to be made up front with the notification for ease of compliance particularly as regards financial flows.

It would be worthwhile to set up the market for container Space availability in ships through a Container Space Exchange mechanism only that makes the data on availability of space in the ships transparent and it's booking fully transparent and thereby effectively eliminating the huge 'rents' presently prevalent in securing container space in ships.

Other policy issues to address competition and transparency in the availability of containers and fares, tariffs and charges, is to make available containers only through a container exchange (like stock and commodity exchanges) that will effectively regulate availability of containers and those containers that are not offered in the exchange would be taken out of the country by the consortium thereby 'killing' the speculation in container availability as well as needless import of containers for which the Indian Exporter - Importer is charged despite availability of the type of container required within the country.

It would be worthwhile to set up the market for container Space availability in ships through a Container Space Exchange mechanism only that makes the data on availability of space in the ships transparent and it's booking fully transparent and thereby effectively eliminating the huge 'rents' presently prevalent in securing container space in ships which is solely on account of the lack of availability of data on the space availability in the ships in a transparent manner.

It is within the regulatory norms of this country that the Central government reserves the right to intervene if it determines that Vessel Sharing Agreements (VSAs) are being used to engage in unlawful practices. Such actions may result in civil penalties, fines, refunds to shippers, or even the dissolution of the agreement. To ensure compliance, the government may request information, investigate complaints, and initiate inquiries into any practices that violate Indian law. This includes monitoring the impact of VSAs on India's export-import trade and addressing issues like unreasonable refusal to deal, unclear fees, unfair container practices, and anti-competitive behaviour. Therefore effective regulation of anti-competitive behaviour must also include the creation of Institutional Structure in the nature of Tribunals (of the stature of NCLAT etc) to effectively address complaints of the Export-Import Trade about levy of charges outside that prescribed in Bill of Lading or mandating compulsory charges either by the Shipping lines / NVOCCs or intermediaries acting on their behalf or even by the ports that are now Authorities (functioning as commercial entities) and not Trusts of the port users as it was earlier.

It is necessary that the issue of anti-competitive structure of VSAs needs supportive additional and integrated policy measures and institutions catering to the aforesaid policies to be effective. Piecemeal interventions and half-hearted policy interventions may end up serving and strengthening the very malice that the policy set out to eschew from the system and thus counterproductive in nature. In that event, maybe a 'do nothing' policy for the present, may serve Indian Trade interests better for the time being, awaiting a more opportune time for Regulatory Intervention to address the issue of non-competitive structuring of VSAs prevailing at the relevant time.

TECHNOLOGY REDEFINES THE FUTURE OF LOGISTICS

The future of logistics promises to be more connected, efficient, and transparent, with technology playing a central role in shaping the industry's trajectory.

By Vishal Jain
Co-Founder, Roadcast

Navigating the complexities of today's logistics industry requires a nuanced understanding of its multifaceted challenges. The sector, valued at 8.4 trillion euros in 2021 and projected to reach 13.7 trillion euros by 2027, is a cornerstone of the global economy. Customer satisfaction is crucial, with speedy and reliable delivery becoming increasingly vital; 55% of consumers are inclined to switch to faster delivery options.

The logistics industry is on the brink of a transformative revolution, driven by the convergence of advanced technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), Blockchain, and Automation. These innovations are reshaping how goods are tracked, managed, and delivered, leading to more efficient, transparent, and cost-effective operations. As the sector evolves, companies like Roadcast are contributing to this transformation through innovative solutions that enhance real-time visibility and operational efficiency.

AI: Smart Solutions

AI is revolutionizing logistics and fleet management with a suite of innovative technologies. Smart route planning leverages AI algorithms to analyze vast amounts of data, including traffic patterns, weather conditions, and vehicle capacities, to create optimized delivery routes that minimize travel time and fuel consumption, resulting in significant cost savings and reduced environmental impact.

Predictive demand forecasting replaces outdated methods by using AI to examine historical sales data, social media trends, and weather forecasts, allowing businesses to accurately anticipate future demand, optimize inventory management, and avoid stockouts. Warehouse automation is another breakthrough, with AI-powered robots taking over repetitive tasks like picking, packing, and sorting, enhancing accuracy, reducing human error, and streamlining operations so warehouse workers can focus on more strategic activities. Proactive maintenance benefits from AI's ability to analyze sensor data from vehicles to predict potential issues before they arise, thus preventing breakdowns, reducing downtime, and ensuring timely deliveries.

Additionally, AI-powered driver behavior monitoring offers a modern approach to tracking and analyzing driving actions, moving beyond basic observation methods to provide accurate assessments and timely feedback. This is particularly crucial given the alarming statistics from the 2022 Annual Report on 'Road Accidents in India'. The report by the Ministry of Road Transport and Highways reveals a sharp increase in road mishaps, with 4,61,312 accidents reported, leading to 1,68,491 deaths and 4,43,366 injuries. This marks a significant rise in accidents (11.9%), fatalities (9.4%), and injuries (15.3%) compared to the previous year. Alarmingly, over speeding was identified as the primary cause, responsible for 71.2% of the fatalities.

AI-powered Driver behavior monitoring involves systematically tracking and analyzing vehicle operations while gathering data on various driving actions. In the past, driver management relied on rudimentary methods like physical observation and basic sensors, often insufficient for accurate assessments and timely feedback.

Internet of Things: Real-Time Visibility and Control

The Internet of Things (IoT) has become a cornerstone of modern logistics by providing real-time visibility into every aspect of the supply chain. IoT devices, such as GPS trackers and RFID tags, collect and transmit data on the location and condition of goods and vehicles. This technology not only improves tracking accuracy but also helps in managing inventory more efficiently.

For example, IoT-enabled fuel sensors can monitor fuel consumption, detect theft, and optimize usage. Such sensors provide real-time data on fuel levels and usage patterns, which is crucial for reducing operational costs. The integration of IoT into logistics operations offers end-to-end visibility, enabling companies to track shipments from origin to destination with unprecedented precision.

One of the standout benefits of IoT is GPS tracking. It's like having a live map of your delivery fleet at your fingertips. According to MarketsandMarkets, the global market for real-time location systems (RTLS) is set to reach a whopping $16.2 billion by 2028, largely due to the growing demand in logistics.

Inventory management is another area benefiting from IoT. RFID tags and smart sensors are transforming how we track stock levels and locations. This automation reduces the risk of stockouts and overstocking, ensuring that inventory is always at optimal levels. According to Allied Market Research, the global RFID market, valued at $11.8 billion in 2021, is expected to grow to $31.5 billion by 2031.

Predictive maintenance is one of IoT's most exciting applications. By monitoring conditions like temperature and shock, IoT sensors can predict equipment failures before they happen. This is crucial for perishable goods where maintaining optimal conditions is essential.

For example, sensors on delivery vehicles can alert managers to potential breakdowns, allowing for timely maintenance and reducing costly downtime. This approach not only extends the lifespan of assets but also ensures smoother operations.

Blockchain: Ensuring Transparency and Security

Blockchain technology is making waves in logistics by enhancing transparency and security. Blockchain's decentralized ledger system ensures that every transaction is recorded and immutable, reducing the risk of fraud and errors. This technology is particularly beneficial for verifying the authenticity of goods and managing complex supply chains.

Automation: Streamlining Operations

Automation is another game-changer in the logistics industry, with applications ranging from warehouse management to autonomous vehicles. Automated systems can handle repetitive tasks such as sorting, packing, and inventory management more quickly and accurately than human labor.

For instance, automated guided vehicles (AGVs) and drones are increasingly used in warehouses to transport goods and manage inventory. These technologies not only speed up operations but also reduce the risk of human error.

Embracing technology is key to staying ahead in the logistics industry. From vehicle tracking to equipment monitoring, innovative solutions offer opportunities for optimization and growth.

As the logistics industry continues to evolve, the integration of AI, IoT, Blockchain, and Automation will drive further advancements.

WAREHOUSE AND LOGISTICS SECTOR IS LATE ENTRANT TO DIGITIZATION

Sandeep Kulkarni, Chief Operating Officer (COO), Allcargo Gati Limited in this interview explains, Allcargo Gati embracing cutting-edge automation technologies in warehouses, including Warehouse Management Systems (WMS), Control Tower Sorters, Put-to-Light systems, and how these advancements have significantly boosted their operational efficiency.

How is Allcargo Gati using next generation technologies like Artificial Intelligence, IoT and automation in its operations?

At Allcargo Gati, we have embraced cutting-edge automation technologies in our warehouses, including Warehouse Management Systems (WMS), Control Tower Sorters, Put-to-Light systems. These advancements have significantly boosted our operational efficiency, accuracy, and scalability. Our investment in WMS has streamlined inventory management and order processing by reducing time-consuming, repetitive tasks for employees. Looking ahead, warehouse automation will increasingly integrate artificial intelligence and machine learning, with a focus on automating key areas such as inventory management, packaging, and value-added services to further enhance efficiency and accuracy. Automation has also improved workplace safety by minimizing manual handling and reducing human error, creating a more secure and productive environment.

Warehousing and logistics sector has been a late entrant to digitization. By when can we confidently say that this sector will be at par with other industries in usage of technology?

The warehouse and logistics sector has indeed been a late entrant to digitization, but the last few years have seen the rapid integration of such technologies as artificial intelligence, machine learning, automation, and advanced analytics within the industry. Given the ongoing investment in modernization of the existing technology and development of new approaches we are heading in the direction of unification in the business world where customers become more satisfied leading to operational efficiency and business growth through technology in logistics.

What strategies are being implemented, such as investing in technology centers or collaborating with startups, to stay updated with the latest innovations?

Through significant contribution in technology and collaborations with startups, Allcargo Gati is rapidly enhancing with digitization. We generate smart logistics solutions, like improved Transport Management Systems (TMS) for real-time tracking and AI-driven route optimization. Our partnerships with tech firms enable us to implement advanced technologies like machine learning to optimize operations and the Internet of Things for inventory management. Our revamped GEMS platform and the use of portable devices both contribute to even greater efficiency. The Centralized Control Tower also increases the visibility of the supply chain. By utilizing cutting-edge technology, Allcargo Gati ensures that its operations are not only effective but also compliant with the future of logistics.

Moving beyond warehouse automation, tracking of containers and route optimization, what is the next level for technology upgradation in shipping and logistics sector?

In addition to container tracking, warehouse automation, and route optimization, the shipping and logistics industry is now adopting artificial intelligence (AI) and predictive analytics. These technologies enable accurate predictions of demand, enhance supply chain visibility, and easier dynamic decision-making. Furthermore, the use of drones and driverless cars has the potential to further streamline operations and shorten delivery times, while the incorporation of blockchain technology can enhance transaction security and transparency. Using these cutting-edge technologies, we can increase efficiency, flexibility, and durability by which will ultimately optimize the entire logistics ecosystem and establish new standards for the sector.

We generate smart logistics solutions, like improved Transport Management Systems (TMS) for real-time tracking and AI-driven route optimization. Our partnerships with tech firms enable us to implement advanced technologies like machine learning to optimize operations and the Internet of Things for inventory management.

NEXT-GEN TECH TO IMPROVE OPERATIONAL EFFICIENCY

Liji Nowal, Managing Director at ODeX India Solutions Pvt Ltd, in an exclusive interview with Maritime Gateway, sheds light on the role of new and emerging technologies like blockchain, AI, IoT in maritime, and logistics sectors and how they are investing in digital infrastructure to deliver a seamless user experience.

Post-Covid there was a lot of fanfare for blockchain technology. About 4-5 years now, what is the status? Is the industry still in the nascent stage in terms of using blockchain or have we advanced in terms of technology use?

While the initial enthusiasm for blockchain in the maritime industry surged post-Covid, the sector is still in the process of fully embracing the technology. We've progressed beyond the early experimental phase, with several successful proof-of-concept projects, particularly in trade finance and document authentication. However, widespread adoption remains inconsistent due to the complexities of integrating blockchain across global supply chains. Key challenges such as regulatory harmonization, infrastructure costs, and interoperability persist. Despite these obstacles, blockchain's potential to significantly improve transparency, security, and efficiency is undeniable.

Moving beyond tracking of containers, real-time monitoring of cargo en route, and warehousing automation, what is the next level in terms of moving towards advanced technologies for the supply chain players?

The next major evolution for supply chain players lies in leveraging predictive and prescriptive analytics, driven by AI and machine learning. These technologies enable anticipation of disruptions, real-time route optimization, and more advanced automated decision-making. Digital twins, which create real-time digital replicas of physical systems, are also emerging as a transformative tool, providing enhanced visibility and control over operations. Additionally, blockchain integration still remains a game-changer, particularly in ensuring end-to-end transparency and automating smart contracts, which can significantly streamline traditionally paperwork-heavy processes.

Shipping lines are investing in technology centres and technology startups, who are coming up with promising and advanced solutions. What about the other stakeholders in the maritime sector? Are they exploring new horizons in using next-generation technologies?

Other key stakeholders, such as ports, terminal operators, freight forwarders, and logistics service providers, are also investing in next-generation technologies. Automated port operations, smart warehousing, and the Internet of Things (IoT) are being implemented to improve operational efficiency. Many are turning to AI-powered systems for route optimization and exploring autonomous ship technology. Even regulatory bodies are adopting digital platforms to simplify compliance processes. However, a gap remains in achieving seamless integration across the entire supply chain—a challenge that will require collective effort from the industry to overcome.

Have there been any recent technology breakthroughs in analyzing shipping and logistics data, bringing up new dimensions to decision making?

Recent advances in AI and big data analytics have transformed decision-making in the shipping industry. Predictive analytics is now being used to anticipate delays, optimize fuel usage, and improve asset utilization. Additionally, cloud-based platforms that aggregate data from various sources enable real-time collaboration among stakeholders, offering deeper insights into operational performance. Machine learning algorithms are also at the forefront of innovation, driving improvements in maintenance prediction, route planning, and customer demand forecasting, elevating data-driven decision-making to unprecedented levels.

How far has the industry opened up to data sharing?

Data sharing in the maritime industry is steadily gaining traction, though it still faces hurdles. Concerns over data ownership, privacy, and maintaining competitive advantage continue to slow progress. However, initiatives like GSBN and other collaborative platforms are promoting greater openness, fueled by the industry's need for improved efficiency and visibility across global supply chains. Stakeholders are increasingly recognizing that secure data sharing, can deliver substantial operational benefits, leading to a rise in collaboration within this space.

Surging Chinese imports Put Indian MSMEs in distress

Imports from China are hurting Indian MSMEs as cheaper Chinese goods make it tough for smaller domestic companies to compete in the market, leading to distress among these companies.

According to the think tank Global Trade Research Initiative (GTRI), many of the imported products are also made by local MSMEs, and they find it hard to grow due to the easy access to low-cost Chinese products. In a detailed study done by GTRI, it has been revealed that local MSMEs are finding it difficult to compete with cheap Chinese imports in product categories like umbrellas, artificial flowers, human hair articles, leather articles and toys.

For example, China supplies 96% of India's umbrellas and sun umbrellas (USD 31 million) and 92% of artificial flowers and human hair articles (USD 14 million). Chinese imports have captured 60% of the glassware market, 54% market of leather articles including saddlery and 52.5% of toys market. The Chinese dominance in the Indian toys market is despite the government hiking customs duty on toys from 20% to 70% and implementing quality control measures.

"Even in ceramic products (USD 232.4 million, 51.4%) and musical instruments (USD 15.7 million, 51.2%), where Indian artisans once thrived, the dominance of Chinese imports is displacing local

production," says the GTRI research.

In product categories, where Chinese imports account for less than 50% of domestic market, Indian MSMEs are struggling to compete in industries such as furniture, bedding, and lamps (with Chinese supplies capturing 48.7% of market with imports valued at USD 370.8 million), and tools, implements, and cutlery (39.4%, USD 269.3 million). "These are sectors where Indian small businesses have traditionally been strong but are now losing ground due to the influx of Chinese goods," observes GTRI.

Similarly, products like articles of stone, plaster, and cement (49.3%, USD 234.5 million), miscellaneous articles of base metal (47%, USD 282.6 million), and carpets (31.8%, USD 24.8 million) are under threat, diminishing the competitiveness of local producers.

From January to June 2024, India exported USD 8.5 billion to China while importing USD 50.4 billion, resulting in a trade deficit of USD 41.9 billion. This low export and high import make China India's largest trade deficit partner. About 98.5% of imports from China, or USD 49.6 billion, are industrial goods. China accounts for 29.8% of India's industrial goods imports.

Industrial goods exports on the rise

With increasing India's dependence on Chinese industrial goods like telecom, machinery and electronics, Beijing's share in New Delhi's imports of such goods rose to 30%from 21% in the last 15 years. The growing trade deficit with China is a cause of concern, and the strategic implications of this dependency are profound, affecting not only economic but also national security dimensions.

From 2019 to 2024, India's exports to China have stagnated at around USD 16 billion annually, while imports from China have surged from USD 70.3 billion in 2018-19 to over USD 101 billion in 2023-24, resulting in a cumulative trade deficit exceeding USD 387 billion over five years.

The Indian government and industries must evaluate and potentially recalibrate their import strategies, fostering more diversified and resilient supply chains, GTRI founder Ajay Srivastava said.

The Indian government and industries must evaluate and potentially recalibrate their import strategies, fostering more diversified and resilient supply chains, GTRI founder Ajay Srivastava said.

This is imperative not only to mitigate economic risks but also to bolster domestic industries and reduce dependency on single-country imports, especially from a geopolitical competitor like China, he added. "Over the last 15 years, China's share in India's industrial product imports has increased significantly, from 21% to 30%.

"This growth in imports from China has been much faster than India's overall import growth, with China's exports to India growing 2.3 times faster than India's total imports from all other countries," the report said.

In 2023-24, India's total merchandise imports amounted to USD 677.2 billion, with USD 101.8 billion of that coming from China. This means China accounted for 15% of India's total imports. Out of these imports from China, USD 100 billion or 98.5% were in major industrial product categories.

"When compared to India's global imports of these industrial products, which total USD 337 billion, China's contribution is quite significant, representing 30% of India's imports in this sector. Fifteen years ago, China's share was just 21%," it added.

The key sectors, where New Delhi's dependence is rising significantly, include electronics, telecom and electrical; machinery; chemicals and pharmaceuticals; products of iron, steel and base metal; plastics; textiles and clothing; automobiles; medical, leather, paper, glass, ships, aircraft and remaining categories.

During April-January 2023-24, the electronics, telecom and electrical products sectors had the highest import value at USD 67.8 billion, with China contributing USD 26.1 billion.

"This represents a substantial 38.4% of the total imports in this category, indicating a heavy dependence on Chinese electronic goods and components," it said. In the machinery sector, China accounts for USD 19 billion, which is 39.6% of India's imports in the sector. This underscores China's key role as a supplier of machinery to India, Srivastava said.

India's chemical and pharmaceutical imports during the period stood at USD 54.1 billion. Out of this, USD 15.8 billion came from China. This resulted in a Chinese share of 29.2%, highlighting the importance of Chinese chemical and pharmaceutical products in India.

Similarly, the report said the total imports for plastics and related articles stand at USD 18.5 billion, with China providing articles worth USD 4.8 billion. This accounts for 25.8 % of the total imports in this sector. Srivastava also said that half of the imports from China consist of capital goods and machinery, indicating a critical need for focused research and development in this area.

Intermediate goods like organic chemicals, APIs (Active Pharmaceutical Ingredients), and plastics, which represent 37% of imports, show a pressing need for upgrading these industries, he said, adding that consumer goods make up 12% of the imports, while raw materials are less than 1%.

The report added that many products imported from China, such as textiles, apparel, glassware, furniture, paper, shoes and toys are from categories dominated by micro, small, and medium enterprises (MSMEs), and most of these items could potentially be produced domestically.

"Overall, India imports a broad array of products from China, from high to low technology items, highlighting significant gaps in India's industrial capabilities across various sectors," it added.

Chinese companies are involved in India's energy, telecommunications, and transportation sectors, and they play critical roles in smartphones, electronics, electric and passenger vehicles, solar energy, engineering projects and many other sectors, it said.

MAERSK MOVING FASTER ON NEW TECHNOLOGIES

Maersk revamped its Maersk Growth innovation unit in June with a new team and a change in how it invests in tech and sustainability.

Part of a company-wide transformation at AP Moller Maersk, the Danish shipping and logistics company, is the overhaul of its corporate venturing unit, Maersk Growth. Much of the old team, including Shereen El-Zarkani, left in the summer of 2023, replaced by new team with a new mandate and operating model.

One of the biggest changes is that Maersk Growth has added venture clienting to the mix of its corporate venturing tools — seeking to partner commercially with a large number of early-stage startups even when it does not take equity in them.

The idea, says Ida Christine Brun, head of external innovation and ecosystem management, is that this will help Maersk adopt new technologies faster, especially in the area of supply chain, where there is growing competition and pressure to meet changing customer demands.

"When we look at supply chain tech, what we were doing before is investing in early-stage startups, with a horizon of three to five years to even have a product. What we're seeing today with the ever-changing customer needs, and the high pace of technological development is that we require solutions and that collaboration with the startups to happen now," says Brun.

"We're pursuing strategic partnerships and non-equity collaborations depending on the type of challenge that we're trying to solve. That can help us reach that skill and that acceleration faster than it would be going down the investment route," she says.

Maersk has been been undertaking a company-wide transformation since 2016, turning itself from a shipping company to an end-to-end logistics provider, with everything from airfreight to last-mile delivery options to offer customers. The pace of that transformation accelerated over the past year, as shipping prices fell from Covid-era highs, putting the logistics sector under strain. A new chief executive, Vincent Clerc, came in at the start of the year, and the company is

cutting some 10,000 jobs to streamline its operations.

Technology is at the heart of accelerating Maersk transformation, says Alexa Rios Araneda, head of strategic business innovation at Maersk.

"We're in a very deep transformation, coming from this very traditional shipping line to becoming the integrator of container logistics, providing end-to-end solutions to our customers. And that requires a solid foundation from a tech perspective," she says.

"If we talk about AI, automation, IoT and visibility and traceability, it is evolving so fast. One of the key challenges is to keep up with those new uses of the technologies."

Being able to track and monitor goods better is particularly crucial, given that the shipping sector is subject to more and more disruption, whether from geopolitical tensions or extreme weather. In December, for example, Maersk was one of several shipping lines having to reroute vessels away from the Red Sea after coming under attack by Houthi rebels. Later in December fierce winter storms caused containers to be washed off its ships in the North Sea.

Startups that Maersk is already working with include Dexory, a company that uses autonomous robots to capture images of goods in warehouses, giving users visibility on stock levels and location.

"We need to make sure we can be super resilient, because we know that the disruptions are part of the game," says Rios Araneda. "This is such a backstage industry until we get global disruptions like Covid-19, or what's happening now in the Red Sea, and you see supply chains and transport logistics on the news,"

She is hoping that AI, in particular, might be able to supercharge the organisation's ability to forecast demand and model complex scenarios — not just collecting data but using that data for insights.

"It is about moving beyond the data, moving the needle from visibility to recommendations to actions," she says.

Startups that Maersk is already working with include Dexory, a company that uses autonomous robots to capture images of goods in warehouses, giving users visibility on stock levels and location. Maersk invested in Dexory's series A round in June. The Danish shipping group also works with Pactum, a startup that uses AI to negotiate supplier contracts automatically. Maersk invested in an early-stage round in Pactum at the end of 2022.

Equity investments will focus on sustainability

Using venture clienting to tackle supply chain issues means corporate investment can be fully focused on sustainability. Brun says that Maersk had a realisation that it would need to push harder to be able to keep to 2030 and 2050 emission reduction targets.

"We have a portfolio of 38 companies now, which we will, of course, continue to support with follow-on investments. But when we look at new investments, it's going to be very focused on the decarbonisation agenda of the company," says Brun.

Biofuels and green methanol are some of the most immediate focus areas for the team, she says.

"Right now we're seeing these as the most promising options for achieving significant reductions in greenhouse gas emissions. At the same time we are exploring avenues for improving energy efficiency and investing in the development of future green fuels such as green ammonia and hydrogen. We're not locked in."

Investing more heavily in sustainability could mean investing more and backing startups from an earlier stage, says Brun.

"It's no secret that these companies come at a much greater expense than the more traditional fields. Many of these are still in very early stages of development. We are seeing lower technology readiness levels than we have typically invested in so far," she says.

A new team structure

Brun and Rios Araneda both joined the revamped Maersk Growth team in June. Both have spent more than a decade at Maersk. Brun, originally from Norway, spent considerable time with Maersk's oceangoing business, while Rios Araneda, originally from Chile, spent time in the refrigerated business and then at Tradelens, a digitisation project Maersk ran with IBM.

Although previous members of Maersk Growth also had long backgrounds with Maersk, this new team seeks to knit the CVC unit even more tightly to the parent corporation.

'SOLUTION WE PROVIDE HAS HIGH ACCEPTABILITY, AND EVERYONE SEES VALUE IN IT'

Dhruv Taneja, Founder and CEO, MatchLog Solutions, in this interview with Maritime Gateway magazine, explains how MatchLog's innovative triangulation system connects import containers with export demands, slashing dry runs and curbing carbon emissions from unnecessary trips to empty depots.

Tell us about the business concept of MatchLog?

Matchlog is in the business of optimizing and eliminating dry runs which are caused due to first mile and last mile delivery of containers to and from ports. We not only match containers and ensure high availability of supply for exporters which also gives them direct discount on using street turn containers. but we also add value in form of carbon avoidance for environment. MatchLog's innovative triangulation system connects import containers with export demands, slashing dry runs and curbing carbon emissions from unnecessary trips to empty depots. Our innovative triangulation system seamlessly connects import containers with export needs, reducing dry runs and saving costs by 13 per cent-14 per cent for shippers. With over 200,000 container movements optimized, we have already prevented 40,000 metric tonnes of carbon emissions.

Our solutions like the STinder/ Container Reuse Platform, MatchLog Integrated Street Turn Yard (MISTY), and a user-friendly Transport Management System are driving us toward an ambitious goal—handling 2 million trips annually, cutting 80,000 metric tonnes of emissions, and saving over $100 million in freight costs.

Please detail the Transport Management System you have developed? Which are the technologies you are using and what efficiencies does it provide to the customers?

Our Transport Management System is a user-friendly one-stop platform with a bottom-up construction that helps various stakeholders to optimize and efficiently execute their transportation plans in synchronization. The platform comprises three layers:

Layer One: Visibility – India handles around 11 million imports annually, with the last mile handled by transport companies that collectively operate about 2 million trailers suitable for containers. We have developed a layer that allows all stakeholders to update the trips they are undertaking, including details like container size, type, shipping line, and hinterland destination. This module is also extended for integration with players like CFS (Container Freight Stations), ports, and other platforms, facilitating the flow of similar information.

Layer Two: Discovery and Matching – Here, a customer with a valid booking can input details of their requirements, such as container type, size, shipping line, and location. The platform then displays matching containers, allowing the customer to raise a request for a match and utilize the container.

Layer Three: Container Assessment – This layer assesses the health and fitment of containers using a mobile app and images. The inputs are sent to the shipping line to enable the closure of the import cycle and link the container back to export operations.

These three layers work seamlessly together to enable optimization through Matchlog.

What challenges did you face in convincing the Indian logistics community to embrace your solutions?

The solution adds value to each player in the ecosystem. It improves the bottom line and yield for transport companies, generates direct savings for the export community, and reduces cycle time for shipping lines. As a result, the solution we provide has high acceptability, and everyone sees value in it. The major challenge lies in overcoming the hurdle of adoption and change management, starting with the drivers at the bottom of the pyramid. Once this hurdle is crossed, the process becomes much smoother.

How do you use disruptions in the industry to bring out relevant solutions for customers?

We address the unique challenge of enabling optimization to reduce dry runs, and the solution we offer today is world-class. Only a handful of companies globally operate in this space. With higher adoption, we can extend this solution into complementary domestic logistics and further optimize rail and coastal logistics as well.

CROSS BORDER MOVEMENT THROUGH BHOMRA LAND PORT

The National Board of Revenue (NBR) allowed import of all types of goods through the Bhomra Land Port of Satkhira, except powdered milk, in a bid to facilitate trade between Bangladesh and India.

The customs wing has issued a notification in this regard to make the land port vibrant and facilitate trade. Imports will be allowed through the Bhomra-Ghozadanga road, while exports using the port remained unchanged.

Earlier, all export goods and some selective import goods such as rice, lentil, stone, green chili, onion, garlic, ginger, chassis of cars, cotton, yarn, livestock, fish, sugar, spices, and limestone were allowed to enter though the port among others.

As per the Customs Acts, imports and exports of goods through any land, river or airport is prohibited without having specific gazette notification of NBR.

Syed Atiqur Rahman, the Customs, Excise and VAT Commissionerate of Khulna said the Bhomra port would be able to work full-fledged with the installation of some scanners, developing shades, warehouses, and yards among others.

Basically, stones, green chili, onion, chili and ginger come from India through the port, he added.

Bhomra port is near Kolkata that may help to reduce time and cost of import of goods.

A feasibility study report of South Asia Sub regional Economic Cooperation (SASEC) said economic activity may be increased through development of infrastructure of Bhomra, along with Sheola, Thegamukh, under the Bangladesh, Bhutan, India, and Nepal (BBIN) initiative for regional connectivity.

Some firms in India and China, presented the study report jointly, placed at a National Public Consultation Workshop in Bangladesh on August, 2016.

Infrastructure for the land ports would boost economic activity and benefit people in the region, said the report.

However, it said that infrastructure development will not have any adverse environmental impact.

Swissconnect Bangladesh, a non-profit development organisation based in Switzerland, has an ongoing effort to modernise national land border trade procedures, supported by the Global Alliance for Trade Facilitation (GATF) and in collaboration with Bangladesh Land Port Authority (BLPA).

It is developing an e-Port management system at the Bhomra Land Port, aiming to streamline land border trade processes and significantly reduce traders' waiting times, making a substantial positive impact on the operational conditions for border agencies.

It is also developing and deploying an e-port management system, including appropriate IT infrastructure to support the system.

THE FUTURE OF SUPPLY CHAIN TECH TRENDS

Through meticulous sifting of large datasets, companies can get intelligence about not only the bottlenecks but also the opportunities that will add a competitive edge.

By **Rahul Kumar**
Business Head ERP & HRMS
Embee Software

In a field faced with disturbances and inefficiencies, where 63% of companies are not able to see the full picture of their supply chain, one can easily see that cutting-edge technology is needed to address the problem.

The supply chain and logistics are the way of the future, and the sector has already arrived at this stage of development; digitalization is not only a strategic attribute but also a matter of survival. At the same time, with the increase in the complexity of global trade and the change of consumer demands, the use of advanced technologies is a need for gaining and for running at a level of operational excellence.

For logistics managers, as well as all other professionals who are in the supply chain functions and technology sector, the only way to keep up with these technologically advanced trends is to keep learning.

This will be a comprehensive blog that will take you through the top 10 supply chain and logistics technology trends, which are significant as well as have a real-world effect. The industry players who learn the below trends will be able to better deal with the turbulences of the supply chain sector and the opportunities constituted by the quick epiphytic regions.

Changing Landscape of Supply Chain and Logistics

The trade and logistics industry are nowadays the object of globalization undergoing a process of digital development. Like so long-consuming times, when companies just change their distribution methods as the market has new forms for the sphere that is shipping sensitive and global, almost ticking to of supply chain on the wall.

Technology will address these problems. For example, by increasing the efficiency of the processes or giving real-time data and analytics, the tech systems are enabling the supply chain to be more responsive and productive. Usually, the conventional supply chain models are unsuccessful with such disturbances - inefficiency, lack of transparency, and the answer is so slow.

Nonetheless, the improvement of technology allows resolving them. Companies can optimize their operations, lower costs, and improve customer satisfaction by the usage of digital tools.

Automation and Robotics

The supply chain business is partly upgraded due to automation and robotics, which perform tasks more efficiently and with fewer mistakes. Planned AGVs and robotic process automation (RPA) are becoming highly efficient and accurate with inventory management, sorting, and packaging. Could the adoption of robots deliver some significant economic benefits?

For example, Amazon's use of Kiva robots reduced its operating costs by almost one-fifth. Indeed, these automatons can work and be productive 24/7, which in turn may enhance accuracy and intelligence. Robotics also makes the working environment more secure by carrying out the tasks which are riskier for the workers. For instance, drones can count the inventory without the need for workers to climb ladders or operate heavy machinery.

Internet of Things (IoT)

The Internet of Things (IoT) is a technique in which mobile devices and sensors are linked to the supply chain, enabling real-time data flow and the revelation of the quality of goods, conditions, etc. Thus, companies perform delivery deals (sales) faster.

Improved visibility is a very integral part of IoT. Shipping companies track perceptibly in real-time with IoT technology, reducing the risk of theft and loss. According to a Gartner report, by 2023, over 50% of the major business processes will incorporate some form of IoT. It is also used to optimize the maintenance schedule for equipment. The inventory management system is based on IoT sensors, which can perform the maintenance tasks on the machines as per the available data.

For logistics managers, as well as all other professionals who are in the supply chain functions and technology sector, the only way to keep up with these technologically advanced trends is to keep learning.

Artificial Intelligence in Predictive Analytics

AI is a necessary factor in predictive analytics, so, if we ask what, for instance, the possible decisions can be, then this may be a completely different part of the company choosing without data. AI in analytics makes experiments that allow the computer to learn things by doing them. In addition to the tracking and forecasting of products, AI can aid in distribution planning by suggesting alternatives for the transportation methods in case of any disturbances.

Another way AI can be used to save more money is with the introduction of a common knowledge storage system. Let's refer to this system as a storage gadget that would be widely used by all departments. Storing information is an important aspect of the activities of the company that IoT pertains. Knowing and obtaining all the information that we gather and process in our big data base, we can learn and apply the right model for future prosperity.

Cloud Technology for Enhanced Collaboration and Efficiency

Cloud technology makes possible the smooth carrying out of tasks by creating a transparent communication and data-sharing environment within the supply chain partners. Real-time access to information over the cloud, on the other hand, makes better decisions and relationships. The cloud entails both scalability and flexibility for big organizations.

They can grow or shrink operations according to customer demand without the need for huge investment. This agility becomes primordial in today's challenging market environment. In addition to this, cloud technology adds to data security. The main contributing factor for this is the cloud service providers who now implement very stiff security measures for protecting your data from getting hacked. These security measures include encryption and access controls.

Big Data and Analytics for Informed Decision-Making

Big data and analytics thus put the power in the hands of supply chain executives who are furnished with the intelligence to achieve the decision-making goals. Through meticulous sifting of large datasets, companies can get intelligence about not only the bottlenecks but also the opportunities that will add a competitive edge.

One of the leading advantages that big data analytics brings to the table is demand forecasting. More accurate forecasts will not only lower the inventory levels, thereby reducing carrying costs, but also minimize stockouts. The retail giant Walmart incorporates big data into its systems to analyse buying trends from real people, which allows it to predict purchasing patterns. Also, analytics has the potential to boost supplier performance. Through the identification and measurement of key performance indicators, firms can root out the poor suppliers and implement solutions that will ensure the supply chain functions properly.

Digital Twin Technology in Supply Chain Optimization

The virtual production of physical assets and processes are the outcomes of digital twin technology. These virtual counterparts are digital and, as such, they can be used to emulate real-world activities and thereby,

companies can optimize their operations by using them. Digital twins are a helpful tool for forecasting maintenance.

By having their equipment carefully monitored, companies can foresee any future lesser to no defects, therefore saving them from the incurrence of repair costs. The main tool GE uses to check and evaluate the quality of its industrial equipment is the digital twin. Moreover, it freshens the supply chain scan. Digital twins allow viewing all the supply chains in a more holistic way, thus enterprises can recognize the implementation of good processes and the level of productivity they can achieve by rectifying bottlenecks and optimizing when possible.

Sustainable Technology and Green Logistics

Along with sustainability, the production of goods and forwarders have started and are continuing to see growing importance in this respect. Companies are switching to environmentally friendly technologies to minimize ecological disturbances and comply with set standards. Electric and hybrid vehicles have seen growing popularity over the last few years. These energy-efficient substitutes are characterized by far lower emissions, and lower fuel prices are another advantage.

DHL has taken a pledge to operate zero-emission vehicles for 70% of its initial and last-mile services by 2025. Furthermore, a trend of using alternative methods of packaging is observed. Companies are incorporating processes such as the use of recyclable and biodegradable materials instead of aligning themselves with the old way of manufacturing, which caused a lot of waste and was harmful to the environment.

Last-Mile Delivery Innovations

Last-mile delivery is a critical aspect of the supply chain, directly impacting customer satisfaction. Innovations in this area are improving speed, efficiency, and convenience.

Delivery drones are revolutionizing last-mile logistics. Companies like UPS and Wing are using drones to deliver packages quickly and efficiently, especially in remote areas.

Smart lockers and pickup points offer flexible delivery options. Customers can pick up their orders at convenient locations, reducing the need for home deliveries and enhancing the overall experience.

5G Technology for Faster and More Reliable Communication

With its combination of high-speed, low-latency wireless communication, 5G will affect the supply chain in a large way. This is due to the technology's capability for microsecond latency and real-time reception of a high density of data points. For this reason, companies should seriously consider making changes to their distribution. The seeds of 5G technology are also sown in factory plants where automation, IoT devices, and robotics are key players. 5G is the technology that allows wireless computer networking technology to work seamlessly.

The biggest positive side of 5G is that it encourages companies to work autonomously. This is because 5G's fast network speeds make it possible for businesses to employ unmanned vehicles and drones, thus saving human resources and going greener. Through 5G, businesses can get smarter technologies, for example, big data analytics, augmented reality, and IoT. The technology can do fast processing of large datasets in real-time, which is an essential part of decision-making.

The Role of SAP in Supply Chain Transformation

SAP comes with a full set of tools that can support the management of logistics and supply chain. SAP Business One to SAP S4/HANA have vast numbers of new features with these tools. One core part is AI, IoT, and blockchain integration that also brings in new SAP functionalities which enable companies to realize their digitalization goals.

Conclusion

Ultimately, it is through technology that the logistics and supply chain industry is unfolding the revolution that presents a wide choice of advantages, as well as growth opportunities. Beginning with automation and IoT to AI, these technologies are particularly new trends that are going to shape the industry in the future. Early adopters that do not only catch the wave today but also lead the way soon are the ones that should adapt to these trends, along with logistics and supply chain specialists.

Companies together with their business partners can enhance efficiency, and cost reduction can be some of the benefits of these technologies; this can also give a company a competitive edge. Could your chain of goods be the next one to change?

TECH-DRIVEN SOLUTIONS COULD ENHANCE OPERATIONAL EFFICIENCY

iThink Logistics was founded with a mission to simplify and optimize the logistics experience for e-commerce sellers, says Zaiba Sarang, Co-founder of iThink Logistics

Tell us about the business concept of iThink Logistics?

iThink Logistics was founded with a mission to simplify and optimize the logistics experience for e-commerce sellers. We are a technology-driven logistics aggregator, offering a one-stop platform that connects businesses with reliable courier partners, streamlines order fulfillment, and ensures seamless last-mile delivery. Our focus is on using AI and automation to reduce complexities, cut costs, and improves operational efficiency for e-commerce brands of all sizes, ensuring that they can deliver products to customers quickly and reliably.

The E-commerce logistics sector is much cluttered and highly competitive. How have you manage to carve out your territory in this competitive market?

Despite the competitive nature of e-commerce logistics, we've differentiated ourselves by focusing on technology and customer-centric solutions. Our platform's key features include Connect+ for order confirmations, WISMO for real-time tracking, and our NDR management system to resolve undelivered shipments, have given us an edge. By offering a tailored experience that simplifies complex logistics challenges for e-commerce sellers, we've built a reputation for efficiency, reliability, and flexibility.

You seem to be focusing on growing your international presence as well, especially in cross-border logistics. How do you plan to go about it?

Expanding our cross-border logistics is a priority. We plan to achieve this by partnering with international courier services and optimizing customs clearance processes through tech-enabled solutions. Our goal is to make cross-border shipping as seamless as domestic deliveries, offering e-commerce sellers transparency and speed in their international shipments.

What challenges did you face in convincing the Indian logistics community to embrace your solutions?

One of the primary challenges we faced was resistance to adopting new technology. Many logistics providers were accustomed to traditional methods. We addressed this by demonstrating how our tech-driven solutions could significantly enhance their operational efficiency, reduce costs, and streamline delivery processes. Building trust through case studies and offering hands-on support helped bridge the gap.

In the FY 2023-24, you have booked a profit of Rs.50 Lakhs, as against an operating loss of Rs. 4.5 Cr in the previous year. How have you managed to emerge out of the red?

Despite the competitive nature of e-commerce logistics, we've differentiated ourselves by focusing on technology and customer-centric solutions.

Our turnaround was driven by strategic optimizations. We focused on cost-efficiency, enhanced our automation processes, and refined our customer acquisition strategies to onboard more e-commerce sellers. Leveraging AI to streamline our logistics operations also reduced manual intervention and cut down operational expenses. Moreover, expanding our services to meet MSME needs helped diversify our revenue streams and improve profitability.

You are also planning to attract more MSME clients. How do you meet their logistics needs?

MSMEs have unique logistics needs, often requiring cost-effective and flexible solutions. At iThink Logistics, we cater to these requirements through customizable delivery options, competitive pricing, and a user-friendly platform that simplifies order management.

SAFETY CHALLENGES IN SHIP RECYCLING

Accidents are an unfortunate but inevitable reality in any industrial sector, and the ship recycling industry is no exception. In this interview, Maritime Gateway speaks with **Rohith Agarwal, CEO of Guideship Consulting Services,** who has over a decade of experience in ship recycling consultancy. Rohith has played a pivotal role in implementing the Hong Kong Convention (HKC) across several yards in Alang, India. His insights shed light on how the industry addresses accidents, the importance of comprehensive investigations, and how the sector continues to move forward.

Accidents are a common occurrence in the ship recycling industry. How do you see these incidents affecting the industry's reputation?

It's important to acknowledge that accidents are an unfortunate reality of any industrial activity, including ship recycling. However, we must not let these incidents define the industry's overall character. Every accident, no matter how big or small, is a learning opportunity. The goal should not be to vilify the industry, but to use these events as a catalyst for improvement. The reputation of the ship recycling industry must be seen in the context of its commitment to learning from accidents, enhancing safety practices, and adopting national and international safety standards.

What are the common factors contributing to accidents in ship recycling, and how does the industry address them?

In the ship recycling industry, accidents are often the result of a combination of factors, including human error, equipment failure, and unforeseen circumstances. For instance, gas-cutting operations and the handling of hazardous materials are high-risk activities that require constant vigilance. The industry tackles these challenges by applying systematic investigation methodologies like Root Cause Analysis and Failure Mode and Effects Analysis. These methods help identify not only the immediate cause of the incident but also any latent conditions that may have contributed to the accident. By addressing these underlying issues, we can implement corrective measures that prevent similar incidents from recurring.

What role do safety audits and other technical investigations play in reducing the frequency of accidents?

Safety audits and investigations are integral to improving the safety performance of ship recycling yards. Techniques such as Incident Cause Analysis Method and Event Tree Analysis are commonly used to identify both the direct and indirect causes of accidents. These frameworks allow us to look beyond human error and consider technical failures or systemic issues that may have played a part. Job Hazard Analyses (JHA) are also conducted to assess the risks associated with specific tasks, while safety audits provide a comprehensive review of yard-wide safety practices. These measures are not just reactive; they are proactive tools to create safer working environments.

How should the industry handle public perception and criticism, especially when accidents occur?

Public perception is an area we need to handle carefully. When accidents happen, there's a natural tendency to blame the industry outright. However,principles such as force majeure recognize that some incidents are beyond the control of even the most safety-conscious operations. It's crucial that investigations are conducted impartially and thoroughly to determine the actual causes of the incident. This helps to separate fact from speculation and ensures that the industry isn't unfairly blamed. Rather than focusing on blame, we should focus on transparency, learning, and improving safety standards.

What safety improvements have been implemented in Alang's ship recycling yards in recent years?

The ship recycling yards in Alang have made remarkable strides in adopting international safety standards over the last few years. For example, many yards have achieved certification in ISO 45001, which is the gold standard for occupational health and safety management systems. In addition, continuous training programs for workers, safety drills, and the introduction of modern, safer equipment have greatly improved safety outcomes.

VISHVASYA BLOCKCHAIN AS A SERVICE

The Vishvasya-Blockchain Technology Stack offers Blockchain-as-a-Service with a geographically distributed infrastructure designed to support various permissioned Blockchain based applications.

In a programme organized at the Ministry of Electronics and Information Technology (MeitY), Government of India, S. Krishnan, Secretary, MeitY launched the Vishvasya-Blockchain Technology Stack to offer Blockchain-as-a-Service with a geographically distributed infrastructure designed to support various permissioned Blockchain based applications.

Additionally, the Secretary, MeitY also unveiled the NBFLite-Lightweight Blockchain Platform, Praamaanik – an innovative blockchain-enabled solution for verifying mobile app origin and National Blockchain Portal.

National Blockchain Framework to Enhance Digital Trust and Service Delivery MeitY, with the vision to create trusted digital platforms, initiated National Blockchain Framework (NBF) for promoting research and application development; facilitating state of the art, transparent, secure and trusted digital service delivery to citizens.

National Blockchain Framework technology stack is architected with Distributed Infrastructure, Core Framework functionality, Smart Contracts & API Gateway, Security, Privacy & Interoperability and Applications development offering Blockchain as a Service (BaaS). NBF currently supports two permissioned Blockchain platforms and is extensible. The Technology Stack is hosted on geographically distributed infrastructure at NIC Data centers i.e. Bhubaneswar, Pune, Hyderabad.

Blockchain Sandbox for Startups and Academia

NBFLite, a Blockchain sandbox platform, is developed especially for startups/academia for rapid prototyping of applications, carrying out research and capacity building. These technologies have been developed by collaborating efforts of C-DAC, NIC, IDRBT Hyderabad, IIT Hyderabad, IIIT Hyderabad and SETS Chennai under the MeitY support.

National Blockchain Framework to Boost Security and Transparency for Citizens

During the launch, S Krishnan, Secretary, MeitY expressed that as part of the efforts of Government of India for providing trusted digital service delivery, the National Blockchain Framework would play an important role in enabling security, trust and transparency for various citizen centric applications. He also highlighted that the stakeholders should aim to position India as a global leader in blockchain technology and proliferate the developed solutions for Global adoption, leveraging it to drive economic growth, social development, and digital empowerment.

Blockchain's Role in Transforming Governance

Bhuvnesh Kumar, Additional Secretary, MeitY, highlighted that the Blockchain technology holds immense potential for transforming governance in India by making public services more transparent, efficient, and accountable. He stressed the need for scaling the applications on NBF across various states & departments and also suggested to explore onboarding new applications/ platforms/ innovative components on the NBF stack.

NBF's Goals for Addressing Challenges

Smt Sunita Verma, Scientist G and Group Coordinator, R&D in Electronics & IT, MeitY mentioned that the objective of initiating NBF is to develop an extensible framework with Blockchain technology stack on distributed infrastructure towards addressing the challenges such as need for skilled manpower towards building Blockchain based applications.

RUSSIA PLANS PIT STOPS IN EASTERN MARITIME CORRIDOR

Russia aims to establish intermediate stops in Vietnam, Thailand, and Indonesia for the Eastern Maritime Corridor, linking Vladivostok with Chennai.

Russia is working to include Vietnam, Thailand and Indonesia as intermediate stops of the Eastern Maritime Corridor connecting Vladivostok with Chennai as part of efforts to boost India's business connections with resource rich Far East.

According to Russian Far East Minister Alexey Chekunkov, currently the Far Eastern Shipping Company (FESCO) is actively working on this arrangement and the Indian entities are also involved in this initiative.

This week's Eastern Economic Forum in Vladivostok will also enable Russia and India to explore joint shipbuilding projects at Indian shipyards.

At the July annual summit the two countries signed the India-Russia Cooperation Programme in Trade, Economic and Investment Spheres in the Russian Far East for 2024-2029, as well as the Principles for Cooperation in the Russian Arctic Region.

"The trade turnover between the ports of the Far East and India exceeds one billion dollars, excluding oil and special-purpose goods. Therefore, the logistical aspect of this agreement is very important; it allows for the development of trade between the Far East and India, as well as the countries of Southeast Asia as a whole," Alexey Chekunkov, Minister of Development of the Russian Far East and the Arctic recently stated.

He said that work is being done to include Vietnam, Thailand and Indonesia in the routes between Russia-India as part of intermediate stops of the Eastern Maritime Corridor.

Following the annual summit in Moscow in July, the two sides are expediting complete implementation of Vladivostok-Chennai Eastern

Maritime Corridor and linking it with the resource rich Arctic region. India-Russia also plans a joint shipbuilding project for maritime trade, it has been learnt.

India has plans for a Trans-shipment hub in the Bay of Bengal. While Vladivostok-Chennai Eastern Maritime Corridor has started functioning additional infrastructure needs to be put in place in Chennai for handling additional trade volume.

Covering a distance of around 5,600 nautical miles, the Eastern Maritime Corridor (EMC) is a highly strategic shipping route connecting India to Russia. The EMC has emerged as a beacon of transformative potential, capturing the imagination of global trade enthusiasts. In the midst of major geopolitical shifts and economic realignments, the EMC stands as a testament to the dynamic nature of maritime cooperation.

With quite ambitious estimates, the EMC can reduce the time required to transport cargo between Indian and Russian Ports of the Far East Region by up to 16 days. Once complete, it will take 24 days, down from presently over 40 days, to transport goods from India to Far East Russia. The trade route between Mumbai and St Petersburg covers a distance of 8,675 nautical miles which takes approximately 35 to 40 days.

The EMC will facilitate a sea trade route between Chennai and Vladivostok via sea, covering a distance of about 5,600 nautical miles – significantly shorter than the current route passing through the Suez Canal. A large container ship that travels at the normal cruising speed of 20-25 knots (37-46 km/hour), will be able to cover this distance in approximately 10 to 12 days.

The genesis of the EMC lies in the collaborative efforts between India and Russia. Recent reports highlight the proactive measures taken by both nations to explore the Northern Sea Route (NSR) and EMC, aiming to widen maritime cooperation and trade. Indian Minister for Ports, Shipping, and Waterways, Sarbananda Sonowal, emphasized the role of EMC amid the current crisis in the Red Sea. Such diplomatic foresight showcases the corridor's potential resilience in the face of unforeseen challenges.

India has plans for a Transshipment hub in the Bay of Bengal. While Vladivostok-Chennai Eastern Maritime Corridor has started functioning additional infrastructure needs to be put in place in Chennai for handling additional trade volume.

Economic Implications: A Game-Changer in Trade Dynamics

Trade relations between India and Russia are poised for a significant boost, with a specific focus on the 'Eastern Maritime Corridor.' The corridor is hailed as a game-changer, aiming to reduce freight charges, expedite transit times, and open up new trade avenues.

Vladivostok is a major city in Russia, located on the Golden Horn Bay, north of North Korea, and a short distance from Russia's border with China. It is the largest port on Russia's Pacific coast and home to the Pacific Fleet of the Russian Navy. Vladivostok is also the eastern railhead of the legendary Trans Siberian Railway, which connects the Far East of Russia to the capital Moscow, and further west to the countries of Europe. On the other hand, Vladivostok's massive port is the hub for shipping and commercial fishing.

Russia sees India as its strategic partner and is working closely to further deepen bilateral ties through enhanced trade relations. Anatoly Yuryevich Bobrakov, Hon'ble Deputy Minister for the Development of the Far East and the Artic of the Russian Federation expressed his confidence in the outcome of the recently conducted India-Russia Workshop at Chennai. All things considered, the operationalization of the EMC is expected to usher in a new era of trade relationships between the two countries.

Sonowal, during the recent Workshop, expressed optimism about the commencement of trade operations on the EMC. This signals a tangible step forward in transforming the corridor from a conceptual idea into a functional reality.

To comprehend the transformative potential of the EMC, it's crucial to explore its operational aspects. The corridor is envisioned as more than just a physical route; it symbolizes a digital and logistical infrastructure that enhances connectivity.
Reports suggest that the corridor's operationalization will lead to a seamless flow of goods, reducing transportation costs and boosting efficiency.

Environmental Considerations: Sustainable Trade Routes

In an era of increasing environmental consciousness, the EMC's role in fostering sustainable trade routes cannot be overlooked. As sea routes become integral to global commerce, the corridor's design takes into account ecological considerations to ensure a balance between economic growth and environmental stewardship.

The EMC's potential as an alternative route amid the Red Sea crisis enhances its role in providing flexibility and resilience in global trade. Diversifying routes not only mitigates risks but also allows for better management of environmental impact by distributing traffic across different regions.

Efficient operations contribute to reduced energy consumption, optimizing resource use, and minimizing the overall ecological footprint.

India seeks to boost exports to Russia

India is exploring ways to boost its exports to Russia, including by encouraging rupee-rouble trade and pushing Moscow to lift non-tariff barriers. Old partners India and Russia have stepped up trade since Russia invaded Ukraine in early 2022, but the increase has been overwhelmingly one-way, dominated by India buying Russian oil shunned by traditional customers in Europe.

ENVIRONMENTAL, ECONOMIC FACTORS IN SHIP RECYCLING

Through meticulous dismantling, various components, such as engines, machinery, and furniture, are either reused or recycled. The reclaimed materials contribute to the production of new goods, fostering a sustainable and efficient use of resources

Ship recycling stands at the intersection of environmental responsibility and sustainable consumption, playing a pivotal role in the realization of Responsible Consumption and Production.

Ship recycling promotes responsible consumption by retrieving and repurposing materials from retired vessels. Through meticulous dismantling, various components, such as engines, machinery, and furniture, are either reused or recycled. The reclaimed materials contribute to the production of new goods, fostering a sustainable and efficient use of resources. This not only reduces the environmental burden associated with extracting raw materials but also supports the creation of a closed-loop system within the maritime industry.

Navigating Challenges of Hong Kong convention (HKC) Implementation in 2025

As the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (HKC) approaches its entry into force on June 26, 2025, the global ship recycling industry stands at a critical juncture. The HKC, designed to ensure that ships are recycled in a manner that does not pose unnecessary risks to human health, safety, and the environment, has been a long-awaited regulation. However, its implementation raises numerous questions that demand the attention of both industry experts and regulators.

India's Leadership in HKC Compliance

India, a major player in the global ship recycling, is currently in an advantageous position. A significant number of ship recycling yards in India have already achieved compliance with the HKC, holding Statements of Compliance (SoC) issued by reputable classification societies that are members of the International Association of Classification Societies (IACS). This demonstrates India's commitment to leading the way in safe and environmentally sound ship recycling practices.

The Uncertain Future for Bangladesh and Pakistan

In contrast, neighbouring countries like Bangladesh and Pakistan, which also hold a significant share in the global ship recycling market, are lagging in full HKC compliance. Bangladesh, for instance, has only about half a dozen yards that are currently HKC compliant, with the rest still in the process of upgrading their facilities.

Ensuring Effective Implementation of HKC

One of the most pressing concerns is the verification of compliance. Who will be responsible for ensuring that facilities receiving DASR from their respective state authorities are fully compliant with the HKC? How will it be verified that these yards are practicing safe and environmentally sound recycling methods consistently, without cutting corners? The effectiveness of the HKC hinges on robust oversight and enforcement, yet the mechanisms for achieving this remain unclear.

The Stakes for Non-Compliance

Another critical question is the fate of the HKC if non-compliance is detected after June 25, 2025. What will happen if individual ship recycling yards are found to be in violation of the convention's standards? What will be the repercussions for nations that have ratified the HKC but fail to enforce its provisions effectively? These are not just theoretical concerns; they are real challenges that could undermine the credibility and effectiveness of the HKC.

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.

कॉनकॉर
CONCOR

THINK LOGISTICS, THINK CONCOR

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

MOVEMENT ON DEDICATED FREIGHT CORRIDOR (DFC)

CONCOR is not only expanding its existing businesses but has also taken various initiatives to take advantage of opportunities available. This includes setting up of MMLPs on DFC network, expansion of double stack hauls etc.

IT - ENABLED BUSINESS SOLUTIONS

- IT is the backbone of Logistics operations.
- Launched app for 1st/Last mile services
- Pilot project on AI-based solution initiated at ICD TKD
- Consideration for extending AI solution to other CONCOR terminals nationwide
- Arrangements made for real-time location tracking of containers
- Automated billing for vendors, Implementation of an e-Office
- Digital workplace solutions

INCREASED FOCUS ON 'SUSTAINABILITY'

➢ Acknowledgment of global warming as a significant concern

While ESG norms are being finalized for Logistics sector in India, CONCOR is making itself future ready by:

Deployment of LNG Trucks:

- 90 trucks already deployed, More than 40 in the pipeline
- Total of app. 130 trucks to be deployed, marking the largest order in India

Installation of Solar Panels at Terminals

Memorandum of Understanding (MoU) with:

- IGL & IOCL for LNG infrastructure
- NTPC Vidyut Vyapar Nigam for solar power-based solutions

FIRST MILE LAST MILE CONNECTIVITY (FMLM)

FMLM App for Transporters- CONCOR e-Logistics Transporter App: CONCOR has developed FMLM App to provide End to End logistics support to its customers. The very purpose of FMLM is to strengthen and provide connectivity at reasonable rates to the Customers through competitive bidding among empanelled vendors at terminal level.

Regd. Office: C-3, CONCOR Bhawan, Mathura Road, Opp. Apollo Hospital, New Delhi-110076 Corp. Office: CONCOR Annexe., 3rd Floor, NSIC MDBP Building, Okhla Phase – III, Delhi -110020 Email: investorrelations@concorindia.com, Website: www.concorindia.co.in Phone: 011-41222500/600/700