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DELIVERING AN OPTIMISED SUPPLY CHAIN

RAJESHWAR BHATT
CEO, KEMAR PORT AUTOMATION

AWAITING NORMALCY OF THE SUPPLY CHAIN

Industry leaders gaze at the crystal ball to predict what the coming months will unfold for the shipping, logistics and trade community

WHEN WILL CONTAINER CRISIS END?

The global community has welcomed the New Year on a positive note, while grappling with new virus variants. Cargo handled at India's major ports rose 10.74% during April-December 2021 to 529.344 mt from 478.008 mt a year ago. Evergreen has just added to its fleet the 399.99 m long "Ever Alot" that has 24,004 teu capacity, creating a new world record by breaking the 24000 teu barrier. But investments in container ships, which pushed up new shipbuilding orders in 2021, are forecast to slow down in 2022, which may not be a good sign as the capacity crunch continues.

The EXIM community is still dragging along under the burden of high logistics cost. Soaring freight rates on major sea routes, particularly the Bangladesh-China route, come as a severe blow to local businesses. The increased charges, together with shipment delays have already raised production costs for most goods.

The sea freight charges on the Bangladesh-USA route increased by 500%, while it increased by 400% on the Europe route, over the last year. The surge in freight rates and associated costs are largely the result of a mismatch between soaring demand and reduced supply capacity, according to a recent report of the UNCTAD. "If container freight rates continue to surge, global import price levels could increase by 11% until 2023, while consumer price levels could rise by 1.5%," it reads, adding that developing countries would suffer much. Economists believe businesses across the globe were now struggling with increased transportation costs.

But how long will the freight rates rally and container shortage last? Industry experts predict, "Considering the current state of affairs, we do not see anything changing till end of 2022. Restricted capacity will take a long time to meet the existing and growing demand. 2022 will largely see a stabilisation of the shipping freight rates although they will be still on the higher side. Logistics cost will also be high but stable. The emphasis will be on tech and mainly to be lean and hungry, and China is doing just that." While the global community was busy planning for the China+1 strategy, China has dished out its latest "Made in China 2025 industrial policy blueprint" that has the potential to make Beijing the factory floor of the future. It will now focus on building industrial robots, as well as upgrading equipment and processes used in the manufacturing sector, warehousing and logistics.

As COVID-19 continues to return in the guise of new variants, we hope our supply chains continue to become more resilient.

2022 will largely see a stabilisation of the shipping freight rates although they will be still on the higher side.

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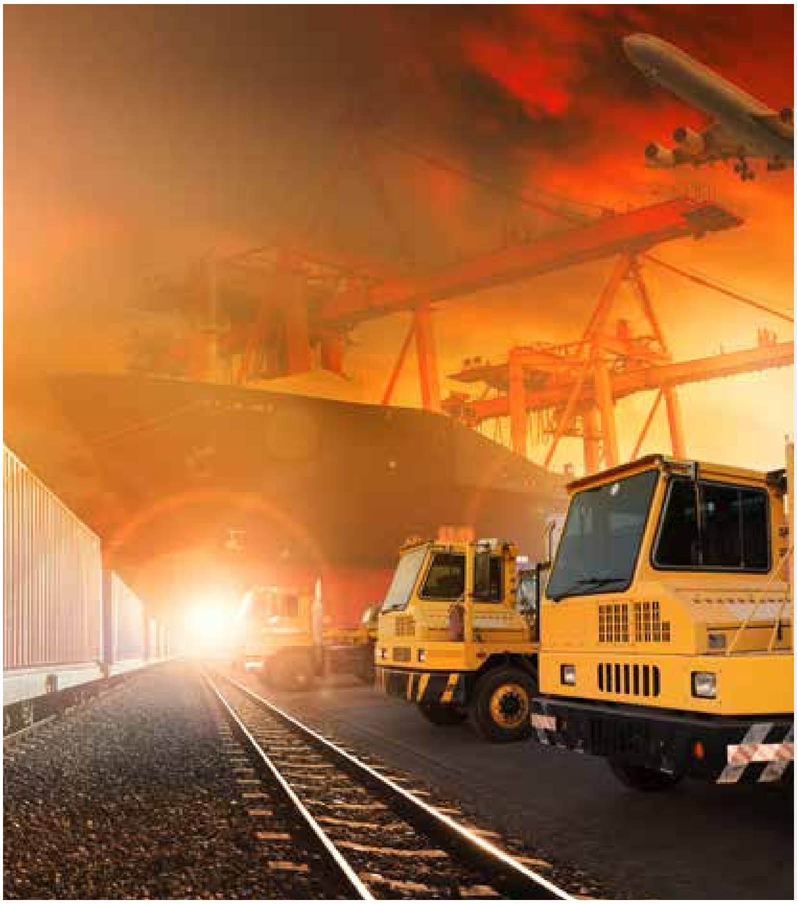

DELIVERING AN OPTIMISED SUPPLY CHAIN

"Our customers look forward to enhancing their operations and supply chain efficiency. We do this by increasing their supply chain traceability, readability, visibility, and transparency by deploying mobile computing, IoT, RFID, and various other location intelligence solutions," shares **Rajeshwar Bhatt, CEO, Kemar Port Automation Pvt Ltd**

You have been in the port automation industry for the past 20 years. What trends have you noticed? Where do you see the maritime sector heading in terms of technology adoption?

The ports worldwide have shifted the focus to optimizing their entire value ecosystem using various technological platforms and automation innovations. For the Indian market, increasing investment and cargo traffic indicate a healthy outlook towards the Indian ports sector; this can prove beneficial for Operations and Maintenance (O&M) providers. A transition to a cleaner and greener maritime industry on an international level concerning regulating sulphur and GHG emissions has been observed. There has been a remarkable increase in the use of big data analytics at the transport nodes, IoT enabled remote operations, RFID based logistics and transportations and Robotics. The technological implementations are projected to continue rising due to increased investments and decreasing costs. Since there is an increased shift towards port automation, there is also an increasing concern of cyber security to secure the supply chain; this could mean less investment in physical infrastructure development and more significant investments in cybersecurity and analytics.

To which Indian and foreign ports have you provided automation solutions? How have they improved the efficiency of those ports?

Kemar port automation is associated with most of the India's best ports and terminal operators like Adani Group, JSW and JM-Baxi Group, and several overseas operators including DPW Maputo & Arise Togo and Benin. Our customers look forward to enhancing their operations and supply chain efficiency. We do this by increasing their supply chain traceability, readability, visibility, and transparency. This is achieved by deploying various solutions, including mobile computing, IoT, RFID, and various other location intelligence solutions that help deliver an optimized supply chain to our customers.

The rise in E-commerce has fuelled demand for warehousing. What technology solutions do you offer for warehouses?

The optimized yard and warehouse are the critical components of any e-commerce, and our warehousing solutions complement the rising demand for warehousing. Our flagship 'Box-at-yard' and location intelligence solutions are an excellent way to enhance traceability and optimize operations when it comes to warehousing. By leveraging modern technologies and following a machine-first approach towards adopting solutions, we minimize human dependency as our location intelligence solutions allow the companies to plan with more transparency and confidence.

The shipping industry has a tedious documentation process. Do you also provide solutions for the digitalization of documentation?

Kemar's goal for the shipping industry is to streamline all the processes to ensure a smooth, streamlined and optimized logistic movement. We offer a solution to digitalize these documentation processes by creating a portal for information exchanging where the concerned parties can upload their information digitally and the same can be accessed whenever necessary. With the usage of artificial intelligence and data accusation mobility, RFID and OCR are helping customer in this direction.

The government is coming up with a Logistics Data Bank, then we have the Port Community system PCS 1X, and similarly, there are other platforms as well. Are your solutions compatible with these platforms?

Kemar solutions-KGos, BoxatYard, and K-connect can be integrated into any platform. They are well designed to take care of current and upcoming initiatives by the government or port authority. We design our solutions keeping in mind compatibility with all new developments in the port community systems.

How has your business been this year? What are your plans for the next year?

The IT and automation sector has been truly rewarding this year. We have experienced a significant growth in terms of revenue and innovation. Our flagship solutions - UrgeTruck, KGos and BoxatYard, have been the primary focus this year and there have been very good project acquisitions in the domestic market.

Kemar Automation

Kemar Port Automation

At Kemar Automation, we help our customers find innovative solutions to complex problems by combining our in-depth knowledge and expertise around enabling Digital Transformation for Manufacturing, Transportation & Logistics.

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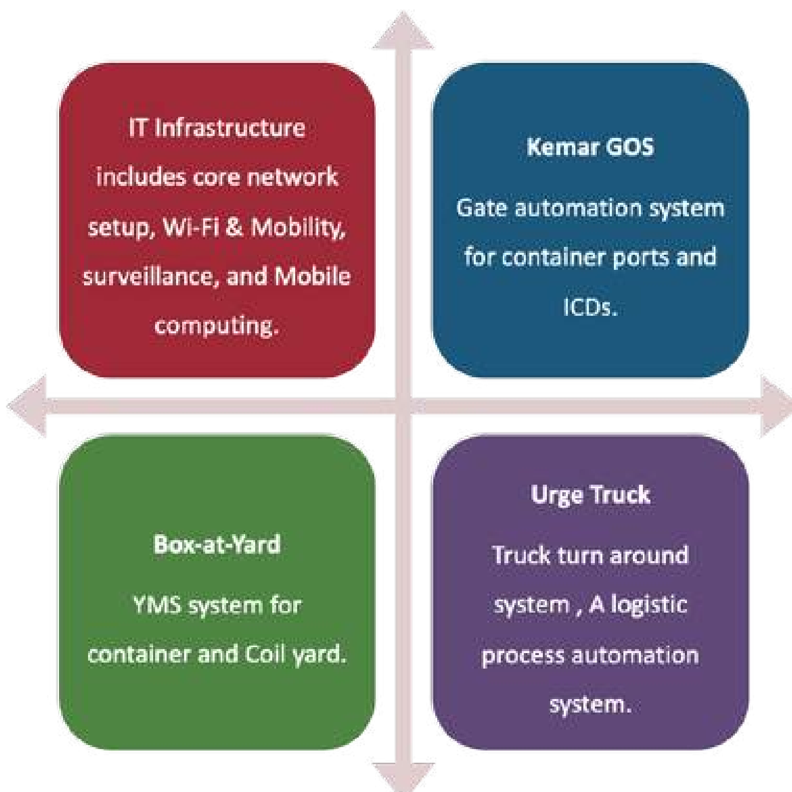

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AWAITING NORMALCY OF THE SUPPLY CHAIN

Industry leaders gaze at the crystal ball to predict what the coming months will unfold for the shipping, logistics and trade community

The year 2021 has seen the maritime trade bounce back, as there is considerable increase in the demand for shipping and global trade flows are rising, while the shadows of the pandemic fade away. The industry leaders from various domains of shipping industry across the country have responded on the range of issues related to the maritime business, trade and supply chain crisis in the industry outlook for 2022.

Even though, the direction and prospects for maritime trade seem to be on a positive note for 2022, but a sense of uncertainty still persists, as the leaders have opined that it is really difficult to predict when the global supply chain normalcy will be restored particularly as new variants of Covid-19 are appearing in different parts of the globe. But almost all of them are hopeful that situation should become near normal from the second or third quarter of 2022.

The most disturbing issue for the industry for the entire last year has been the supply chain disruptions. The industry experts opine that as the pandemic has undeniably caused a question mark over the global value chain originating in one continent and ending in another continent or passing through various continents. As such, global supply chains are more susceptible to disruptions. Therefore, the share of the global value chain in overall global production will come down during the post-Covid era. Even during the pandemic, the population was best served by local neighbourhood stores rather than large departmental stores. The pandemic has definitely pushed the realignment of the global value chain with more emphasis on the regional value chain. Short distance value chains are likely to be more successful and feasible in the post-Covid period. India should also work on such chains with South Asia, South East Asia and Middle East countries.

According to **Dr Ajay Sahai, Director General & CEO, FIEO**, the three main logistics challenges faced by the industry include (i) acute shortage of containers; (ii) non-availability of space on ships; and (iii) skyrocketing freight. In order to overcome this problem FIEO has suggested government to encourage manufacturing of containers in the country and urged the government to provide fiscal/tax concessions to encourage container manufacturing in the country.

As per the opinion of **Xerrxes Master**, **President, AMTOI**, 2022 will largely see a stabilisation of the shipping freight rates although they will be still on the higher side. Logistics cost will also be high but stable, but the emphasis will be more on technology.

Anil Devli, CEO, Indian National Shipowners' Association, opines that in the coming days the cost of decarbonisation will play an extremely important role in shipping economics. Given the move towards lowering of carbon emissions, there can be no doubt that we will all have to pay the price for this cleaner environment. The shipping industry has, of its own volition, set certain targets towards decarbonisation and reduction of use of fossil fuels. These new non-fossil fuels and decarbonising technologies will come at a high cost which will have to be borne by society at large. Therefore, consequently, there will be a rise in overall costs of transportation in the coming years as a certainty.

According to **Dhruv Kotak, MD, JM Baxi**, retention of customers and venturing into new markets spread across various locations will be the primary key, while in shipping and logistics sector technology will play a key role like artificial intelligence, data storage centre, RFID technology, warehouse automation etc., which will enable faster transit from the first mile to last mile connectivity. Warehouses, sorting centres, distribution hubs will get more demand as the inventories would be maintained to meet the customers' requirement. Lines are also looking at providing end-end logistics solutions as well. The launch of National Logistics Portal by the Government of India will become a game changer where exim trade will be facilitated to do their entire documentation online.

Harish Pandeya, MD, Swift Cargo, opines that the government needs to continue to demonstrate the will to bring in greater efficiencies in transportation and port functioning - on the labour management as well as infrastructure front.

As per the opinion of **Jasjit Sethi, CEO of TCI Supply Chain Solutions**, the Indian logistics sector is valued at $ 215 billion and has been witnessing a CAGR of 10.5 per cent. As trends and technology go hand in hand massive changes in supply chain are being fuelled by digital transformation. The sector has undergone an end to end transformation in the last one and a half years from first mile delivery and warehousing to handling last mile delivery. Technology innovations being an essential part of almost every industries' growth, logistics and supply chain is indeed one of the most impacted sectors. With massive technological advancements in the recent years, Industry 4.0 has changed the land scape of many industries and their business models. This revolution is marked with real time exchange data, automation, robotics, cloud artificial intelligence, connected devices and equipment (IoT) and augmented reality to connect innovations, new technologies and humans.

According to **Vikash Agarwal, Managing Director, Maersk South Asia**, with regard to green transition of shipping industry, the momentum should be translated into very concrete actions at the International Maritime Organization (IMO) - including a price on GHG emissions and raising the IMO's GHG reduction ambitions to netzero in 2050. It is encouraging to see the overall goal to decarbonize by 2050 is now shared by everyone in the shipping industry and in combination with recent positive statements from key IMO Member States, the current momentum provides the IMO's upcoming MEPC77 meeting the best possible conditions to secure much needed progress on these critical topics.

Manish Puri, President, Association of Container Train Operators (ACTO), has expressed opinion that the primary lesson that we have learnt from the pandemic was the extreme dependence of global supply chains on a few critical geographical locations - primarily China and the US. As we move out, on the demand side we can expect some diversification both in terms of global sourcing locations, and in terms of allocating some sourcing from domestic markets as a risk hedging measure. On the supply side as well, we can expect to see some re-alignment of global trade lanes with efforts to provide more inventory in emerging markets like India, Vietnam, Bangladesh, and parts of Africa. We can also expect further pushes on cost cuttings and capacity management on the supply side in order to create a future risk hedge against commercial or business losses.

Shankar Shinde, Chairman, FFFAI, feels that there is a caveat in view of the emerging challenges that the freight forwarders and logistics service providers will have to face. Ongoing Covid-19 scenario with new variants like Omicron will have huge impact on the logistics and supply chain sector. At present there is a requirement of huge inventory and therefore requirement of huge stock/warehousing capacity to meet the demand in exigencies like lockdown in future. The managing of Just in time delivery service has now changed to efficient Inventory management, which may not be possible for small and middle-sized players.

According to **Shailesh Garg, Director, General Manager India, Drewry**, the disruptions caused by Covid-19 have forced the consumers and the service providers to adopt new IT tools and technology. The focus will now be more on Automation, IoT, Blockchain and other technology-based solutions to achieve flexibility and better control over the entire supply chain. Further, changes in the regulatory environment and increased focus on ESG issues are expected to lead the shipping and logistics industry towards sustainable and green solutions.

Shri Sanjay Sethi, IAS
Chairman, JNPT

Supply chain crisis

The global economy is projected to grow 5.9 per cent in 2021 and 4.9 per cent in 2022, 0.1 percentage point lower for 2021 than in the July forecast. The downward revision for 2021 reflects a downgrade for advanced economies—in part due to supply disruptions—and for low-income developing countries, largely due to worsening pandemic dynamics.

This is partially offset by stronger near-term prospects among some commodity-exporting emerging market and developing economies. Rapid spread of Delta and the threat of new variants have increased uncertainty about how quickly the pandemic can be overcome. Policy choices have become more difficult, with limited room to manoeuvre.

As the supply chain played a vital role in responding to these hurdles by ensuring a quick and continuous flow of food, necessary commodities and most importantly, essential medical supplies to places where they were required.- The global supply chain has been facing tension due to the large scale of disruptions caused due to the pandemic. The pandemic led to change in consumption patterns which have added to the difficulties faced by the sector. The increase in input and freight costs have intensely impacted the shipping volumes and have also strained the manufacturing, transportation, and logistics sectors. Due to these ongoing supply and demand disparities and workforce availability, companies across the globe are working towards performance and maintaining profitability into 2022.

With the onset of the festive season and the outbreak of the new COVID variant, the near-term relief of the worldwide supply chain disruption is unlikely to normalize. The pandemic may have long-lasting effects on how organizations work and supply chains operate. This emphasizes the dire need for businesses and organizations to work on long-term resilience in their business model and way of operation for tackling future challenges.

Lessons learned

In the last few months, we have noticed that the supply chain has taken a toll and has never been strained as much in the past couple of decades globally. Due to the complexity in the supply chain, any disruption in the supply chain link causes a domino effect leading to an increase in prices and a shortage of raw materials and other necessary inputs. Businesses need to calculate the risks while designing the supply chain and the implications of their business model on different industries or the economy in general. While during the Pre-Covid periods, our supply chain systems were operating on Just In Time (JIT) supply models with almost Zero or at a bare minimum inventory holding at our factories, which seems to be difficult now, as the Factories have to hold heavy inventories due to disrupted supply chain because of global uncertain industrial outputs.

Therefore, Companies need a holistic approach to designing and handling the supply chain to create a more flexible framework and robust risk management operations to protect against possible disruptions. There is need of diversifying not just the customer base and suppliers but also the region of operations, so that dependency on any one should not be at critical level. Integration of new technologies, AI and ML will enable revamping logistics-related operations and increase operational efficiency. It will allow stakeholders to gain real-time visibility in the operations and create effective strategies. Another major learning we can take from this pandemic is that we need to consider our workforce's well-being and support their mental and physical health. Implementing such measures will help the industry emerge stronger and make us more resilient to take on potential adversities.

Key shipping and logistics trends

While COVID-19 slowed down the logistics activities across the globe, it also fuelled the demand across various industries such as essential goods, healthcare, pharmaceuticals and e-commerce, leading to a positive impact on the logistics sector. As we head into 2022, the prospect of the shipping and logistics industry looks better as there is great growth in the online shopping segment as people around the globe have started purchasing more consumer goods to adapt to the pandemic. This change in consumer behavior will continue and will further see an increase in the production of these goods and, in turn, will also increase the logistics operations.

The industry will see a drastic change in the area of digitization. The digital transformation will provide stakeholders with advanced software to build effective and better interactions with their consumers. IoT will help companies in the shipping and logistics sector calculate the possibility of certain events and their impact on the industry and economy. We will see companies increasing their operational efficiency and making informed decisions, which will increase customer satisfaction. Companies will adopt blockchain technology for their supply chain management to improve their inventory levels' visibility. This will bring transparency and provide real-time updates on the shipped products and shipments.

The sector will witness an increase in dependency on technology due to the growing demand from the e-commerce sector and the shortage of labour in the logistics sector. Companies across the globe will be equipped with automated vehicles, hire a workforce who are experts in automation, big data, AI and well-educated about the IoT.

Like other sectors, the logistics sector will also adopt green logistics. Focusing on sustainable practices, companies will follow eco-friendly measures, use more renewable energy sources in their daily operations, and use technology to keep track of the carbon footprint.

Business plans for the next year

Being one of the country's premier and leading container ports, JNPT strives to constantly work on its role as a catalyst for trade and logistics in the country. JNPT is operating on a supply driven infrastructure model and well positioned to accommodate shipping lines requirements and always ensuring that container ships will never wait for want of berths, as in terms of connectivity, be it through sea or road, initiatives are undertaken to integrate all the connectivity elements for trade and provide the required facilities to stakeholders, benefit the end consumers or citizens.

With the launch of the PM Gati Shakti Scheme, JNPT has integrated its efforts along the scheme's objective to develop the logistics sector further and around the country.

With a vision to make JNPT a mega port shortly, we plan to build world-class facilities to provide the much-required support to the stakeholders. JNPT has proposed to develop Vadhavan Port along with the participation of the Govt of Maharashtra (Maharashtra Maritime Board), and an MOU was signed on 5th June 2015 to set up a new port at Vadhavan as a Major Port to be notified under the Indian Ports Act 1908 by Government of India. Poised to be developed based on Landlord Port Model, Vadhavan Port will be jointly implemented by JNPT and Maharashtra Maritime Board with a shareholding of 74% and 26%, respectively. Vadhavan will accommodate 24,000 TEUs container ships with technological driven operations which will be a Port of Millennium.

Apart from this, to enhance capacity and productivity for our business,

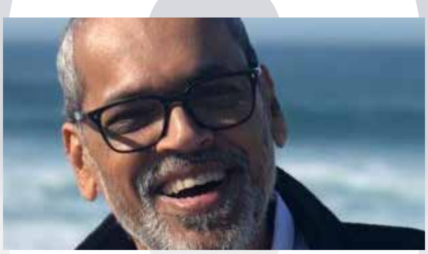
generate employment and provide a livelihood to the local community, JNPT has developed a port-based SEZ. With infrastructure facilities as per international benchmarks, we are confident in attracting leading global companies to make India a manufacturing hub. Once completely operational, JNPT-SEZ is expected to generate ₹4,000 Crores of investments and create 57,000 jobs, generating substantial employment opportunities. JNPort also enjoys the SEZ project's Special Planning Authority (SPA) status. Serving as a lucrative investment destination for the domestic and global port-based industries due to the proximity, JNPT-SEZ will further help reduce setup time and cost for the units being set up and will further enhance "Ease of Doing Business".

Policy expectations from the government

JNPT is one of the GDP contributors of India, the logistics sector will continue to grow to look at the current market scenario. Due to the expected increase in trade volume, the industry will also see a drop in logistics cost with the faster turnaround time provided the current hurdles are overcome.

The government's various initiatives like – Sagarmala Programme, Port Development, Inland water transport and RoPAX services will transform the industry and improve the ease of doing

business in the country. The government will drive initiatives to support the industry by developing smaller ports. These efforts will ease the pressure faced by the major ports handling huge cargo traffic. We can expect policies and initiatives which will promote sustainability in the port sector with a push to reduce the carbon footprint from the industry.



Anil Devli
CEO, INSA

Supply chain crisis

I can only speak about the blue side i.e. shipping. Currently, the pent up demand has led to an unprecedented pressure on the need to transport. This coupled with massive port delays in China and the disruption of the Suez Canal exacerbated the liner cycles leading to further delays. Clearly, world's container shipping fleet found itself lacking to meet demand and that had led to a huge rise in freight. However, unlike China which had a foresight to create its own container shipping companies, our policies decidedly discouraged investment in container fleet over the years. The final blow was struck in 2018! We are now paying the price for those non-decisions.

As the capacity of containers shipping was fully utilised, bulk carriers, by association, also saw a rise in demand correspondingly.

This positive cycle can see softening only if one sees a lowering of demand for finished goods, leading to a lowering of production from Asia to the West. The other negative trigger can be an increased supply of ships.

All in all, these were happy days for some shipowners and after several years of lows, there is a short spurt in revenues for shipping companies.

This time we saw a lowering of demand for fuel (road, rail and air travel was impacted due to the pandemic) and at the same time there was a rise in fleet numbers. This led to the softening of the tanker market. While oil tanker earnings have improved in November, but 2021 is still likely to prove to be the worst year for oil shipping freight rates since the recession of the early 1990s.

Energy analysts are positive about macroeconomic growth and oil demand growth in 2022 as traffic in major cities is almost back to pre-pandemic levels. Refiners have already begun their peak season programmes and demand in late October and early November 2021 was robust.

According to Clarkson Research, more ships were ordered within the first half of 2021 than in all of 2020 as ship owners were reluctant to place orders at the start of the pandemic.

In total, 749 merchant vessels of 23.4 million cgt have been reported ordered so far, representing the strongest order volume since 2013. Mainly the shipbuilders in China and South Korea have benefited from the current newbuilding boom in 2021 as maximum orders went to these two countries (21 million cgt). Today, about one-third of active shipyard sites in the world are with Chinese (state-owned) companies.

However, in 2022, 5% more in new capacity of tanker fleet would be delivered, 3% of new dry bulk vessels would be delivered and about 3.41% of Container fleet would get delivered, as per Clarksons.

This should tell us something about how market will behave.

Lessons learnt

That humans by nature learn to adapt. What you call crisis can also be seen as just another mismatch of demand and supply – a function of market forces will set it right. The universal lesson is that the market, like water finds its own level and soon one will see the tables turning. There will always be a winner – either a buyer or a seller.

Key shipping and logistics trends

One can expect that there will be an increase in supply of shipping tonnage while demand is not expected to rise proportionately. What I am sure about is that trade needs to come to terms with a rise in freights, all around, not just shipping freights.

The cost of decarbonisation will play an extremely important role in shipping economics. Given the move towards lowering of carbon emissions, there can be no doubt that we will all have to pay the price for this cleaner environment. The shipping industry has, of its own volition, set certain targets towards decarbonisation and reduction of use of fossil fuels. These new non-fossil fuels and decarbonising technologies will come at a high cost which will have to be borne by society at large. Therefore, consequently, I see a rise in overall costs of transportation in the coming years as a certainty.

Business plans for the next one year

The Indian shipping industry has recorded a growth of 1.62% while world fleet grew 3.2% in calendar 2020. With the support of the government of India we are certain that the industry will clock a reasonable growth and add to the economic benefits of the nation including savings in freight, rising employment, training of seafarers and most importantly securing the supply chains for India.

Policy expectations from the government

We are encouraged by the policy support provided by the government of India in respect of Dry and Wet Bulk carriers. This has already led to additional ships entering the Indian flag fleet.

Indian shipping is a proud contributor to the Indian economy by way of duties and taxes it pays to the exchequer. It is also a proud partner of Indian seafarers, and has been for several years an active trainer of Indian boy and girl cadets. There is need to empower Indian shipping and the one important step is to make Indian shipping competitive as compared with its foreign peers. Our efforts in this direction will continue unabated and we are sure that the Government of India is listening.

Dr. Ajay Sahai
Director General & CEO, FIEO

Supply chain crisis

It is very difficult to predict when the global supply chain normalcy will be restored particularly as new variants of Covid are appearing in different parts of the globe. Supply chain normalcy is possible only when we overcome the pandemic preferably with vaccination of the global population. We should bear in mind that no one is safe till the entire world is made safe. However, we feel that the situation should become near normal from the second or third quarter of 2022.

Lessons learnt

The pandemic has definitely caused a question mark over the global value chain originating in one continent and ending in another continent or passing through various continents. As such, global supply chains are more susceptible to disruptions. Therefore, there is increasing reliance on local production by a number of countries. Some will succeed, some may not. The share of the global value chain in overall global production will come down during the post COVID era. Even during the pandemic, the population was best served by local neighbourhood stores rather than large departmental stores. The pandemic has definitely pushed the realignment of the global value chain with more emphasis on the regional value chain. Short distance value chains are likely to be more successful and feasible in the post COVID period. India should also work on such chains with South Asia, South East Asia and Middle East countries.

Challenges Indian exim community is facing

The three main logistics challenges faced by the industry include (i) acute shortage of containers; (ii) non-availability of space on ships; and (iii) skyrocketing freight. These logistics challenges have impacted every segment of industry more so the high volume low value cargo. Various steps have been taken to address some of these challenges but many of them will automatically be settled once COVID disruptions are over. To reduce the shortage of containers, the Government is on a drive to release detained containers with various agencies. The time period for re-export of empty containers has been extended. Some ports have put restrictions on export of empty containers. Shipping lines have also brought empty containers from different parts of the globe to the west coast and in a limited way on the east coast. Government is also encouraging manufacturing of containers in the country. FIEO has suggested providing fiscal/tax concessions to encourage container manufacturing in the country. To address the shortage of space, we are asking the shipping lines to bring master vessels to the Indian coasts. The freight, being market driven, has softened up as the peak period supply for Christmas, New Year and Chinese New Year is also open. We also expect new containers and new ships to be added to the supply from the second quarter of 2022 to help in easing the pressure.

Positioning India as an export hub

India is emerging as a major exporting nation though we may not push for an export driven economy and would like the economy to be broadened so that even if exports of goods & services touches 25% of the GDP, it may cross at least the milestone of US$ 1000 Bn. A country the size of India both in land size and population, can hardly afford to follow an export-led growth like many small economies of South East Asia. We are expecting a fiscal year with exports of about US$ 400 Bn in goods & US$ 250 Bn in services. By 2030, we are aiming to take our goods & services exports to over US$ 2 trillion. China+1 policy of most of the global companies is helping Indian exports and exporters are flushed with orders across sectors. We hope that the logistics challenges will be taken care of so that we remain on course to achieve spectacular exports in the medium to long-term.

On the policy front how government is supporting exports

Since India has breached the threshold limit of US$ 1000 per capita GNP a few years back, we no longer have the privilege to support exports through subsidy. Therefore, the Government is looking into the supply side challenges impacting exports including infrastructure inadequacies, lack of skilling, rigid labour laws, inverted duty structure affecting manufacturing, etc. The Government has focused on zero rating of Indian exports by introducing the new scheme of RoDTEP and RoSCTL so that taxes and duties which were hitherto not being refunded under the existing mechanism have now started with effect from 1st January, 2021.

Manish Puri
President, ACTO

Supply chain crisis

There are two aspects to the current global supply chain situation. The first relates to a global container supply shortage, and the second to a dramatic global rate escalation on ocean freight. The first issue is primarily an outcome of a global imbalance between supply and demand, resulting from a much larger number of containers being held up in the destuffing/release process than before (mostly due to Lockdown related issues), as a result of which empty container supply has become constrained. This issue is already seeing some improvement, and should not be longer that one annual cycle to resolve. On global freights, it is unlikely that there will be a push back to old rates anytime soon. With increasingly robust export markets, a new higher benchmark for ocean freights is likely to be established. The issue will therefore not resolve in the immediate term, and will likely result in higher freight rates in the long term.

Lessons learnt

The primary lesson learnt from the pandemic was the extreme dependence of global supply chains on a few critical geographical locations - primarily China and the US. As we move out, on the demand side we can expect some diversification both in terms of global sourcing locations, and in terms of allocating some sourcing from domestic markets as a risk hedging measure. On the supply side as well, we can expect to see some re-alignment of global trade lanes with efforts to provide more inventory in emerging markets like India, Vietnam, Bangladesh, and parts of Africa. We can also expect further pushes on cost cuttings and capacity management on the supply side in order to create a future risk hedge against commercial or business losses.

Key shipping and logistics trends

Corrections from the Pandemic outcomes will be primary. Expect some focus on new markets like India. Expect India Exports to increase which will mean a higher need for empty inventory.

Policy expectations from the government

Support against monopolistic pricing practices, efforts to reduce domestic logistics cost, focus on shifting cargo from road to rail, improving hinterland infrastructure etc.

Jayyannt Lapsiaa
President, AILBIEA

Supply chain crisis

The Current strained global supply chain scenario is gradually returning to normalcy, but a bit slow. However this itself is encouraging as it is giving a relief of sorts to the beleaguered trade and industry to slowly regroup themselves and bounce back into the mainstream of trade and manufacturing activities. Though, still there are apprehensions of 3rd Wave of COVID resurfacing, but, with most of the

population in many countries, including India having been vaccinated the fear is very much diluted and now the trade and industry is geared up to face any challenges emanating from the emergence of 3rd Wave of Covid. The good sign is that the confidence levels in the trade and industry [especially supply chain] to meet any new challenges have risen to decent combatable levels.

Lessons learnt

There are quite a few important lessons that have emerged out of the Pandemic and ongoing supply chain crisis. To list a few important ones: [A] Never panic, take utmost precautions and adapt to changing your routine ways of operations by finding innovative ways to overcome the restrictions imposed through lockdowns, and stay active in the field of supply chain. [B] Always be POSITIVE and keep encouraging your fellow colleagues and vendors into remaining steadfast and brave in these trying circumstances, urging them to take all the required precautions and safety measures whilst entering the field of activity and areas of operations. [C] There are new avenues which have sprung up due to the Pandemic and there is immense potential to explore these avenues through astute planning and proper execution. [D] Draw a concrete plan for unavoidable delays in deliveries, payments, movements of goods, transportation etc. in such a manner that it does not impact one's business and does not severely hamper the supply chain activity, by strategizing the on field and back office operations in an efficient manner taking into account the various impediments and hurdles caused due to the lockdowns and resultant restrictions. [E] Adapting to unforeseen and newer changes, which one has never experienced before, since it is now becoming a way of life, and to be ready to take calculated risks and make bold moves to stay afloat and move forward.

Key shipping and logistics trends

In the new year there will be initial knee jerk reactions by hiking of rates, tariffs and spiralling of costs by many in supply chain sectors, which will gradually taper down to more realistic levels. Digitization of documents and drastically reducing human interface and intervention in submissions of Bills of Lading, Delivery orders, Transport Receipts and Challans, etc. Many supply chain offices will reduce their office staff strength resulting in layoffs and will put additional responsibility of multiple tasks on individuals, thereby pruning their departments and adjusting to operate with lesser staff.

Business plans for the next one year

To consolidate and regroup our resources and strengths and leave behind the memories of the past. Change our style of functioning and operations to be in sync with the already changed and ever changing scenarios. Explore the new opportunities emerging out of the Pandemic and operate with confidence and conviction of succeeding and stepping up our momentum, increasing our volumes and providing value addition to our business and to our clients. Learning to be more vigilant, more careful, more watchful and more prudent in our operations, costings and in our services. Expand our areas of operation to varied fields within the supply chain to augment our finances and spiral our overall growth. Being prepared for any eventualities [like the rumored 3rd wave] and taking adequate measures to counter the same with a lot of confidence and courage.

Policy expectations from the government

We expect pragmatic and quick redressal of the issues affecting the EXIM operations due to the Pandemic. Coming out with trade friendly and facilitative measures to bolster the EXIM trade and work towards drastically reducing the dwell time and significantly reduce the transaction costs through expeditious assessments and clearances from Customs and port. Government should adopt a more sympathetic attitude towards the EXIM TRADE and Supply Chain Business and come out with trade friendly policies and schemes which are very easily implementable and are not at all confusing and complicated. Officers of Customs, Port and GST should be directed to be more flexible and easily approachable whilst resolving issues and problems and should be more softer in their responses and approach. Officers of Customs, Port and GST should be made accountable for delays and high handedness in their attitude, which many a times is rampant. There should be rationalization of taxes and the thrust should be given to increase the time frame of compliance in view of the major set back suffered by the majority of those in SUPPLY CHAIN and EXIM Businesses.

T. Venkataraman
MD, Goodrich Group

Supply chain crisis

As of now, there are still uncertainties due to:-

- the discovery of a new Covid-19 variant Omicron in South Africa & the spread of the same to more than 3 continents in the last one week.
- Shortages of truckers, chassis, inadequate manpower to operate terminals on a 24 x 7 basis at major ports in USA and other infrastructure problems like the current rails and road infrastructure in USA, which is inadequate to handle the current logjams.

The current global supply chain scenarios in all likelihood would remain chaotic even beyond 2022, if the said main causes are not resolved even if Covid-19 concerns ease with higher vaccination across the globe and drop in the infection rates preventing fresh variants from developing.

The supply chain scenario in the near term will depend on the level of disruption the Omicron Covid-19 variant will cause in the coming weeks / months. As we are writing this report, many countries which were working to unlock their borders based on the lower infection rates are now reassessing their unlocking strategy. Many countries have also imposed temporary restriction from countries where the new variant is already detected.

All the experts agree that the spread of the variant cannot be stopped but can only be controlled by these measures and hence we are once again entering a period of uncertainty which could cause further supply chain disruptions.

Lessons learnt

- Over dependency on any one country as the key global supplier, should be avoided and it is advisable to spread your supply base to various geographic areas to avoid total disruption if one area is affected in the future.
- Every country should focus on investing and modernising its rail, road, warehouse and terminals infrastructure, with the growing population and increased demand.
- In the Logistics industry, even with the immense contribution by IT and ITeS the dependence on skilled manpower cannot be replaced at least in the foreseeable future. Hence the industry needs to ensure that our infrastructure can be built to take such supply chain shocks in the future.

Key shipping and logistics trends

The demand for vessel space and containers will continue to remain elevated tilting the demand supply situation in favour of demand.

In terms of trends, customers will tend to distribute their volumes to multiple reliable service providers as space and equipment continue to remain tight.

Digital trends will gain traction as we all have adjusted to the new normal and the need to avoid physical contact.

Business plans for the next one year

As an organization, we would focus to increase our tonnage on all core sectors and expand our fleet to meet the increasing demand. We are also working to establish new offices in key locations in our network to provide superior service to our customers. To support our expansion and growth needs we strive to induct and train skilled manpower at all levels of our business process.

Policy expectations from the government

We expect the Government to be an enabler to support the "Made in India" initiative to bring quality manufacturing to India.

To support the same, apart from policy decision the focus to improve the overall infrastructure of road, rail, terminals, warehouses to meet the growing demand and ensure a seamless service by the logistics industry is possible to the end customer.

Pramod Kumar Srivastava
President, NACFS

Supply chain crisis

The global supply chain has been greatly affected by the pandemic. During the past year, we have observed non-uniformity in shipping line services which has led to space constraints. Customers are unable to meet their contractual obligations due to delay in shipments. I believe turnaround times in ports will improve over time and we can expect normalization of shipping line services by next year.

It must be mentioned that even though at troublesome times, the logistics sector of our country has kept moving and the supply chain did not halt. The entire country came together to keep the wheels of the economy running and a big contribution was made by the CFS and ICD facilities of the nation.

Now with the vaccinations rolling out to the entire population, I can see the situation improve over time. I believe we will be returning back to normal by September 2022.

We must also take all necessary precautions to combat the threat of the 'Omicron' variant. A surge in cases with the 'Omicron' variant may delay the timeline beyond September 2022.

Lessons learnt

The pandemic has taught all of us to embrace digitalization and reduce our reliance on manual modes of working. We never thought of conducting virtual meetings in the past and now we feel happy to connect virtually with the entire world.

Remote working is another lesson learnt during the pandemic as it was something unheard of in the logistics trade.

The ongoing supply chain crisis is teaching us to invest in infrastructure and digital tools. Adoption of multimodal transportation is the need of the hour, and the industry needs to reduce its dependency on road transportation. We must utilize coastal cargo route and rail route to reduce turnaround times.

Key shipping and logistics trends

We are witnessing cargo moving to the west coast of the country from the east coast and it seems that this trend will continue in the future. Mother vessels which are calling at the western ports have less waiting period.

Due to low draft, feeder vessels are operating along the east coast which carry the cargo to transhipment ports of Singapore, Port Kelang, and Colombo. We are noticing that mother vessels are already getting full at the transhipment ports, and the feeder vessels carrying cargo from the east coast of India are therefore facing huge wait times at the transhipment ports.

I also feel that CFS would have more services to offer in the coming period. CFS operators can cater to DPD customers by having DPD facility from CFS to customer factory at reduced tariff. Coastal cargo and domestic cargo handling are two areas where the CFS operators could get involved in, subject to approval from the government authorities. This would lead to proper utilization of their infrastructure.

Another trend which will help the sector to grow further is the establishment of manufacturing units in Bonded warehouses.

What are your business plans for the next one year?

During these times, an integrated logistics facility would be greatly beneficial to the EXIM trade. With this in mind, we are developing a logistics park in Durgapur (West Bengal) with cold chain infrastructure, driver training facilities and container handling activities. The logistics park would be well connected with rail terminal as well as inland waterways. There would be an extensive parking area for trucks/ trailers.

We are also focusing on developing logistics service infrastructure in the Kolkata port region.

On the policy front what are your expectations from the government?

The government should ensure that safety norms in transport sector are followed in all cases. Safety norms related to Gross Vehicle Weight should be adopted at all areas, including port area vicinity. However, a relaxation period of 1 year should be provided in order to give trade the necessary time to build the required infrastructure.

I would also request the government to consult with logistics associations before coming up with relevant policies.

There is a huge parking crisis outside port area throughout the country. I would request the ministry to plan on developing high rise parking buildings near all port area to reduce congestion on road caused by unorganized trailer parking.

Vikash Agarwal
MD, Maersk South Asia

Supply chain crisis

The current state of strained supply chains is arising mainly out of the ongoing dislocation in demand and supply sides of logistics industries. The consumer demand remains strong in USA and Europe, but the composition of spends is likely to rebalance towards services. The rising prices for some goods might lead consumers to adjust their spending plans too. On the other hand, the inventory replenishment will support goods trade well into 2022, and the channel shift to e-commerce is likely to keep pressure on outbound logistics capacity. On the supply side, supplier delivery times remain lengthy, and there is little visibility into when capacity constraints, including landside bottlenecks in trucking and warehousing, will abate.

All these dynamics are leading to the uncertainty surrounding the outlook. We believe that the global shipping is expected to remain somewhat like what it is right now until Q1 2022 and what happens beyond is difficult to predict.

Lessons learnt

One of the most important lessons that it has taught us is that we must be resilient in whatever we do. Be it any business, or be it any operations, if we are resilient and are ready to accept what is thrown at us and adapt to the situation, we should be fine. The uncertainties in the market might have closed some doors but they have also opened others.

I personally think that instead of betting bigger, operations need to focus on what the market demands. Customer-centricity must take the centre-stage for every decision that is made. If the customer or market demands to go big in operations then so be it, but if it demands on improving efficiencies, then just going bigger is not the solution. For us at Maersk, we are constantly asking ourselves, how are we creating value for our customers, especially in a crisis that we have been in, for so long now? How is it that we can connect and simplify our customers' supply chains?

The pandemic is taking longer to settle down than anyone anticipated. The uncertainties continue even today and the way the market responded could not have been predicted by anyone. The sectors which are growing such as retail & lifestyle, home appliances and so on, might have to scale up while others might have to look at diversifying to sail through and this points directly back to what I mentioned earlier – businesses and operations will need to be far more resilient and agile now.

Key shipping and logistics trends

One of the most important aspect for shipping and logistics will be better forecasting and planning. It will be imperative for us along with our customers to look beyond the horizon and predict the trends that the market will follow and how the consumer sentiment will take shape. This will allow us to plan and execute supply chains better, thus taking away inefficiencies from the system.

The other aspect will be around digitalisation. Shipping and logistics has predominantly been hugely dependent on paper-based manual processes. While there is a shift towards digitalisation owing to the restrictions laid down by the pandemic, we will have to accelerate it even more. Higher adoption of platforms such as TradeLens will allow all the stakeholders in the logistics ecosystem to work with more transparency, security, speed and eliminate errors at the same time.

Finally, more broadly speaking, it will be a year for the industry to look for ways of creating value for customers in their supply chains. For example, by offering them integrated logistics solutions that will allow the customers to focus on their core business and let the professionals orchestrate their end-to-end needs of logistics. This will have several benefits including but not limiting to cost and time savings.

Business plans for the next one year

At Maersk, we are putting the customer at the centre of every decision that we are taking. For the upcoming year, it will be building our business on this base and creating solutions that would delight our customers.

First and foremost, we are building long term relationships with our customers. Our goal is to get as many customers on long term contracts as possible. With this move, we are not only getting better insights in the forecasts that help us in planning our operations better, but also insulating our customers from the fluctuations of freight rates in dynamic market situations.

We are then focusing on strengthening our product offering by building a strong network of logistics and services that is based on an already strong network of ocean shipping. We are focusing on expanding our rail offerings, warehousing footprint, air solutions and so on to ensure that we have everything in supply chains that our customers might want. We want to be like a super market wherein a chef can walk in and literally buy all the ingredients required to cook the most delicious meal – all under one roof.

The COP26 summit has implications for shipping, especially the green shipping corridors being planned. How will this impact?

At A.P. Moller - Maersk we are pleased to see the momentum for global logistics at the conference – not least through numerous initiatives specifically on supply chains that were launched by ambitious states, businesses and NGO's. The commitments from key retailers to purchase carbon neutral logistics, for key states and companies launching the First Movers Coalition and the adoption of the Clydebank Declaration on green shipping corridors provide a strong starting point for the many stakeholders in our industry working to create a decade of action to get shipping on track to deliver on the Paris agreement.

This momentum should be translated into very concrete actions at the International Maritime Organization (IMO) - including a price on GHG emissions and raising the IMO's GHG reduction ambitions to net zero in 2050. It is encouraging to see the overall goal to decarbonize by 2050 is now shared by everyone in the shipping industry and in combination with recent positive statements from key IMO Member States, the current momentum provides the IMO's upcoming MEPC77 meeting the best possible conditions to secure much needed progress on these critical topics.

Dhruv Kotak
MD, JM Baxi Group

Supply chain crisis

During end of 2020 and into 2021, the demand on goods increased the merchandise trade than during the pandemic lockdowns and restrictions. Working from home, online shopping and increased computers sales all placed unprecedented demand on supply chains. This large swing in containerized trade flows was met with supply-side capacity constraints, including container ship carrying capacity, container shortages, labour shortages, continued on and off COVID-19 restrictions across port regions and congestion at ports. This mismatch between surging demand and de facto reduced supply capacity then led to record container freight rates on practically all container trade route. Manufacturers in the United States mainly rely on industrial supplies from China and other East Asian economies. Larger vessels that were deployed in the Indian Sub-Continent were diverted to the China – US /Europe sector to meet the high demand. With huge congestion in US ports and economy slowly coming back in this region, the vessels deployed at other sectors are expected to return back which would eventually cater to the Christmas/New year shopping rush. Moreover, the containers shortage issue is in the process of easing out and is likely to return to normalcy by the last quarter of FY 22. From April 2022, the supply demand will probably get aligned.

Lessons learnt

Firstly, the trade should look at exploring multiple options like various sources to procure or supply. Secondly, geographical expansions are also to be considered henceforth. Major studies and experts mentioned that the businesses that have limited themselves to certain geographical regions and customers have faced more challenges than the ones who had expanded their horizons. Going forward expansion into various categories would be the mantra for business continuity. Furthermore, if the shippers are confident on the future orders and production, a reliable method is to enter into long term contracts with the shipping lines & NVOCCs. The pandemic has also taught the lesson that the majority of the work can be done from home with appropriate technology in place except for processes / departments which would reduce the operational and recurring expenditure. This would enable the continuity of the supply chain as most of the documentation and filing is done online that can be done from anywhere in the world. For terminal operators our highest priority was to take care of our people and their families, their safety to ensure minimum disruption to the essential services we provide to the nation.

Key shipping and logistics trends

Retention of customers and venturing into new markets spread across various locations will be the primary key, while in shipping and logistics sector technology will play a key role like artificial intelligence, data storage centre, RFID technology, warehouse automation etc., which will enable faster transit from the first mile to last mile connectivity. Warehouses, sorting centres, distribution hubs will get more demand as the inventories would be maintained to meet the customers' requirement. Lines are also looking at providing end-to-end logistics solutions as well. The launch of National Logistics Portal by the Government of India will become a game changer where exim trade will be facilitated to do their entire documentation online.

Logistics scenario in the hinterland

Shortage of containers is the current challenge in the hinterland while the demand of cargo is high coupled with lesser allocation on vessels. The ease out on shortage of containers and increased allocation will give room for incremental EXIM traffic which is in pipeline as per the major shipping lines. Rail network is also getting developed well within the country and also into Nepal with private operators.

Business plans for the next one year

Improved rail traffic, retention of customers, expansion of existing volume traffic by venturing into new regions, hinterland and tap the unexplored markets. Not to forget the continuous improvised customer service which has always been the success mantra. We are upscaling our infrastructure for catering to the expected container traffic growth. Basis current estimates, our Vizag container terminal capacity will be enhanced from 0.6 million TEUs to 1.3 million TEUs during first quarter of 2022. This will provide more room for having main line vessels , feeder vessels calling the Visakhapatnam port potentially to become the transhipment hub on the East Coast of India

Policy expectations from the government

Governments should monitor markets to ensure a fair, transparent and competitive commercial environment and encourage more data sharing and stronger collaboration between stakeholders in the maritime supply chain. Major ports should be given more freedom to be competitive with private ports. Government should also look into simplifying the procedures, especially customs related for handling EXIM and transhipment cargo in the Indian ports on par with that followed in other international ports.

Shankar Shinde
Chairman, FFFAI

Supply chain crisis

As per the WTO researches International trade is reviving quickly. As it says world merchandise trade recorded a 45% year on-year increase in the second quarter of 2021, from a very low base in the same quarter of 2020. Strong trade growth was recorded in all regions due to high demand for goods from firms and households.

We are in services trade and significantly global services trade returned to positive growth in the second quarter of 2021, rising 26% year-on-year. The increase largely reflected the rebound from second quarter 2020, the quarter in which the strongest impact due to COVID-19 was felt.

In the second quarter of 2021, services trade grew positively year-on-year in all regions, although most regions have not yet returned to pre-COVID-19 services trade in value terms. Remarkably, our traditional markets Europe and other regions had the strongest year-on-year growth for exports, up 28% and 43% respectively. North America and Other regions had the strongest growth of imports, up 30% and 33%. So, market is already showing very strong and positive growth trajectory and it would further increase in the ensuing months.

However, there is a caveat in view of the emerging challenges that the Freight Forwarders and Logistics Service providers will have to face. Ongoing COVID scenario with new variants like Omicron will have huge impact on the logistics and supply chain sector. At present there is a requirement of huge inventory and therefore requirement of huge stock/warehousing capacity to meet the demand in exigencies like lockdown in future. The managing of Just in Time delivery service has now changed to efficient Inventory management, which may not be possible for small and middle-sized players.

Lessons learnt

The resilient CBs and FFs faced many critical situations and bounced back. What unprecedented COVID-19 taught our community is to go for robust IT infrastructure enabling to provide uninterrupted services without having physical interactions. Yes, it is difficult for our community to change directions and become immediately efficient. However, the CBs/FFs community learnt the lesson that there is a need for them to evolve and adapt to technological advances. So, there are a large number of technological innovations such as drones, data analytics, Artificial Intelligence, Machine Learning, Natural language processing, Block Chains etc which need to be embraced.

It is pertinent to mention that the stakeholders in supply chains including CBs/FFs are operating in Isolation. Unless there is seamless data flow within every stakeholder, they would be compelled to duplication of DATA and multiple Software platform utility which would result in high cost in furthering the API latching with Government statutory organisation. The DATA systems should be latched for seamless supply of data flow integration within stakeholders along with Government Portals using advanced technology.

Key shipping and logistics trends

Apart from pharma and agro products, which have been the main commodities during the COVID-19 pandemic period, we can see manufacturing and export/import of all major/traditional products are on track in the months to come.

As far as shipping and logistics services are concerned, capacity constraints and exorbitant freight charges will be the most critical areas (maybe not solely depending on the balance of demand and supply) that the industry as well as end users would have to encounter with.

Business plans for the next one year

Year 2022 will be the Golden Jubilee Year for FFFAI. In this year we have lot of programmes chalked out for across the country in association of all our 28 Member Associations. New avenues for revenue generation/expansion of business would be our primary focus and for that to support our members through enhancing IT capability and domain knowledge/skilling to cope up with the new trends/challenges.

We are also working on asset sharing cooperative models for our members to bring down the IT infrastructure investment cost to support the businesses model which can be applied across the industry in creating warehousing system / transport / fleet facilities / equipment handling machines / cooperative CFS models etc.

FFFAI has its own training and education wing named Indian Institute of Freight Forwarders (IIFF), which is the only institute in SAARC region to conducts diploma course in freight forwarding. IIFF is approved by FIATA (International Federation of Freight Forwarders Associations).

Now we are introducing various short and long term certification courses which will be subject specific. There are refresher courses for existing manpower in logistics which will also include automation and technology in logistics.

Further, we will be engaging university and college institutes to organise the logistics courses. Meanwhile, IIFF has signed MOUs with some institutes to provide support in education to new entrant's interested in logistics industry.

FFFAI is in dialogue with NACEN (National Academy of Customs Indirect Taxes and Narcotics), IIFT (The Indian Institute of Foreign Trade) and National Skill Development Corporation (NSDC) for partnering in education.

We will have regular exchanges of the faculty including experts from our industry with practical knowledge, as logistics trade is more of practical experience than theory. We are having regular webinars to benefit members for disseminating information on emerging new technologies and the changes in regular law compliances to enhance their domain knowledge.

Policy expectations from the government

The Government has been very pro-active to facilitate the international trade through various innovative measures with taking regular feedback from industry stakeholders. As a leading logistics Industry association, FFFAI has very strong collaboration with various ministries of the Government of India viz. Ministry of Commerce, Ministry of Finance, Ministry of Civil Aviation, Ministry of Shipping, Ministry of Road Transport and Highways, etc.

We welcome government's initiatives on digitization, self-assessment, faceless assessment, risk management systems, DPD (Direct Port Delivery), AEO (Authorised Economic Operator) programme facilitation measures. The government has also introduced PGA's (Participating Government Agencies) digital Single Window Interface for Trade (SWIFT) and Sea Cargo Manifest and Transhipment Regulations (SCMTR), which are commendable.

We however urge the government to emphasize more on sensitization/ training programmes for the ground level officers to execute the policies and follow the guidelines in sync with true spirit. It would further facilitate the trade and "Ease of Doing Business", the new mantra of the government. We expect more transparency, accountability and seamless multimodal transportation, as emphasized by the launch of 'PM Gati Shakti' project and highlighted by the recently unveiled 'LEADS Report'.

Jasjit Sethi, CEO
Transport Corporation of India-Supply Chain Solutions

Supply chain crisis

The global supply chain has been strained due to COVID-19 and other events like the Suez Canal incident, China's ports and US ports congestions. Now while trade has picked up, the recovery has led to spikes and the unprecedented rise in shipping rates and container shortages have taken everyone by surprise and it will be some time before it cools down. We estimate that by mid-2022 there will be more realistic shipping costs but perhaps the days of rock-bottom rates are over.

Lessons learnt

The most profound lessons learned during the pandemic that where we're going to be a different world (a new normal) from where we've been this last year, which is much different from where we had been for years and years before that. In the new normal, from planning to execution, every element of the logistics process is being reconsidered, repurposed & digitalized. Covid 19 forced supply chain to change overnight from paper based processes to fully digitalized one.

TCI's resilience fared well, leveraging on our sound network, infra, capabilities & dedicated staff, even amidst the uncertainties, we managed to bring on-board new clients and commenced few long term commitments as well. Growing on this, and the fact that many small, mid-size LSP are struggling for survival, provides us with an opportunity to grab a major pie of the market.

At TCI, we remain agile and committed adapting to the ever changing needs of the business and environment.

Key shipping and logistics trends

The Indian logistics sector is valued at $215 billion and has been witnessing a CAGR of 10.5%. As we know that Trends and technology go hand in hand massive changes in supply chain are being fuelled by digital transformation. The sector has undergone an end-to-end transformation in the last one and a half years from first mile delivery and warehousing to handling last mile delivery.

Technology innovations being an essential part of almost every industries' growth, logistics and supply chain is indeed one of the most impacted sectors. With massive technological advancements in the recent years, Industry 4.0 had changed the land scape of many industries and their business models. This revolution is marked with real time exchange data, automation, robotics, cloud artificial intelligence, connected devices and equipment (IoT) and augmented reality to connect innovations, new technologies and humans.

Business plans for the next one year

Our portfolio between road, rail, coastal shipping and warehousing as segments with industry verticals spanning core industry, essential goods and retail/ e-commerce has been resilient and we grew in last fiscal and have a further growth this year to date. Our plans are thus to build on these learnings and shocks to a more resilient portfolio along with opportunities in inorganic growth.

We closed a disinvestment in our cold chain business during this year and it's on a high growth trajectory. Our share and presence in the Indian Logistics landscape has increased in all aspects and that will help us on a good growth number for the coming fiscal.

Policy expectations from the government

After the black swan events like Covid-19, it had brought to light the need for the efficient and robust logistics network, which we are proud to say withstood all shocks admirably well. The government fostering National Logistics policy which promotes the multimodal transportation & improves the movement of goods across the country is a good step. We do feel that the Highway toll and high taxes on fuel and high GST on commercial vehicles add about 2-3% cost on logistics and that's an area to be seen holistically from a nation's competitiveness. Taxing logistics is not a good idea.

Umesh Grover
Secretary General, CFSAI

Supply chain crisis

The disruption and strain in global supply chain has been unprecedented since the outbreak of pandemic and all forecast and predictions have proved wrong. No one could ever imagine the magnitude and the time it would take to stabilize or normalize. Whilst the global situation is still grave, situation in India has improved to some extent with imports resuming from China, availability of empties from US WC, though US exports to China have been hit badly in the bargain, Shipping Lines pro-active steps in positioning large number of empties in India from across the globe and not to forget the commitment of all the service providers like Terminals, CFSs, ICDs working uninterrupted during the pandemic, normalcy should return fast. However, with new COVID variant "Omricon" playing a global havoc, it has become even more difficult to predict now but optimistically, I feel by mid -2022 the normalcy should return.

Lessons learnt

While it is too early to even sum up the lessons as we continue to be hit by fresh surprises every day, one thing is for sure that over dependency on China for last 2 decades caused the biggest damage globally. Indian automobile sector, one of the biggest contributor to the economy suffered the most recently when the economy is otherwise booming. Shortage of semi-conductors. The only global source has been China. We need to ponder why? One of the lessons learnt is that we now have to set up domestic production and be self-reliant. For several other essential commodities too, the lesson learnt is that we can't remain fully dependent on other countries and have to move towards being self-reliant.

Key shipping and logistics trends

All eyes would be on rationalising of the shipping freight rates which have seen historic highs. Lot of low value commodities like tiles etc. may not remain viable to transport in containers and alternate non-containerised modes would need to be explored. As far as logistics industry is concerned, with unprecedented boom in exports, need for export stuffing and covered sheds in CFSs, will see a huge surge and will be in short supply. Dedicated Freight corridor and RORO concept being conceptualised by Railways may see some movement. Increased import and exports will see the demand for additional infra.

Following the announcement of DPD and DPE, what is the survival strategy of CFSs?

As far as DPE is concerned, it has always been there and CFSs normally handle only 25% of exports and 75% of imports. With exports rising, CFSs who cater to exports will see a huge surge. Other facilities would also try and increase export yard in CFSs if additional FSI is permitted. As far as imports are concerned, DPD has stabilized in last 1-2years to around 60% in JNPT and 40-50% in other locations. For DPD, a lot depends on the commodity. However Interestingly 85% of the DPD Imports in JNPT are still handled by CFSs as importers and trade find value in CFS services, albeit lesser services are requirement for DPD boxes. This obviously impacts CFSs revenues. Enblock evacuation of Imports from terminals and safe storage is key requirement of importers which CFSs have been providing. The higher percentage of RMS facilitation is also resulting in a quicker turn around and the CFSs ground rent, another revenue component for CFSs is shrinking.

Further increase in imports may see larger volume in CFS facilities, though most of them are working on 55-60 % of their designed capacity.

CFS industry has been pitching for doing additional value added services like packaging – repackaging, bar coding, environment friendly MSME activities. Larger CFSs built on say 25 acres or more land can easily cater to FTWZ activities, if permitted. Lastly with the new airports coming in and surge in Air cargo being predicted, CFSs especially in Panvel area of JNPT can work as AFSs also, instead of creating new Air Freight stations.

Policy expectations from the government

The Draft Logistics Policy which was framed with valued inputs from trade during consultative meets could change the landscape of Logistics industry, if implemented. But the question remains as to why and where is the delay? CFSs submissions as covered in above para, we believe have been covered in the new draft policy. We are optimistic that CFSs with their state-of-the-art infra created at huge capex will rebound with additional activities over the years..

For CFSs / ICDs, CBIC being the nodal agency, we have represented seeking various reforms in existing policies which are adding to the transaction cost. Some key areas are, cost of Insurance, early disposal of long standing un-cleared and unclaimed cargoes, faster disposal of containers detained by investigating agencies. We do hope with Shri Vivek Johari as the new Chairman CBIC, there would be positive changes and these issues will get addressed, which would go a long way in reducing transaction cost and "ease of doing Business" for the Service providers. The existing policies focus mostly on "Ease of doing Business" for the importers and exporters and not the service providers, who play a vital role in creating "Ease of doing Business."

Vivek R Kele
Director, Teamglobal

Supply chain crisis

The current scenario is expected to last till mid-2022 to possibly end of 2022.

Lessons learnt

As an LSP we need to bring resilience in processes, IT systems and people's skill so that as an organisation we are ready to handle huge changes arising out of situations like pandemic and the supply chain crisis arising out of it.

Key shipping and logistics trends

More digitalisation will be the continuing trend in shipping and logistics.

Logistics scenario in the hinterland

Hinterland in India is now better connected to the gateway ports due to better highways network, rail-port connectivity and off course the DFC.

Business plans for the next one year

Continue to build competencies in our systems and our people so that we are better able to meet our customers ever changing logistics requirements.

Policy expectations from the government

Government should make the use of Port community system compulsory to reduce the paperwork and other lags in the supply chain.

Shailesh Garg
Director, GM-India, Drewry

Supply chain crisis

It is clear now that the supply chain disruptions will last longer than what we anticipated at the start of 2021 and Drewry does not expect to see operations normalise until the end of 2022. Liner companies are now expected to make record profits in 2021 and are utilising the funds on new build and equipment investments. However, the fleet growth is expected to lag behind demand growth in 2022, Further, the supply chain pain is just not limited to shipping capacity, it is also the result of landside constraints i.e., congestion at ports, shortage of port labour, lorry drivers, low warehousing space which limits the ability to clear and turn the boxes efficiently.

Lessons learnt

The ongoing supply chain crisis has highlighted that diversification of the sourcing hubs is key for business continuity plans and to prepare and deal with any new crisis as and when it happens. Companies will need to balance supply chain resilience and cost for achieving higher reliability.

Key shipping and logistics trends

Disruptions caused by COVID 19 has forced the consumers and the service providers to adopt new IT tools and technology. The focus will now be more on Automation, IoT, Blockchain and other technology-based solutions to achieve flexibility and better control over the entire supply chain. Further, changes in the regulatory environment and increased focus on ESG issues is expected to lead the shipping and logistics industry towards sustainable and green solutions.

Policy expectations from the government

Pandemic has forced the companies to look beyond the low-cost production centres. Reliability and risk mitigation will be key in designing the new supply chain and sourcing models. The expectation is that the government will take proactive measures and policy initiatives to promote India's capabilities and capacity as alternative manufacturing and sourcing hub particularly in key industries like pharma, automobile, engineering and electronics.

Harish Pandeya
MD, Swift Cargo

Current supply chain crisis

Not in a hurry. This is more so true of the Asia to North America and Europe trade lanes. Vessels continue to wait outside Los Angeles/Long Beach ports curtailing the no. of vessels available/on active voyage. Ground handling challenges including chassis and driver shortages across Europe, Britain and North America continue adding to the delay in a possible normalisation.

Lessons learnt

This once in a century kind of situation has led to some irreversible changes, like work from home for individuals across the globe, supply chains across the world will spruce up by "near-shoring" or "in-shoring" supplies and suppliers rather than rely on off-shore factories located in China. Truck driving challenges will continue unless the new generation is "sold" the truck driving job and enticed with goodies like days off and more money. Driverless trucks still seem a while away. Last mile deliveries will continue to cost more till then. Finally, carriers will not be in a hurry to ramp up capacity or market share at the cost of lower prices/profits, so rates will never go back to the pre-pandemic levels. Environmental requirements for carriers will also add to the costs.

Key shipping and logistics trends

Market watches closely what Maersk is up to and likely to try following - at least covertly. So end-to-end or store-door service provision will increasingly be on offer from some lines and forwarders.

Business plans for the next one year

Focus on high yield trade lanes and widen customer base. Increase focus on end-to-end service provision.

Policy expectations from the government

The government needs to continue to demonstrate the will to bring in greater efficiencies in transportation and port functioning - on the labour management as well as infrastructure front.

Xerrxes Master
President, AMTOI

Supply chain crisis

The way things are currently going, I do not see anything changing till end of 2022. Restricted capacity will take a long time to meet the existing and growing demand.

Lessons learnt

I think the biggest lesson we learnt from the pandemic was "To always expect the unexpected" One has to be flexible, dynamic and open to change depending upon the fast changing circumstances. Being fixated in your view will never help. Our supply chains have to be robust and have several contingency plans to meet the current crisis and uncertain times.

Key shipping and logistics trends

2022 will largely see a stabilisation of the shipping freight rates although they will be still on the higher side. Logistics cost will also be high but stable. The emphasis will be on tech and mainly to be lean and hungry.

Policy expectations from the government

We expect the government to have a far more friendlier GST regime, protection and ease of doing business for MSME and SMEs. Also emphasis should be laid on infrastructure development and ensuring that airports and ports have free flow of EXIM traffic.

Sunil Vaswani
Executive Director, CSLA

Supply chain crisis

The Shipping Lines have been doing all they can to help the situation. From JAN 21 till OCT 21, several new services were introduced between India and various trades like the US, Europe, West Africa and the Far East by carriers like MSC, Maersk, Hapag Lloyd, CMA-CGM and others. These helped increase the weekly capacity from Indian origins to these destinations by about 32,000 / 33,000 teus a week.

Further, the following additional services were announced by the shipping lines during the latter part of 2021:

HMM: A new fortnightly service that created an additional capacity of 850 teus to Latin America and 150 teus to South Africa, ex India, i.e. a total additional capacity of 1,000 teus ex India every fortnight. The service to South Africa will commence later, in view of the current Omicron virus currently in South Africa.

FEEDERTECH: A new service that resulted in an additional capacity of about 1,700 teus a week ex India to Singapore and Port Klang.

ZIM: A new upgraded service ex India to East Med ports that will increase the weekly capacity ex India by about 1,000 / 1,200 TEUs.

These additional services helped in further increasing the weekly capacity ex Indian ports which today stands increased by about 35,000 TEUs.

Besides, between Jan and Dec 2021, about 1.85 million teus of empty containers were repositioned by the shipping lines, at a huge cost, from all over the world into India, to help meet the export demand. The shipping lines also placed orders for about 600 new vessels, deliveries of which are expected to commence from the first / second quarter of 2022. The recent outbreak of the Omicron variant and restocking of supplies due to the rising number of Covid cases around the world has however put additional pressure on the supply chains. Hence, while the situation has already improved to an extent, it is likely to start easing further from the around the second quarter of 2022 onwards.

It is also hoped that the congestion issue at global ports improves significantly so as to help ease the situation further.

Lessons learnt

The delays are being caused due to congestion at global ports in North America, Europe and China / S.E. Asia. Vessels at the ports of Los Angeles and Long Beach for instance, which handle about 40% of the US traffic, have had to wait for about a month to dock. Besides, evacuation of containers from the ports is delayed due to Covid protocols, labour / trailor driver shortages and rail cars being overbooked. The global ports therefore need to invest in infrastructure and gear themselves so as to efficiently handle large volumes of cargoes that are being shipped into Europe and North America, as delays caused at ports increase the turnaround time of vessels and containers, thereby creating an artificial shortage of space and equipment.

Key shipping and logistics trends

With the various steps taken by the shipping lines as explained under point no. 1, the space and equipment situation is expected to ease further from around the second quarter of 2022 onwards. This could have happened earlier but for further disruptions in the supply chains caused by the Omicron variant. Digitisation is also expected to expand its footprint which will help enhance efficiencies within the system. Uniformity of Customs regulations / practices and Port / ICD procedures across the country would further help. Also, all the pending issues pertaining to SCMTR would need to be addressed before its implementation.

Policy expectations from the government

a) High Port Charges

India's port charges remain amongst the highest in the world.

Total Vessel related costs and container related costs at Indian ports, particularly at the new terminals of Nhava Sheva (ie BMCT and NSIGT), Mundra, Chennai, Ennore and Vizag, are far higher than those at neighbouring foreign ports. Vessel related costs work out to be more expensive by over 400% at Indian compared to foreign ports while container related charges are about 50% more expensive.

The unit cost per move at these existing rates therefore, works out much higher for a vessel calling at Indian ports, as compared to foreign ports.

This therefore proves as a deterrent for the introduction of additional services and port calls at Indian ports and eventually impacts the competitiveness of the Indian trade. Besides, it also discourages transshipment at Indian ports - something that the country has actually always wanted to encourage.

A significant reduction in the Port Charges at Indian ports, so as to at least match, if not better, those at neighbouring foreign ports, would certainly help in attracting more traffic at Indian ports and thus help the Indian trade.

Be that as it may, the container shipping lines, on their part, have in the meanwhile, already introduced new services which have increased the capacity from Indian ports by about 35,000 teus a week. Besides, the container shipping lines have also repositioned about 1.85 million teus of empty containers into the country, between January and December 2021, at a huge cost, to help meet the demand for export bookings.

b) Dual charges unfairly imposed on vessels calling at JNPT and

retrospective increase in MBPT dues from the 3rd of Oct 2019:

This pertains to the MBPT dues paid by the shipping lines at Nhava Sheva. Presently, all the container vessels call at either of the container terminals at JNPT. During the normal year of 2019 (which was pre-pandemic), approx 1600 container vessels called at JNPT.

Since the inception of JN Port during the year 1989, all the shipping lines have been paying both the MBPT as well as the JNPT dues. Presently, the shipping lines pay 18% of MBPT Dues to JNPT along with the berth hire charges for their vessels.

Earlier the MBPT dues were not so unaffordable due to the smaller size of vessels and the lesser number of calls at JNPT. Now with the sizes of vessels having increased from 2700 teus (26,000 GRT) to the range of 9000 teus (109,712 GRT) / 14,000 teus (128,000 GRT), the MBPT dues are indeed getting to be unaffordable for the Shipping lines. A point to be noted is that none of the other ports in India charge dual port dues like JNPT does. For instance, both Kolkata as well as Haldia share the same channel but do not charge double port dues.

In order to allow larger parcel size vessels to call at Nhava Sheva, JNPT carried out capital dredging, thereby enabling vessels with 15 Mtr arrival draft and 14000 teu capacity (over 100,000 GRT) to call at the port. While it is understandable that the cost of the Capital Dredging was borne entirely by JNPT, with no contribution from MBPT, it (MBPT) still recovers 18% of its port dues through JNPT, from vessels calling therein. The vessels entering into JNPT, are managed by the JNPT Marine Department and no services are really are provided by MBPT as such.

While on the one hand, CSLA had been making several requests for over more than a year for the discontinuation of these MBPT dues, on the other, JNPT sent out the circular dated the 24th of November 2020, increasing the MBPT scale of rates, with retrospective effect from the 3rd of October 2019. This is extremely unjustified, as the above increase, that too with retrospective effect, would prove to be detrimental towards the Government's initiative of reducing transaction cost, encouraging more port calls and improving India's ranking in the ease of doing business.

In view of the above, not only the retrospective increase but in fact a complete withdrawal of the MBPT dues for vessels calling at JNPT, is recommended by CSLA.

c) VTMS Fees:

Light dues are charges levied on ships for the maintenance of lighthouses and other aids to navigation. While these charges are collected by DGLL, which comes under the purview of the Central Govt and covers all Indian ports, the Gujarat Maritime Board (GMB), which comes under the jurisdiction of the state government, charges VTMS fees (over and above the light dues already paid) on vessels calling at ports in Gujarat. This acts as a dual charge and unduly increases the cost of operations. A vessel therefore calling at Mundra for instance, besides paying light house dues, which actually cover all Indian ports, has to further pay VTMS, which acts as a dual charge and hence increases the cost of operations and needs to be discontinued.

d) Levy of taxes on handling of transhipment containers:

Mundra is a major transhipment hub competing with Colombo, Jebel Ali and Salalah. GST is charged per move ie twice per unit even on transhipment containers. This is not the case at foreign transhipment hubs as transhipment containers do not leave the port premises. A reduction in these taxes and withdrawal of the dual charge therefore will definitely enhance the transhipment volumes from India.

e) Waterfront royalty:

Waterfront royalty too is charged per transhipment move which again makes it a double charge. Here again the transshipment containers do not leave the terminal yard and yet waterfront royalty is charged twice per unit. This increases the transshipment cost and restricts the growth in the transhipment volumes from India.

It is hoped that the government seriously considers these recommendations in the new year.

Ragam Kishore
President, IPPTA

Supply chain crisis

The resurgence of global economic activity in the first half of 2021 lifted merchandise trade above its pre-pandemic peak, although the global supply chain is still on tenterhooks with congestion at Chinese and US ports, shortage of containers, looming threat of another pandemic etc. It is anybody's guess as to when complete normalcy will be achieved.

Lessons learnt

Our utmost priority was to safeguard employee safety and make sure that there was minimal disruption in the supply of essential commodities to the Nation. The non-availability of truck drivers, labour shortage, shortage of addl. handling equipment leading to disruptions in terminal operations can negatively affect evacuation of cargo in/out of the port area and to the hinterland. Ports and Terminals have greater responsibility and challenges to manage resources and handling equipment during such critical situations, create networks and ensure highest safety and health standards.

Key shipping and logistics trends

Technology is shaping the future of Shipping and Logistics. Artificial Intelligence (AI), Big Data, RFID Technology, Warehouse Automation are already having a huge impact. The launching of National Logistics Portal by the Government will become a game changer where the EXIM Trade will be facilitated to do their entire documentation online. Shippers, Carriers, Suppliers and Consumers are expected to benefit from the logistics technology trends in 2021.

Policy expectations from the government

With the enactment of the Major Port Authorities Act, 2021 and the announcement of new Model Concession Agreement for Port Sector, there is going to be a dichotomy created by denying a level playing field between existing Operators and the new concessionaires. The following suggestions are made in this regard:

- (i) Full tariff freedom to the existing PPP Operators on the lines of tariff freedom to new concessionaires based on Major Port Authorities Act, 2021
- (ii) Choice to be given to the existing Operators to opt for the provisions of the new Model Concession Agreement, 2021
- (iii) Existing concessionaires should be given Right of First Refusal (ROFR) to bid for renewal when the existing concessions come to an end.

Karunakar S Shetty
VP, Maharashtra Chamber of Commerce, Industry & Agriculture

Supply chain crisis

I believe the current supply chain situation has improved and is returning to normal. Unlike in the past, the new normal has seen a significant transformation in the operational functioning with the use of technology. However, the increasing freight rates around the world continue to be a constraint. With the excess demand and rapid increase in the volume of consignments following the pandemic, this concern must be addressed.

Lessons learnt

When the whole world was disrupted due to a pandemic, digitization opened a new ray of hope for our routine work. A new concept of working from home emerged around the world, and many companies began investing in their IT infrastructures, which was never a priority previously.

In terms of Supply Chain crises, they are a continuous process. It is never easy to manage such a large chain with so many people, processes, procedures, and regulations. Transporters, manufacturers, logistics operators, other Exim stakeholders, and relevant authorities have begun to collaborate with ERP and similar systems to ensure smooth operations across the chain.

Key shipping and logistics trends

In the coming years, I anticipate a significant increase in the volume of exports. In the post-pandemic scenario, the government is creating a plethora of opportunities for traders and industries. The Hon'ble Prime Minister has set a national goal of $400 billion in exports.

The outreach of the portals for e-marketplace "GeM" and for Micro, Small, and Medium Enterprises "Trade 4 MSME's" are beneficial in terms of aligning with our Hon. Prime Minister's national mission. The proper implementation of the National Logistics Policy and the SCMTR will be a significant change in the way our industry operates.

Business plans for the next one year

As I speak on behalf of the Maharashtra Chamber of Commerce, Industry, and Agriculture, our business plans for the next year will be to improve manufacturing setups, invest in technology and IT infrastructures, increase agricultural and manufacturing yields, and develop skills to improve efficiency. Our sole goal will be to aid in the expansion of our country's exports.

Climate Change is the much talked concern, globally. The Indian government has been developing various strategies to address the causes of climate change.

To combat this our Hon Minister of Road Transport Shri Nithin Gadkari ji has always been vocal about the production of alternative fuels such as ethanol derived from sugarcane molasses. Our country has a huge opportunity here, and we anticipate a positive trend as Maharashtra is the second largest producer of sugarcane. The Maharashtra traders and industrialists are very enthusiastic about contributing to the national mission, but we also expect that robust maritime policies must be implemented in order to improve trade.

Rest assured, we will focus on the development of other complementary sectors such as banking and finance, construction, legal, and so on to ensure a smooth transition of developments.

Policy expectations from the government

We anticipate that policies will need to be aligned and simplified in order to increase the volume of exports.

We have been dealing with a serious container shortage for several months now. Our country must concentrate on producing containers for the domestic market. My heartfelt request to the government is to track down and support such manufacturers from our country.

Our country must concentrate on becoming a major shipping liner. With only The Shipping Corporation of India as the main line at the moment, my expectation is that more such shipping liners must be developed. We anticipate that necessary infrastructure, berthing areas, and simple regulations will be implemented for developing coastal shipping in the country.

Our country must be developed as a multimodal system that combines rail, road, sea, and air transportation. This will necessitate the simplification of procedures as well as the coordination of Inter-Ministerial Committees in order to reduce the complexity of regulations and paperwork.

THE CORNER STONE FOR EFFICIENT LOGISTICS

The warehousing industry in India is undergoing a significant shift, keeping pace with the emerging manufacturing sector and the boost in e-commerce especially in the tier – II and tier–III cities. E-commerce industry has been one of the major growth drivers of the warehousing industry.

Globally, trade and geopolitical tensions, technological advancements and rising transport costs have led companies to diversify their supply chains over the past few years. This trend has further accelerated with the onset of COVID-19. Post the pandemic, a widespread exodus of manufacturing activity from China is unlikely due to the maturity of its supply chain and its massive domestic consumer market. However, COVID-19-induced disruptions are prompting companies to develop a 'China Plus One' strategy to reduce their dependency on the country. Several markets, including India, are emerging as the frontrunners for the position of the 'Plus One' alternative to China.

Moreover, the government's attractive tax sops and policy initiatives launched in the wake of COVID-19 to ease investment norms helped the manufacturing sector recover to a large extent after the first wave of the pandemic, as was evident from an improvement in indicators such as Index of Industrial Production (IIP) and Purchasing Managers Index (PMI). As of FY2019-20, the manufacturing sector accounted for 14% of the GDP1, with the government planning to increase the share to 25% by 2025 as part of the 'Make in India' campaign.

Against the backdrop of robust

growth of the manufacturing sector, the rise in e-commerce and third-party logistics (3PL) players also led to increasing demand for quality warehousing space over the past few years. While the country is predominantly dotted with warehouses built by leading developers / investors, the government has also been providing necessary support to global manufacturers through Free Trade Warehousing Zones (FTWZs).

India is developing as a preferred investment destination for global manufacturers – especially those deploying a 'China plus One' strategy for diversifying their supply chains. India's prospects as an alternative supply-chain destination seem vastly improved due to continued focus on global standards.

"The Indian Warehousing Market was valued USD 14.65 billion in 2019 and is estimated to grow at CAGR of 9.82% to reach USD 19.53 billion by 2025. As per estimates of JLL, the warehousing space in top 8 cities which includes, NCR Delhi, Mumbai, Bangalore, Chennai, Pune, Kolkata, Hyderabad and Ahmedabad in 2020 has been pegged at a total of 238 million sqft and is expected to grow by about 35 million sqft in 2021 crossing 270 million sqft benchmark," informs **Commander Ajay Zadoo, General Manager, Regional Head - Andhra Pradesh and Telangana, Central Warehousing Corporation**.

A growing interest in diversification of warehousing portfolios among developers is being noticed, by increasing the share of first- and last-mile warehouses. There have even been select instances of developers exploring tier II and III cities as options for their warehouses. **G.V. Sanjay Reddy, Vice Chairman GVK**, highlights "the logistics sector in India, which was at $160 billion in 2017, has witnessed a tremendous growth and in 2020, its market was estimated at $215 billion."

Warehousing on the rise in major cities

Despite unfavourable socio-economic environment, warehousing stock in top eight cities, including NCR-Delhi, Mumbai, Bangalore, Chennai, Pune, Kolkata, Hyderabad and Ahmedabad has added 27 million square feet to 211 million sq.ft in 2019, to reach a total of 238 million square feet in 2020 as per a report published by JLL. Yogesh Shevade, Head Industrial Services, JLL, India said: "In Q4, the market started gaining momentum with highest supply and absorption in 2020 post the lockdown. Industrial spaces witnessed a 13% Y-o-Y growth in total stock in Grade A and B warehousing space in top 8 cities.

"Important point to note here is that in 2020 the tenants have looked for new and innovative ways to take up spaces on short term or temporary leases of tenure 9-12 months for leasing of 'white spaces or unused spaces' in existing leased warehouses on sub-lease. Unfortunately, these do not get captured in net absorptions (considering these are already leased)," he said.

Major demand from 3PL

3PL has become one of the fastest growing segments in the warehousing space, contributing nearly 35% of total net absorption in 2020, highest among all the sectors. Likewise, many e-commerce categories (21% absorption) are expected to do very well, as consumers are making a behavioural shift from buying offline to online, followed by engineering and manufacturing sector (23%). E-commerce took the largest share of warehouse leasing in Guwahati, Jaipur, and Ludhiana.

The underlying factors driving this upward trend is the increasing demand of e-commerce in the non-metro cities of India. In recent years, e-commerce has expanded aggressively to tier-2 and tier-3 cities, which has further led to the growth of the logistics sector to keep up with the rising demand. The e-commerce market, which has witnessed strong growth in the last few years, was valued at around $70 billion in 2019 and is forecasted to reach over $160 billion by 2022. At present, the pan–India footprint of e-commerce warehousing is estimated to be around 50 mn sq ft, of which Amazon occupies more than half. Flipkart comes next with approximately 15% share and the total occupancy for these two players is estimated to be around 70 to 75%.

In the fourth quarter of 2020, smaller cities accounted for 46% share in total e-commerce volumes, marking a steep 14% rise from the period just before the Covid-19 pandemic spread. A

Telangana a bright spot in industrial and warehousing space

- Warehouse space take-up in Hyderabad was about 11 million sq. ft. during 2018 to H1 2021. The leasing was predominantly concentrated in semi-investment grade properties in the city. However, Western and Southern Corridors witnessed a rise of warehouses launched by national developers post 2019. Occupier preferences thus slowly started to shift towards investment-grade warehouses in recent years.
- During H1 2021, rental values increased by about 5 – 14% across micro-markets in Hyderabad, primarily due to increasing demand and development of better-quality warehouses. Space take-up during H1 2021 was mainly driven by retail players who were seeking expansion opportunities in the Northern Corridor. They were followed by 3PL and e-commerce companies expanding across micro-markets.
- Some of the key policies that fuelled the state's rapid industrial growth included:
- Industrial Policy Framework for the state of Telangana, 2014
- Telangana State Industrial Project Approval and Self-Certification System (TS-iPASS), 2014
- Telangana Life Sciences Policy, 2015
- Telangana Electronics Policy 2016

striking reason for the increased online spending per customer in these cities is driven by the development of last-mile delivery by the logistics companies and an exponential increase in the warehousing space. The investments made in the warehousing segment have increased by $7.12 billion between 2018 and 2020.

However, with the recent crisis wreaking havoc upon every industry, the anticipated growth margins need to be refigured on the lines of the disruptions that began in 2020. Raising this concern, Mr. Sanjay Reddy underscores an important detail: “In the year preceding March 2021, India’s top 8 cities saw a sharp decline of 23% in warehousing transactions, which fell down to 31.7 million sq. ft.”

In addition to e-Commerce, the warehousing segment has also benefitted from the boom in the logistics sector in the last decade. For further growth, the warehouse players are embracing technological advancements, such as Automated Guided Vehicles (AGVs), Automated Storage and Retrieval (ASRS) and robotic arms during operations.

Warehouse leasing activity

The warehousing space take-up over the past five years has crossed 200 million sq. ft. cumulatively. While occupiers leased space in both investment- and semi-investment grade assets in tier I locations, we are witnessing an increasing occupier inclination towards the former in recent years. Following large-scale expansion in tier I cities, occupiers have now started to expand their footprint in tier II and III locations due to improvements in infrastructure and growth of online retail in these areas.

Rising demand and e-commerce has created a need for faster delivery in smaller cities as well, which include Ludhiana, Coimbatore, Vapi, Guwahati, Bhubaneshwar, Surat, Lucknow, Patna, Siliguri and Ambala-Rajpura belt are therefore witnessing higher warehousing demand.

Free Trade Warehousing Zones (FTWZs) to support bonded manufacturing

FTWZs were introduced by the GoI in 2015 to create infrastructure for facilitating free trade of goods. These zones were deemed foreign territories / ports / warehouses for storage and other value-add activities under the Customs Law. FTWZ units can also hold inventories on behalf of foreign suppliers / domestic buyers. There are nine approved FTWZs in India, of which four have been notified. Of these four, three are currently operational, as given below:

FTWZ	Location	Area (HA*)	Status
Arshiya International	Maharashtra	58	Notified/ Operational
Matadee FTWZ	Tamil Nadu	40	Notified/ Operational
Arshiya Northern FTWZ	Uttar Pradesh	51	Notified/ Operational
Arshiya International	Maharashtra	43	Notified
Lepakshi Knowledge Hub	Andhra Pradesh	40	Approved
ISPRL FTWZ Padur	Karnataka	41	Approved
Cochin Port Trust	Kerala	41	Approved
Venkatesh Coke & Power	Tamil Nadu	46	Approved
NDR FTWZ	Tamil Nadu	41	Approved

According to CBRE’s ‘APAC Real Estate Outlook 2020’, total cross-border e-commerce sales in APAC are expected to grow from $181.4 billion in 2018 to $389.5 billion in 2023. Bonded warehouses are expected to benefit from this trend as they facilitate faster delivery compared to direct shipping from the country of origin. CBRE expects to see a rise in leasing demand for this property class, especially in large consumer markets such as China and India, and particularly in cities with major ports and airports, such as Hangzhou, Shenzhen, Shanghai, Mumbai and Chennai.

Warehouse rents continue to rise

Warehouses across the Asia Pacific region posted an average 3-5% growth in rents by the end of the year 2020, revealed Knight Frank in its latest Asia Pacific Warehouse Review report. Despite spread of covid-19, cities registered an average rental change of -0.02% year on year – in H1 2020. The report cited that rents in 5 cities will increase over the next 12 months, including those in National Capital Region (NCR), Mumbai, Bengaluru, Taipei, and Shanghai.

The warehouse sector across Mumbai, NCR, and Bengaluru, which accounts for around two-thirds of all the warehouse stock in India, recorded stable rental growth within the first six months of 2020. The warehousing sector had seen a strong demand growth of 44% CAGR, with transactions increasing from 13.9 mnsq ft in FY 2017 to 41.3 mn sq-ft in FY 2020.

On the current context and outlook on the prime warehouse rental performance in India, Balbirsingh Khalsa, National Director Industrial & Logistics, Knight Frank India, said, “The pandemic has led to a break in the supply chain across industries in the country that has resulted in an increasing demand for storage space from the daily necessities, electronics and FMCG sectors. A balance in demand-supply dynamics is expected to support the sustenance of an increase in rental growth. Due to the continued shift of the tenancy mix, it is probable that all cities across India to remain stable till the year-end.”

On the rental warehouse performance in APAC region, Tim Armstrong, Head of Occupier Services & Commercial Agency, Asia Pacific at Knight Frank said, “The outlook for industrial markets remains resilient due to robust demand from the e-commerce and essential goods sectors, as well as additional requirements for inventory storage to mitigate supply chain disconnects.”

More investments expected

The long-term outlook for the segment remains promising and warehousing is predicted to bounce back quicker than other segments of real estate, driven by robust demand from e-commerce and other consumer-led occupiers. The inflow from both foreign and domestic funds will grow over the next 2-3 years as existing participants expand their portfolio and new players enter the market, reports Colliers International.

Institutional investment in warehousing dips 44% to $868 million in 2020

Institutional investment in Indian warehousing fell 44% to $868 million in 2020 due to the COVID-19, but the long-term outlook remains attractive on rising demand from e-commerce players, according to US-based property consultant Vestian.

"With the economic slowdown and COVID-19 crisis taking precedence, 2020 saw a substantial decline in warehousing investment, to the tune of 44%, over the previous year," revealed Vestian.

Investments in the segment almost dried up, particularly during the first half of 2020, as investors turned cautious due to the pandemic.

According to the data, the warehousing sector attracted $125 million in 2016, $1,933 million in 2017, $1,731 million in 2018, $1,543 million in 2019 and $868 million during the 2020 calendar year. "Interest in investment in warehousing has gained momentum since 2017... Propelled by "infrastructure status" allocated to the sector, the year 2017 witnessed a flurry of large-sized investment, tipping the scales at almost $2 billion," the report said. Going forward, the consultant said warehousing demand is likely to be driven by FMCG, e-commerce and 3PL players.

Between 2017 and 2020, the sector has attracted investment inflows of ₹27,800 Crore. During 2019 through H1 2020, the industrial and warehousing segment garnered the third highest share of PE investments after office and retail. The investment capital came from foreign investors such as the Abu Dhabi Investment Authority, Canada Pension Plan Investment Board (CPPIB), Ivanhoe Cambridge, Ascendas and Blackstone among others.

This significant investor interest has been due to reforms introduced by the government, such as GST regime, accordance of infrastructure status to the sector, creation of logistics park policy and development of multimodal infrastructure, among others.

Warehousing boom in Bengal

Demand for quality warehouse is set to emerge as the new driver for the real estate industry in Bengal. The adjoining areas of Calcutta alone can absorb over 10 million square feet of space in the next three years if developers build top-grade warehouses, reveals Nandu Belani, President of CREDAI Bengal, the body of real estate developers. JLL, a global real estate services company predicts 22 million square feet space of Grade A & B warehouse to come up in and around Calcutta, compared to 11.6 million square feet present in 2020.

Much of the demand will be from companies looking to move out of old godowns to modern logistics centres. The Mamata Banerjee-government has recognised the potential of the sector and published a separate policy to support it. The sector will be given infrastructure status, aiding developers to get cheaper loans from financial institutions as opposed to real estate.

"With its inherent strategic location, Bengal is best suited for the logistics hub for the entire eastern region, northeastern states and neighbouring countries. Hence, it is apt and logical to come out with a logistics policy which will leapfrog the intention to implementation," said Sanjay Budhia, Managing Director, Patton Industries.

Indian warehousing segment has a total stock of 215 million square feet of Grade A space. The average vacancies are 8-10 per cent and average Grade A rentals at ₹20.5 per square feet, the report highlighted.

Smaller cities to see more demand for warehousing

At a time when the Indian real estate sector has been facing a slowdown, the warehousing segment has emerged as a promising investment opportunity for investors. The segment, since 2017, has garnered the second-highest share in equity investment after office and has exceeded investments in the retail asset by over three times. Office segments witnessed the equity investment at $9.3 billion, followed by warehousing at $7.2 billion and retail at $1.9 billion in the said period.

Since 2011, investors originating in countries like Singapore with $1,731 million followed by UAE ($1,600 million) and Germany ($1,000 million) have made substantial investments in the India warehousing market.

The warehouse leasing activity saw healthy demand in Mumbai (8% YoY), Pune (42% YoY) and Ahmedabad (5% YoY) in FY2020. The need for fully compliant Grade A properties that increase the efficiency of the supply chain continues to gain momentum. Pune and Chennai have the highest concentrations of Grade A stock, 71 percent, and 69 percent respectively, due to their primary demand base of auto and auto ancillary occupiers.

Due to an increase in demand for warehousing the cap rates have seen a significant decline from 13-15% in the year 2011 to 8.5- 9.5% in the year 2019. This can be attributed to the supply of good warehousing, regulatory eco-system, and formalization of the segment.

Due to nationwide lockdown, delivering essential services to the masses became a necessity, which has resulted in a significant growth in the Tier 2 and Tier 3 warehousing markets. These markets are still at a nascent stage and are contributing around 13% to overall warehousing demand however recorded a tremendous growth rate of 20% in FY-2020.

"AVIGNA PVT LTD. IS LOOKING AT DEVELOPMENT OF 14 TO 15 MILLION SQ.FT WAREHOUSING SPACES IN THE NEXT FOUR TO FIVE YEARS. WE ARE FURTHER FORAYING INTO 3PL TO PROVIDE VALUE ADDED SERVICES TO OUR CUSTOMERS."

Abhijit Verma
Executive Director & CEO,
Avigna Group

Size of the warehousing sector in India

The warehousing industry in India is growing at a CAGR of around 10%. So, if you review the growth of the population and the per capita income of the country, India is still at a nascent stage in the warehousing and industrial space; however it is growing drastically. Comparing on a per capita occupancy basis with the rest of the world, India is still at a very nascent stage, but the scale and the scope is very high.

If we talk about the size of the Indian warehousing market today, it values around ₹1,000 billion approximately and it is expanding at a CAGR of around 13% to 14%. With this growth pace, it can be valued at approximately ₹2,000 billion by 2025.

Key trends in the warehousing sector

The most important thing to be noted is the industry is slowly transitioning from the Godown (traditional warehousing and storage spaces) era to future-ready grade A asset scenario. It is consolidating, maturing, and going forward to a much better scenario. The key demand drivers are growing customer expectations with regards to better efficiency in the supply chain, which is now recognised in India, and this was much required since long.

Customers now want to keep/store their valuable assets in clean hygienic environment, and not shabby places. This is giving rise to the need for automation, future ready grade A assets, and creating demand for various technologies in the warehousing sector.

The pandemic outbreak has contributed to the much-needed acceleration, with E-commerce gaining momentum. Also worldwide decentralization and China factor has played its crucial part especially during the pandemic recovery times. India herein got an advantage because of the decentralisation. China's disadvantage fortunately turned out to be our advantage in such a scenario. So, global manufacturing and decentralization have become the key drivers.

Secondly, the cold chain warehouses are gaining traction in India. Also institutional grade 'A' developers have entered this particular sector. With organized players entering this sector, the decentralisation of manufacturing happened. Further the GST came into place, and the pandemic outbreak has accelerated all of these factors.

Future warehousing hotspots

As per the government of India's policy of a 'Bharat Mala' connecting whole of India in a chain network. Seven to eight important sectors have been identified, and you can see development of warehousing and industrial hubs there. NCR is one of the key markets, followed by Mumbai which is another key market, and then Bangalore, Chennai, Kolkata, Jaipur, Pune, Guwahati, and Patna are other markets wherein the demand for warehousing is slowly growing.

Tell us about the warehousing operations of Avigna Pvt Ltd.? What is the size of investment made into warehousing? What is the capacity of warehousing parks?

Avigna Pvt Ltd. is a capability company focused on building and development of warehouses and industrial parks. The company is looking at development of 14 to 15 million sq.ft warehousing spaces in the next four to five years. The construction arm of Avigna Pvt Ltd. which is focused into backward integration is called 'Avigna EPC', the company monitors and controls the quality of spaces. We are further foraying into third party logistics (3PL) to provide value added services to our clients/customers.

Avigna Pvt Ltd believes in providing a complete, holistic solution to our clients or customers by providing grade 'A' assets. We are also looking forward to provide value added services to our clients.

As of today, we have already completed 2 million square feet in Hosur, Karnataka as our first project. Another million will be added to it soon. Summing up, by the end of this year, we are going to hand over 3 million square feet, valued at approximately ₹500 to ₹600 crores. We also hold land parcels in Hoskote, Madurai, Chennai and Nellore and planning to invest more than ₹2,000 crores in the next two to three years.

In the near future what are your warehousing plans in terms of locations, capacity and investment? Which are the locations you are looking at?

At Hosur, we have already completed 3 million square feet and looking at expansion of another million square feet soon. In Bangalore, we are developing a million square feet and we look forward to another 2 million sq. ft in Bangalore itself. In Chennai, we have a million square feet exposure. We seek a million square feet exposure in Vijayawada, and a million square feet in Madurai. We also plan to invest, coming up in Bhiwandi in Mumbai with 2 million square feet. Alongside, we are seeking exposure of a million square feet in NCR, and a million square feet in Calcutta, Jaipur and Guwahati. Together, until now 10 to 15 million square feet development is already completed.

Which sectors are contributing maximum occupancy in your warehousing parks? Who are your major clients? Have you entered into any business agreements with any businesses for offering warehousing services?

Yes, we are one of the fastest growing companies in the warehousing sector. Industrial clients contribute to maximum occupancy in our warehousing parks. So we are a more of an industrial and warehousing park, and not just another warehousing and logistic park.

3PL and e-commerce companies occupy majority of our warehousing spaces. Some of our major clients are Stellar Value Chain, Reliance, Whirlpool, etc. Top Grade A and 3PL companies form our esteemed list of clientele.

"WE ARE IN THE PROCESS OF EXPANSION OF WAREHOUSES INSIDE OUR CFSs AT KOLKATA (3,700 SQ MTR) AND CHENNAI (2000 SQ MTR). WE ARE ALSO IN THE PROCESS OF EXPANSION OF WAREHOUSING & DISTRIBUTION FACILITY FOR A CAPACITY OF 2000 SQ MTR."

Adika Ratna Sekhar

CMD & Additional charge of Director (HR & CA) and Director (Manufacturing Business), Balmer Lawrie & Co. Ltd.

Size of warehousing sector in India

The warehousing market in India was valued at ₹1,050 Bn in 2020. It is expected to expand at a compound annual growth rate (CAGR) of ~14.86% between 2021 and 2025, to reach a value of ₹2,028.86 Bn by 2025. Use of warehousing management system in India has gained significant prominence over the past few years. Also, the warehousing and cold storage space occupancy rate has increased by ~77% from 2019 to 2020. At present, warehousing in India is mostly concentrated in tier-I cities, such as Bengaluru, Chennai, Kolkata, Mumbai, Delhi-NCR, Ahmedabad, Pune, and Hyderabad. However, with the rising demand for e-commerce activities and doorstep delivery services in the tier-II and tier-III cities, the warehousing sector in India is expected to grow exponentially in the coming years.

What are the factors driving demand for warehousing in India?

The growth in the Indian warehousing market is being driven by the robust expansion and demand in the pharmaceutical, e-commerce, cold chain and manufacturing sectors. The rapid growth in the market can also be attributed to the proactive initiatives and favourable policies of the Government and increasing institutional investments. Other factors, including technological advancements, such as warehousing automation and robotic mechanization are expected to revolutionize the market. An efficient and a well-managed Warehousing Supply Chain is equally important and is considered as an enabler for any business strategy. A technologically sound and competitive sourcing approach with an adaptive mindset and a well synced last mile delivery has become the mantra of success for pioneers of Supply Chain Business. However, the unavailability of proper land, high land acquisition prices and the lack of warehousing infrastructure in the country are factors hindering the growth of warehousing in India.

Key trends in the warehousing sector

Today, consumers are extremely demanding and expect their goods to be delivered on the same day, and in some cases within hours. The warehousing sector typically relies upon the large, centralised hubs and timely receipt of goods is a concern. Emerging micro-fulfilment centres allow warehouse teams to provide efficient and fast last-mile delivery solutions. Either built as standalone operations or bolted onto an existing location to add capacity, their size makes them flexible and cost-effective. The modern supply chain has been using data for enhancing efficiency in operations, be it collating consumer preferences, monitoring goods across a distribution network or tracking shipments. However, leveraging data in creating leaner and more efficient processes within warehouses was overlooked. That's now beginning to change, with more and more operators embracing the idea of a data-driven warehouse – warehouses labour management systems (WLM) is just one example of a system that collects and monitors metrics in real time. This can identify any inefficient process and help identify opportunities to automate or flag technical problems well in advance; thus, enabling operators to be firmly ahead of the competition by streamlining their business.

The pandemic created major challenges within the warehousing sector, where staff often carried out manual tasks in close proximity or worked alongside one another to get the job done. This challenge became even greater amid a spike in e-commerce orders during the pandemic. This has triggered the use of modern technology and accelerated plans of operators to swap humans for automated 'Bots' that can get the job done in a more safe and secure manner. The disruptions and challenges would remain, as the world continues to recalibrate supply chains in the wake of the pandemic. In the endeavour to combat the challenges, the industry has adapted, evolved and embraced brand new technologies and systems that may otherwise have been years away.

Green Supply Chain in Warehousing is also a noteworthy trend. Use of Battery operated MHE, recycling of waste, use of eco-friendly packaging, use of energy efficient LED lights, use of solar panel etc. Indian Green Building Council (IGBC) has launched the 'IGBC Green Logistics Parks and Warehouses Rating System (Pilot Version)', a 'first-of-its-kind and an exclusive rating system for Logistics Parks and Warehouses in India. Digital transformation like E-invoice, fast tags took place in India resulting in green SCM. IoT helps in creating miracles in terms of fuel efficiency and waste management by planning routes rationally and reducing fuel consumption. Further, IoT (Internet of Things) also helps in sensor LEDs contributing to green lighting.

Warehousing clusters location in India

The warehousing market in India is highly fragmented with most warehouses having an area of less than 10,000 sq.ft. Approximately 90% of the warehousing space in the country is controlled by unorganized players with smaller sized warehouses, which have limited mechanization. Fragmented warehousing footprint results in higher average inventory holding, in addition to higher storage and handling losses, driven by lower level of mechanization. Nearly 60% of the modern warehousing capacity in India is concentrated in the top six cities namely Ahmedabad, Bengaluru, Chennai, Mumbai, NCR and Pune, with Hyderabad and Kolkata being the other major markets. This is driven by concentration of industrial activity and presence of sizeable urban population around these clusters. Going forward, due to factors like quality of infrastructure and availability of labour, these advantages are likely to remain with these cities. In all the segments of the warehousing industry barring the agricultural segment, the majority of the capacity is controlled by the private sector. In the agricultural segment, approximately 3/4th is controlled by different Government entities. The primary objective of a majority of these warehouses is to only store food grains and ensure food security.

Which will be the future hotspots for warehousing

Due to digitization and the new norm of work from home, companies have been seriously considering diversifying their presence geographically. Offices will potentially re-allocate resources to smaller cities, away from Mumbai, NCR and other metros, which have been most heavily affected during this pandemic. Due to the above, the re-allocation of the white collared workforce to Tier 2 & 3 cities will significantly increase consumption and demand for warehousing. Cities with good infrastructure like Nagpur, Bhopal and Surat will be the new warehousing destinations of the future. Indian agricultural warehousing will be tested in the near future, even as the expected slowdown in the economy and concerns related to liquidity will hit the farming and trading community at a time when India is about to harvest a bumper crop. The duration of storage of commodities in warehouses will take a longer time than usual, and there could be a scarcity of agricultural warehousing space, thus, creating a huge demand. As per industry estimates, the cold storage capacity itself needs to be increased by at least 40% (pre COVID numbers). The emphasis on increasing this capacity will be foremost within the Government purview - making it an attractive proposition for private investors.

Where are your warehouses located and what is the size?

Balmer Lawrie provides warehousing services to its customers. With its state-of-the-art warehouses pan India, Container Freight Stations and Cold Chain Units, Balmer Lawrie has a general and temperature-controlled warehouse in Andhra Pradesh Medtech Zone catering to the needs of their customers. This is ably supported by the warehousing facilities that we have in the Multi Modal Logistics Hub at Visakhapatnam.

Below are details of our warehousing capability:

In which locations are you planning to expand?

Yes, the warehousing requirement is surely going to increase. We are in the process of expansion of warehouse inside our CFS at Kolkata for a capacity of 3700 sq mtr, inside CFS - Chennai for a capacity of 2000 sq mtr. We are also in the process of expansion of Warehousing and Distribution facility for a capacity of 2000 sq mtr. There is great demand for temperature-controlled warehousing space as well. Balmer Lawrie with its pan India Cold Chain Units and Temperature Controlled Vehicles provide end-to-end cold chain logistics solutions under the brand LOGICOLD. We plan to set up a Cold Chain Unit at Kolkata in addition to the already existing Cold Chain Units at Hyderabad, Patalganga, Rai and Bhubaneswar. This will further strengthen our USP of being one of the largest pan India end-to-end Logistics solutions provider in the organised sector.

How is technology helping to increase the efficiency of warehouses?

Modern warehousing technology has evolved considerably over the past 5 years. Warehouse Management Systems (WMS) are a must in today's fast-paced logistics industry, but most of them use local hardware that limits their capability and human resources would be required to maintain it. A cloud-based WMS uses software as a service (SaaS), creating a system where workers

Category	Location	Capacity
Warehousing & Distribution (W&D)	Kolkata Coimbatore	5100 sq mtr 1000 sq mtr
General Warehouse (Andhra Pradesh Med Tech Zone)	Visakhapatnam	6426.8 sq mtr
Temperature Controlled Warehouse (Andhra Pradesh Med Tech Zone)	Visakhapatnam	479.56 sq mtr
Warehouse	CFS Kolkata CFS Chennai CFS Mumbai	3000 sq mtr 6500 sq mtr 8400 sq mtr
Cold Chain Units	Hyderabad Rai Patalganga Bhubaneswar	3402 pallets 3840 pallets 3840 pallets 5000 pallets
Temperature Controlled Warehouse (Multi Modal Logistics Hub)	Visakhapatnam	3780 pallets
General Warehouse (Multi Modal Logistics Hub)	Visakhapatnam	9908.19 sq mtr

can seamlessly integrate and sustain without downtime. It's also more cost-effective than purchasing dedicated hardware, which can save cost in the long run. Per square foot space in warehouses costs big money, and hence, space efficiency is just as critical as stuffing every spare square inch with inventory. Using new technology can help you find your optimal warehouse layout, maximising the efficiency of product storage, inbound and outbound operations, and any value-added processes. Digital twins in warehousing can support the design and layout of the facilities, monitor real time movement of goods, people and equipment. Increase in transparency in supply chain with recognize inefficiencies to improve and streamline operations. Handheld devices, such as barcode scanners, have always been a part of the logistics and distribution industry, but recent advances and in introduction of Android platforms, have helped these devices become more efficient and useful than ever before. Warehouses that still rely on manual counts and physical paperwork should consider transitioning to Warehouse Technology that include digital inventories and handheld devices equipped with RFID scanners and GPS to increase efficiency and reduce theft and inventory loss. IoT, or the Internet of Things, is a broad term that encompasses all smart or networked devices. If you've got an Amazon Echo or a smart appliance in your home, you're already familiar with IoT. An IoT-enabled warehouse can make picking and packaging more efficient by reducing the workload on human employees. Instead of sending a human worker with a list of items to pull, smart shelves can talk to robotic pickers, letting them know precisely where each item is. IoT can also play a role in packing, labelling, and virtually every other step in the logistics process. AI and IoT has resulted in understanding the movement of goods in a warehouse and transcript to an analysis to understand the consumer behaviour and achieve operational excellence. Soon, we will see a future where robotics and automation will replace the human workforce in the logistics and distribution industry. New technologies improve efficiency, make the job easier, reduce wastes and help in cutting costs.

"MAJOR ROAD AND FREIGHT CORRIDORS ARE ALREADY UNDERWAY WHICH WILL BOOST THROUGHPUT (E.G.: DFC, KMP, DMIC AMONGST OTHERS). INDIAN WAREHOUSING IS NOW IN LINE WITH GLOBAL BENCHMARKING FOR GRADE A SPECIFICATIONS AS OPPOSED TO 5 YEARS BACK."

Mr. Anshul Singhal
Managing Director,
Welspun One Logistics Parks

Strong Demand Drivers

India faces a lack of Grade A warehousing with only 88MM sft of Modern (Grade A) warehousing stock. Meanwhile, China in the last 15 years has grown to 750MM sft of Grade A warehousing stock directly corresponding to the increase in per capita income. This growth commenced once China crossed the $2000 per capita income mark (where India is currently at).

Industry already pegs Grade A supply to grow at (pre-COVID) a y-o-y growth to be ~25%. We estimate that with the impact of COVID-19, the y-o-y growth rate will need to increase by ~10% to meet additional un-met demands.

This is due to the following factors:

Accelerated Adoption of E-Commerce / Capacity Building of E-Commerce Players:

- Online grocers like Big Basket and Grofers have seen the demand for groceries and essentials upsurge by 3-5X compared to normal (according to Neilson, in e-commerce, average orders surged for staples with edible oil growing by 106%, salty snacks by 84%, soft drink by 68% and biscuit by 31% on a weekly basis in the last one month, due to the COVID-19 impact).
- The fact that Big basket raised USD 60MM to fund their scaling of business operations, is a clear indicator of the consumer shift towards e-commerce.
- This could be due to panic buying, but some trends from China suggest that there was a 20% sustained demand even after lockdown was lifted.
- Moreover, the transition of retail to online and larger inventories by e-commerce players, will speed up the warehousing demand further. The resulting impact will be felt substantially in demand for inner city logistics and cold chain facilities.
- E-commerce companies are already looking towards expansion: Amazon, USA plans to hire / have hired an additional 175,000 warehouse and delivery workers amid a rise in online orders due to the coronavirus outbreak. We are hearing similar stories from customers in India. Additionally, last week the Amazon Stock price rose by 5.6% to a record high of $2,290 per share demonstrating the confidence of global markets in the E-commerce story.

Greater Displacement Demand

Companies will prefer Grade A facilities that offer compliance, human safety, hygiene and enable automation and social distancing. We estimate that this will lead to an additional Y-O-Y demand for Grade A facilities by 25% over the earlier predicted demand, even if only 35% of new occupiers switch their preference to Grade A warehouses.

Inventory Stockpiling

- Companies will quickly consider refining their inventory strategy to mitigate risks of supply shortage, by increasing inventory stockpiling. This will create immediate increase in warehousing demand in the manufacturing and consumption hot spots within the country.

- Additionally, soon companies will look at back up storage options in terms of large warehouses in Tier 2 & 3 markets, away from the highest affected Tier 1 cities, to further de-risk their supply chains.

Decentralized Demand due to rapid digitization

- Due to digitization and the new norm of work from home, Companies will be seriously consider diversifying their presence geographically. Offices and workers will potentially re-allocate resources to smaller cities, away from Mumbai, NCR and other metros which have been most heavily affected during this pandemic.
- Due to the above, the re-allocation of the white collared workforce to Tier 2 & 3 cities will significantly increase consumption and demand for warehousing. Cities with good infrastructure provisions like Nagpur, Bhopal, and Surat will be the new warehousing destinations of the future.

Agri Warehousing, the non-E-commerce scale

- Indian agricultural warehousing will be tested in the coming months, even as the expected slowdown in the economy and concerns related to liquidity will hit the farming and trading community at a time when India is about to harvest a bumper crop. The duration of storage of commodities in warehouses will take a longer time than usual, and scarcity of agricultural warehousing space will be seen in the coming months, creating a huge demand.
- As per industry estimates, the cold storage capacity itself needs to be increased by at least 40% (pre-COVID numbers). The emphasis on increasing this capacity will be foremost within the government purview – making it an attractive proposition for private investors.

There are concerns that there will be reduced consumption which will affect the overall warehouse demand. 2 factors to note here are:

Category Shifts: Essentially consumer preferences will shift to less expensive categories. Thus, even though there might be an overall loss of GMV (Gross Merchandising Value), consumption for non-durables and essentials will remain largely unaffected. Impact will be felt more on large discretionary spending.

Pent-Up Demand: Most economist feel that there is enough pent-up demand post lockdown, which will be met through e-commerce rather than offline retail channels.

Our understanding is that both category shift as well as transition to online channels, will have a direct positive impact on warehousing.

SECTOR READINESS

Unlike other real estate asset classes, the warehousing sector is fully prepared and matured to be able to scale and take advantage of the increase in demand due to the following factors:

Mature Policy Initiatives

- GST implemented.
- Infrastructure status: Department of Economic affairs has given infrastructure status to Warehousing giving access to infrastructure lending at easier terms and enhanced limits.
- 100% FDI in Warehousing and logistics to attract funds and incentivize domestic investors into the sector.
- Warehousing state level policies fully matured (e.g.: IIA & ILP in Maharashtra and Warehousing policy in NCR etc.).

Emphasis on Infrastructure

- Major road and freight corridors are already underway which will boost throughput (e.g.: DFC, KMP, DMIC amongst others).
- Indian warehousing is now in line with global benchmarking for Grade A specifications as opposed to 5 years back.

Low Credit Risk

- Within Real estate, there is a challenge in sourcing funds with the reduced numbers of NBFCs and high stress on the prop books of the operational NBFCs.
- The warehousing sector is however, insulated from credit risks, unlike other real estate sectors. It has no linkages to NBFCs, no notable NPAs, no Debt Pileups and exceptionally low vacancy.
- Significant presence and willingness of organized institutional, long term PE and LP capital.
- Low conversion and approval risk (as a 100-acre site comes under one approval whereas in commercial and residential, the same can be building wise and floor wise) which gives additional comfort to lenders.
- Construction cycles, turnaround time and low execution challenges lead to lower credit risks.
- This low credit risk will further add to favorable and preferential treatment of the warehousing sectors capability to access capital.

SUPPLY SIDE DYNAMICS

Distress / NPA: NPAs in real estate will increase as valuations will fall by at least 20% in the city centres and between 5-10% in preferred warehousing locations. Developers / Corporates who are over leveraged due to high land prices will take a sizeable hit, leading to availability of distressed assets in certain locations.

Slightly Better Returns: A land price reduction of ~10% lower along with a cap rate reduction of ~0.5% will result in an IRR jump of ~3% and yield jump of ~0.3%, resulting IRR of ~23%-24%.

Reallocation of Capital: Post COVID, fund managers will look at warehousing and industrial real estate as a safer, resilient and scalable asset class for their investors. Some of the capital already raised for residential, co-living / working, retail and hospitality will look at re-allocating itself into warehousing and the Data center space along with affordable housing.

MACRO-ECONOMIC FACTORS / BIG PICTURE/ LONG TERM

There is a reduced confidence in the Chinese eco-system. In case European and American Corporations want to de-risk from China they have 3 options: South America, East Asia and India. In South America, Brazil is a viable option. However, it faces its own issues with occasional mis- governance and hyperinflation. East Asia, Vietnam, Cambodia, Thailand are smaller countries with limited long-term opportunities. India thus, emerges as the only viable option, with a large English speaking & educated population, and with reasonable law and order in place.

When we move forward into the Post-COVID era, it is conceivable to think that the government will leave no stone unturned to lure these multinational corporations for India to become a preferred destination for manufacturing. This will include more relaxed labor laws and easier import-export terms. This is the only way the government will be able to employ our large educated demographic. Given this scenario, with any export / manufacturing impetus – warehousing will become a necessity.

CONCLUSIVE SUMMARY

Even though there will be a short term dip in consumption demand over the next 6-9 months, combining all the above factors: category shifts, accelerated E-commerce demand, displacement demand, inventory stockpiling, increase in demand for agri-warehousing and a more decentralized consumption footprint – there are clear indicators that the warehousing sector will witness a boom. Furthermore, land buying/ supply creation is a time-consuming process which would most likely collide perfectly to suit the timing of the demand upswing This will be enabled by the fact that the sector is ready with policy, infrastructure initiative and credit lines in place.

"OUR MCFS PROVIDE A+ GRADE WAREHOUSING INFRA WITH FM2 FLOORING AND VERTICAL STORAGE TO ENABLE OUR CUSTOMERS TO OPTIMIZE SPACE FOOTPRINT."

Alexandre Amine SOUFIANI
MD & CEO, FM Logistic

Demand drivers for warehousing in India

Below are some of the factors driving demand for warehousing in India:

- **Omni-channel Logistics** - The next generation of business requires logistics networks tailored to the needs of each and every channel. Omni Channel services are the need of the hour and companies are realigning supply chains to cater to omnichannel from the same warehouses.
- **Warehouse Management Systems** - FM Logistic India has implemented paperless operations with bar code scanning and GPS tracking at its warehouses. These are just the initial steps towards a long automation journey.
- **Sustainable Development** - FM Logistic is a proud member of the United Nations Global Compact Network in India. Sustainability is in the heart of our DNA at FM Logistic. We are one of the few 3PL service providers in India to be associated with this initiative for sustainable development with the United Nations Global Compact Network.
  - We commissioned our first solar project at one of our warehouses for the largest industrial manufacturer. Solar panels having a capacity of 150 kw will be used to power up a large warehouse of 1,80,000 sq. ft.
  - We have launched (as a part of our sustainable development initiatives) electric vehicles for intra city deliveries for a customer in Bengaluru.
  - Efforts are being made across all warehouses to reduce the use of plastic in packaging by using sustainable filler material and thus, reducing the plastic filler material. Also the option of using paper based tape instead of plastic tape for packing is being explored.
  - All our upcoming MCFs will have solar panels to power electricity needs but also able to share excess solar power back to the public grid.
- **Augmented Reality** - Blurring the lines between the digital and physical worlds, augmented reality (AR) will provide new perspectives in logistics planning, process execution, and transportation. By adding virtual layers of contextual information onto a heads-up display or other digital device, AR empowers workers by providing the right information at the right time and in the right place.
- Globally, FM Logistic uses AR to train its warehouse staff on handling and operating complex processes with higher levels of detail. We use the same technology to demonstrate our capabilities to our clients.
- **Internet of Things** - We have implemented IOT solution in one of our warehouses for an e-commerce client where we are able to track the performance of our operators and also identify the bottlenecks in our processes using the data provided by our connected scanners. We are also in the process of implementing digital cockpit which will enable us to monitor the behaviour of our container drivers on a real time basis.
- **Robotics & Automation** - Globally, this is a prime focus area for FM Logistic. In India we have implemented drones for inventory control at one of our warehouses and are in the process of getting this implemented across all warehouses. We have also implemented a fully automated packing line for various clients across India. Globally, FM deploys AGVs and Robots for various activities like loading, unloading, picking, palletizing, etc.
- **Space Optimisation** - At FM Logistic India, our facilities provide the best-in-class services and are built on par with international standards. Our MCFs provide A+ grade warehousing infra with FM2 flooring and vertical storage to enable our customers to optimize their space. We also provide top of the line storage and handling equipment. All these offerings help us to increase the operational efficiency of our customers. Thanks to a very high flooring resistance of at least 6 T/m2 it allows up to 12m vertical storage which brings huge cubic efficiency and better productivity allowing competitive operational cost. Each of our facilities offer ample docking stations to enable the smooth flow of inventory without any bottlenecks.

In which locations are your warehousing clusters located?

FM Logistic India is focussed on developing Grade A+ Multi Client Facilities (MCF) in the most important economic zones in India. Our Grade A+ MCFs are state-of-the-art facilities that provide the best-in-class services and are built on par with international standards. Our MCFs provide A+ grade warehousing infra with FM2 flooring and vertical storage to enable our customers to optimize space footprint. We also provide top of the line storage and handling equipment. All these offerings help us to increase the operational efficiency of our customers. Thanks to a very high flooring resistance of at least 6 T/m2 it allows up to 12m vertical storage which brings huge cubic efficiency and better productivity allowing competitive operational cost. Each of our facilities offer ample docking stations to enable the smooth flow of inventory without any bottlenecks.

All FM Logistic warehouses are equipped with CCTV surveillance systems. We have also deployed the appropriate access control measures in terms of doors, locks (restricted access to inventory storage area to only specific teams) and other security systems to prevent unauthorized access and improve cargo security. All our warehouses are equipped with beam detector systems and intruder alert systems with SOS sms to the concerned team. Our security team undergoes rigorous training and mandatorily conducts regular checks on a daily basis. We frequently organise night audits as well. Warehouse security audits are organized monthly to identify specific risks, if any.

We are supported in this endeavour of developing Grade A+ Multi Client Facilities by NG Concept - our real estate sister concern.

Recently, we commenced operations at our first owned MCF at Farrukhnagar, near Jhajjar. This new A+ grade facility will be the first in India to combine LEED and FM Global Certification. With a built up area of 700,000 sq. ft. this MCF enjoys strategic access to Kundali, Manesar and Palwal expressways for faster connectivity to all major consumption centres in the North. The MCF will has a storage capacity of 100,000 pallet positions and provide a dedicated area for co-packing and other value-added services.

Another Multi Client Facility in Bhiwandi, Mumbai spans across an area of 4,00,000 sq. ft. This facility, too, is strategically located near and provides faster connectivity to the major consumption centres in the West. Furnished with best-in-class safety and security features, both our facilities will offer cost efficient quality, storage and handling services. We will commence operations at this facility by the end of this financial year.

We recently entered into a contract with Welspun One Logistics Parks to lease warehousing space at Bhiwandi. As per the agreement, Welspun One will lease out approximately 9 lakh sq. ft. of warehousing space to FM Logistic India from the total leasable area of 3.2 million sq. ft. at its flagship Bhiwandi facility for a tenure of 5 years. The ₹900 Cr facility is Welspun One's flagship project and is spread over 110 acres. FM Logistic India, with this deal, will now have an additional 9 lakh sq. ft. of dedicated Grade A warehousing campus in one of the key micro markets in India - Bhiwandi, Mumbai. At a time when efficient logistics services are key to developing omni-channel retail strategies, this move will give FM Logistic a significant presence to service the Mumbai Metropolitan Region, which has a consumption base of 26 million people. The Grade A logistic facility has been designed according to the best industry standards with high spec buildings, 100% compliance to norms and stringent safety standards, allowing FM Logistic to strengthen its foothold in India's economic capital. The campus will also give the company adequate room to consolidate and expand operations in the future.

In 2020, despite the pandemic situation looming all across the country, FM Logistic India has added 10 lakh sq. ft. of warehousing space under its operations. The main impetus for expansion in operations has been on account of our great focus on the e-commerce, omnichannel, FMCG, food and Pharma sectors. Our proven capabilities in the ecommerce and omni channel domain has helped us to emerge as a responsible, reliable and resilient 3PL service provider in the wake of COVID-19.

"THE NECESSITY OF SPEEDIER DELIVERY TIMES IS ASSISTING IN THE RISE OF THE WAREHOUSING INDUSTRY. WE INTEND TO GROW IN DELHI, GUWAHATI, AND BANGALORE."

Nitin Mahipal
Managing Director,
Mega Freight Movers

What is the true scale of India's warehousing industry?

In 2020, the Indian warehouse market generated ₹676 billion. In the years ahead, the Indian warehouse market is expected to rise at a CAGR of 9.1% between 2021 and 2026.

Factors fueling warehousing demand

Proactive government measures, enhanced technology, growing sectorial demand, and the expansion of Tier II markets are the driving forces behind this trend. Overall, the demand for speedier order fulfilment and commerce is a major motivator for the growth of the warehousing sector.

Which states feature warehousing clusters?

The largest warehouse clusters in India involve Delhi, Ahmedabad, Indore, Nagpur, Bhiwandi, Bangalore, Guwahati, and Hyderabad.

Which will be the prospective warehousing hubs?

Nagpur, Bangalore, and Delhi NCR would become much more prominent storage hubs in India.

Tell us about your storage services? What are the locations of your warehouses, as well as their magnitude and geographical exposure?

We deliver 3PL Logistics services, which include transporting, warehousing, and delivering commodities. This includes many aspects of Personnel Organization / Stick Organization, and any affiliated operations such as unpacking and clamping / palletizing.

The warehouses are headquartered in Bhiwandi, Hyderabad, Nagpur, Aurangabad, and Vadodara and vary greatly in size from 10,000 to 60,000 square feet. These warehouses handle crucial distribution into the periphery of Maharashtra, Gujarat, Southern Rajasthan, AP, and Telangana.

In which cities do you intend to expand?

The need for storage is expanding due to the increase of manufacturing and E-commerce in India, and client purchases are also influenced by the timing of order fulfilment. As a result, the necessity of speedier delivery times is assisting in the rise of the Warehousing industry. We intend to grow in Delhi, Guwahati, and Bangalore.

How will technology be aiding in strengthening warehouse efficiency?

The use of technology in the storage area is determined by the type of cargo held within. Most e-commerce warehousing requires and deploys technology at a rapid pace to enable error-free handling and speedy picking and sorting operations. Picking and sorting will be done by robots in smart warehouses. This will also assist to lessen the physical strain on human workers while increasing warehouse efficiency.

Conventional warehouses are also integrating dock levelers, smart locks, and trackers to monitor truck entry and exit times (truck turnaround time) in effort to increase efficiency and make warehouses secure for workers and customers.

Significant motion detected by CCTV cameras that detect motion or a significant amount of material loaded in major and minor warehouses, most corporate clients have made fire alarm systems critical.

"WE ARE IN THE PROCESS OF EXPANDING OUR PAN-INDIA WAREHOUSING FOOTPRINT TO 50 LAKH SQ FT BY EARLY FY22 AND BY FY25 WE ARE TARGETING 85+ LAKH SQ FT CURRENTLY THE UNDER-CONSTRUCTION WAREHOUSING SPACE OF AROUND 22 LAKH SQ FT IS SPREAD ACROSS THE KEY WAREHOUSING HUBS IN CHENNAI, MUMBAI, NORTH INDIA AND EAST INDIA."

Anoop Chauhan

COO, Avvashya CCI Logistics, a subsidiary of Allcargo Logistics Ltd

Size of warehousing sector in India

As per projections by a ResearchandMarkets.com report, the value of the Indian Warehousing market was pegged at ₹676 billion in 2021. Going ahead, it is estimated to clock a CAGR of 9.1% during 2021-26. Estimates by real estate consultancy CBRE have stated that warehouse leasing which was pegged at 32 million sq. ft. (MSF) in 2019 is expected to grow to 100MSF over the next 3 years.

Demand drivers for warehousing in India

The Indian warehousing sector was scaling an exponential growth trajectory for a long time even before the outbreak of the Covid-19 pandemic. This was on account of supportive government policies and pro-industry interventions like the roll-out of Goods and Services Tax (GST) and 100% FDI to warehousing through the automatic route. The granting of infra status to logistics covering cold chain and warehousing facilities has driven significant investments in the setting up of logistics parks and free-trade warehousing zones (FTZs) in the country. The pandemic acted as a catalyst for accelerating the pace of growth for the warehousing sector in India. As the e-commerce sector in the country witnesses an unprecedented growth phase and consumers shift to online platforms in greater frequency and numbers, warehouses and fulfilment centers will play a crucial role in personalizing consumer experiences through speedier last-mile deliveries and enhanced value propositions. The unveiling of the 'Make in India' initiative to position India as a global manufacturing hub has uncorked a huge growth potential for the warehousing sector in the country. Along with manufacturing, the astounding growth potential demonstrated by sectors like pharmaceuticals, organized retail, healthcare and foods & beverages has driven the demand for specialized warehousing services and solutions.

Key trends in the warehousing sector

As we enter 2022, technology will transform the functional dynamics of warehousing. Even though India is largely a labor-intensive country, warehousing players will make it a priority to integrate new-age technologies like robotics and Artificial Intelligence (AI) into backend warehousing processes to boost operational efficiency and optimize resource utilization. Warehouses have a pivotal role to play in maintaining a sustainable supply chain. With an emphasis on reducing their carbon footprints, warehousing players will look to driving sustainability in warehousing operations by using green building materials and deploying energy efficient lighting techniques. The demand for multi-level warehouses within city limits or in-city warehousing is likely to rise tremendously as e-commerce players target same-day deliveries to customers.

Location of warehousing clusters across the country

In the post-pandemic phase, the warehousing sector in India is witnessing robust growth driven by the e-commerce boom. The major warehousing clusters in India are located in Maharashtra, Haryana, Chhattisgarh, Madhya Pradesh, Gujarat and West Bengal.

Future warehousing hotspots

The surge in e-commerce transactions during pandemic in the northeast India has made the region an emerging destination for warehousing service providers and 3PL players. After setting up warehousing facilities in Guwahati, Kolkata and Siliguri known as gateways to the fast-growing consumer markets in north east India, major warehousing players are expanding their operational footprints further into the smaller cities of northeast India. With e-commerce altering supply chain dynamics and unearthing new consumption centres, the Tier 2 and Tier 3 cities like Bhubaneswar, Kochi, Nagpur, Indore, Jaipur, Ludhiana, Lucknow, Ambala and Coimbatore are emerging as new warehousing hotspots.

Warehousing operations of Allcargo Logistics

We have a Pan-India network of state-of-the-art grade A warehousing facilities catering to specific requirements of our customers. Our warehousing facilities are conveniently located in proximity to major trade hubs and ensure a greater degree of operational efficiency across PAN India. Sizes of our A Grade WH vary from 5 Lakh Sq Ft to 1 Lakh Sq Ft, with similar presence & footprint across all the regions and key business hubs.

Expansion plans for warehousing

We are in the process of expanding our Pan-India warehousing footprint to 50 lakh sq ft by early FY22 and by FY25 we are targeting 85+ Lakh Sq ft. Currently the under-construction warehousing space of around 22 lakh sq ft is spread across the key warehousing hubs in Chennai, Mumbai, north India and east India. We have plans to expand our operations in Siliguri in West Bengal after strengthening our presence in Guwahati in Assam, Bhubaneswar in Odisha and Kolkata in Bengal.

How is technology helping to increase the efficiency of warehouses?

The integration of digital technologies into core operational processes will be crucial for warehouses to upscale their functionalities. Implementation of new-age technologies like robotics and AI have the potential to create synergies between critical processes and form technologically advanced warehousing models. A cloud-based Warehouse Management System (WMS) using software as a service (SaaS) can help in connecting and optimizing every aspect of the supply chain. Internet of Things (IoT) can facilitate real-time visibility across the supply chain for the customer right from the time the consignment leaves the warehouse till last-mile delivery. By helping to identify efficiency gaps and facilitate predictive analyses across the warehousing value chain, Big Data Analytics is boosting the functionalities of Warehouse Management.

"CENTRAL WAREHOUSING CORPORATION IS ON A TRAJECTORY TOWARDS ACHIEVING 300 LAKH MT (18 CR SQ FT) STORAGE CAPACITY FROM EXISTING 1.4 LAKH MT (8.5 CRORE SQ FT)."

Ajay Zadoo
General Manager, Regional Head - Andhra Pradesh and Telangana, Central Warehousing Corporation

Demand drivers for warehousing in India

The warehousing sector is expected to witness sustained growth despite occasional nudges from Covid 19 and its variants to the overall economy. The growth would be primarily fuelled by e-Commerce Companies; directly catering to needs of customers by closing last mile delivery gap. The growth of e-Commerce is giving rise to demand in warehousing in busiest commercial areas, residential areas and even making fast inroads into Tier II and Tier III cities.

The demand for Grade A warehousing would continue to rise due to higher adherence to safety and hygiene norms due to Covid 19 pandemic; and partly due to stricter implementation of Warehousing regulations by Warehousing Development and Regulatory Authority (WDRA).

Significant investments have been witnessed in last 05 years from global funds and private equity players who are partnering with local developers and logistic players. This has given a fillip to the Warehousing Industry, in terms of much needed capital influx and augmented the infrastructure. Further the much-needed recognition of the Warehousing Industry as an infrastructure sector has also provided the industry with better lending terms and rates resulting in creation of more capacity.

The cold storage has also been identified as a thrust area by the government to minimise post-harvest loss of horticulture products like fruits and vegetables. The infrastructure development projects of Mega Food Parks and Cold Chains are planned for both processing and storage of perishable commodities. This sector could see a big boost in near future.

Key trends in the warehousing sector

The warehousing and logistics sector is buzzing with new technology and trends. Major trends which have stimulated the warehousing sector are:

- Internet of Things (IoT) has coalesced and connected all the warehousing operations together. The data from IoT devices allows warehouses to track incoming inventory while enroute to plan storage, allocate and track manpower, locate items for delivery and record exit of shipments from Warehouse.

- RFID systems are very effective in real time tracking of goods and can provide precise location and contents of package in real time. Through tagging of packages, pallets, trucks etc these systems provide multi-lateral views of processes in the supply chain. Though the RFID has been very successful in e-Commerce and manufacturing sector, however its use has been very limited in bagged agricultural commodities.
- Warehouse Automation and AI has given a boost to productivity and efficiency. It has inherently reduced the human intervention in the Warehouse processes. The Warehousing Automation focuses on operations that can be mechanised and AI on predictive forecasting and route planning for the machines. The futuristic trends in this field are self-driven automated delivery trucks being loaded by robotic means in a fully automated remotely operated warehouse. On a small-scale, drones are already being used for last mile delivery.
- Closing of gap between customer and the warehouse has become a critical factor post covid 19. The term Omni Channel fulfilment has become an important factor in the logistics industry. The primary goal is to provide an easy way to shop for customers. Traditionally the burden of last mile connect with the product was that of the customer, but now this is being taken up by the retail logistics providers. Because of e-commerce and omnichannel trends, shipping methods for last mile delivery are being evolved and refined continually.
- In India, Logistics provides employment to 22 million people and a large majority of them are semi-skilled or with minimal education. The warehousing market alone in India is expected to grow from about $14.6 billion currently to $19.5 billion by 2025. Warehousing Industry labour is unorganised and are traditionally utilised for manual lifting and handling of cargo. In order to sustain the growth trajectory, it is critical to focus on skill development of the workforce of warehousing industry. The skill development programmes, their content, delivery and efficacy would also surely be a key trend in Warehousing.

Current location of warehousing clusters across the country

The Warehousing clusters are located in NCR, Maharashtra (Mumbai and Pune), Karnataka (Bengaluru), Tamil Nadu (Chennai), Telangana (Hyderabad), West Bengal (Kolkata) and Gujrat (Ahmedabad). Mumbai and NCR account for 60% of this market share and 35% of the overall space is Grade A Warehousing and balance 65% is Grade B.

Future hotspots for warehousing

There is immense demand for Grade A warehousing in the major Warehousing Clusters. Further, the Tier II cities like Vizag, Vijayawada, Chandigarh, Lucknow, Coimbatore, Surat and Nagpur are experiencing demand for Warehousing from e-Commerce sector and manufacturing industry. These cities would be next generation warehousing clusters, as the investment in Warehousing in these cities is on an upswing. These new clusters would have predominantly higher percentage of Grade A warehouse space available at cost effective rates.

What are your current warehousing requirements? Where are your warehouses located and what is the size?

Central Warehousing Corporation is on a trajectory towards achieving 300 Lakh MT (18 Cr sqft) storage capacity from existing 1.4 Lakh MT (8.5 Crore sqft). This is being achieved through intensive infrastructure development programme for our own capacity building. Further, the strategic alliances are also being executed to hire additional capacity.

CWC has 422 Warehouse locations across pan India; the average size of a single standard Warehouse unit is 30,000 sqft and each location consists of multiple units. The details of these warehouse locations are available on our corporate website cewacor.nic.in.

In the coming months is your warehousing requirement going to increase? If so in which locations are you planning to expand?

The post covid-19 boom is apparent in the Warehousing Sector too. The Hyderabad Region of Central Warehousing Corporation (CWC) comprises of Andhra Pradesh and Telangana States. In last one year alone in Hyderabad region; 10,76,391 sqft space of CWC has been hired by e-Commerce companies. The locations range from Tier I/II cities like Hyderabad, Vizag, Vijayawada to Tier III towns like Nandikotur (AP), Sarangapur (Telangana). The demand for hiring of e-Commerce is a regular phenomenon now, which was not the case earlier. Further, the requirement for storage of food grains and Agri-commodities is also on the rise owing to setting up of better irrigation facilities. In 2020-21, capacity of 1.2 Crore sqft comprising of 250+ locations were hired and managed by CWC in Telangana for storage of approximately 60 Lakh Fully Pressed Cotton bales of Cotton Corporation of India.

To cater for needs of the Agri-industry, e Commerce and Manufacturing industry, Hyderabad Region of CWC would be enhancing its existing capacity as follows:

Location	Capacity Addition in sqft	Date of Completion	Business Vertical
Nampally, Hyderabad, Telangana	60,000	May 2022	e-Commerce and Manufacturing Industry
Kedareshwarpet, Vijaywada, AP	75,000	Jan 2022	e-Commerce and Manufacturing Industry
Kadapa, AP	30,000	Feb 2022	Food grains deposited by FCI, state agencies and Farmers
Medak, Telangana	1,80,000	Plan being approved	e-Commerce, Manufacturing Industry and Food grains
Renigunta, AP	2,00,000	Plan being approved	e-Commerce and Manufacturing Industry

How is technology helping to increase the efficiency of warehouses?

With technology Warehousing operations are changing very rapidly. From classical labour and manpower intensive processes and systems, the warehouses are evolving and imbibing technology with alacrity. The introduction of Warehouse Management System has revolutionised the inventory management in the Warehouses; automatic update of stock levels, generation of incoming and outgoing receipts, billing and finally instantaneous transmission of inventory data has been its highlights. The Warehouse Management System reduces duplication of work at various levels, streamlining processes and also optimises warehouse layout. The introduction of apps which are mobile friendly has further integrated the process and data capturing takes place on the warehouse floor where the operations are taking place. Instantaneous availability of inventory data gives increased visibility throughout supply chain. Further it helps in demand forecasting, reduces costs due to efficient allocation of labour. The introduction of IR Code scanners, RFID scanners etc have boosted the efficiency of warehouse floor staff enabling instant capture of stock data. All these technology enablers finally translate to improved warehouse flexibility and responsiveness resulting in higher customer satisfaction levels and improved supplier relationships.

"WE ARE ACTIVELY LOOKING AT IN-CITY DISTRIBUTION, WE WOULD MOST PROBABLY EXPAND IN DELHI NCR, MUMBAI, AHMEDABAD, AND BENGALURU."

Prakrut Mehta
Director Leasing, ESR India

Size of the warehousing sector in India

In terms of warehousing real estate, current Grade A warehousing stock would be approximately 100 mn.sq. ft. According to Knight Frank's report, transactions for the top eight Indian cities (primary markets) will grow at a compound annual growth rate (CAGR) of 19 per cent to 76.2 mn sq. ft (7.08 mn sq. m) by financial year (FY) 2026 from 31.7 million sq. ft (2.95 million sq. m) in FY 2021.

Factors driving demand for warehousing

One of the primary factors driving this demand is the exponential growth in e-commerce expansion, the pandemic led to wider adoption of online shopping and grocery deliveries. E-commerce companies were compelled to look for bigger spaces to avoid stockouts. Tier 2 and 3 cities witnessed a major shift in warehousing absorption as e-commerce penetration increased and became categorised as essential services. Favourable policies, the introduction of GST pushed the sector even further and encouraged institutional developers to invest. Warehousing emerged as one of the most resilient asset classes post the pandemic which provided stable returns. Sectors like Pharma, FMCG, retail noticed a major surge in demand, most of the companies are taking their business online leading to an increase in demand for spaces.

Key trends in the warehousing sector

Warehousing has evolved, and India is still at a nascent stage. One of the key trends observed is the shift from Grade B to Grade A, as companies are inclined to adopt automation, increase efficiency, and consolidate their businesses. The warehousing sector was mostly dominated by local developers, however with increased institutional investments, scarcity of debt, increased construction costs, delay in timelines, there has been a shift from tenants preferring institutional developers for built-to-suit warehouses. They offer a seamless experience to scale across regions and bring in a wealth of global development and property management expertise. Adhering to stringent ESG policies, developing green buildings is the need of the hour, most institutional developers are only constructing green buildings that create value long term, is better for the environment, as well as save operating costs for tenants. In-city distribution with multi-level warehouses is gaining prominence, as e-commerce companies are constantly optimising delivery timelines and aiming for same-day delivery. The current in-city facilities are archaic and need to be upgraded to Grade A standards, since land is scarce and expensive, multi-level warehousing is the way to go.

In which states across the country warehousing clusters are located?

Clusters are located mainly in the peripheries of major cities located in Maharashtra, Gujarat, Punjab, UP, Delhi, Haryana, Tamil Nadu, Karnataka, Telangana, and West Bengal.

Future hotspots for warehousing

Select tier 2 cities will see the next stage of expansions, mainly Lucknow, Ludhiana, Nagpur, Bhubaneswar, Coimbatore, and Guwahati.

Tell us about your current warehousing infrastructure? Where are your warehouses located and what is the size?

In India, we are present in 9 cities, 15 locations, and we have a total GFA of 18. mn. sq. Ft. Our APAC footprint is 243 mn. sq. ft. spread across 8 countries. We service a multitude of sectors for their warehousing and industrial requirements. Mainly, e-commerce, 3PL, retail, auto and auto ancillary, FMCG, FMCD, Pharma, construction, and renewable energy.

There is a pent-up demand for industrial warehousing, which had slowed down during the pandemic. There is also a surge in demand from retail, auto and auto ancillary, FMCG and renewable energy sectors. It has been a momentous year for leasing and the market is currently bullish, and we expect this impetus to continue till the mid of next year.

In which locations are you planning to expand?

We are actively looking at in-city distribution, we would most probably expand in Delhi NCR, Mumbai, Ahmedabad, and Bengaluru.

How is technology helping to increase the efficiency of warehouses?

Technology has been a game-changer and has brought a radical shift to how warehouses are managed. Adoption of artificial intelligence, robotics, automation, and digitisation has led to increased efficiency, increased warehouse safety, minimised errors, optimised time and increased customer satisfaction. Our warehouses are designed for the future, they are FM2 compliant, designed as per NBC norms for fire safety and is equipped for implementation of automation. Though it might come at an increased cost to automate warehouses, due to the higher efficiency and savings in running costs, the automated warehouse can pay for itself after some time.

ESR India has launched an app for the digital management of our parks. Through this app, we have implemented digital entry into our parks with health declarations. We have facilitated a 2 click incident reporting with an escalation matrix if not addressed, live views of our parks and buildings, advanced anomaly detection through AI-enabled cameras for enhanced security.

MUMBAI
ESR Bhiwandi 1 – 43 Acres – 1.3 MN SQ. FT.
ESR Bhiwandi 2 – 49 Acres – 1 MN SQ. FT.
ESR Lodha – 88 Acres – 1.9 MN SQ. FT.

PUNE
ESR Chakan 1 – 53 Acres – 1.3 MN SQ. FT.
ESR Chakan 2 – 36 Acres – 1 MN SQ. FT.
ESR Global Ranjangaon 1 – 25 Acres – 0.6 MN SQ. FT.
ESR Global Ranjangaon 2 – 18 Acres – 0.4 MN SQ. FT.

DELHI NCR
ESR Sohna Road – 76.4 Acres – 1.7 MN SQ. FT.
ESR Jhajjar – 21 Acres – 0.5 MN SQ. FT.

KOLKATA
ESR Uluberia – 58 Acres – 1.5 MN SQ. FT.
ESR Uluberia – 35 Acres – 0.7 MN SQ. FT.

NAGPUR
ESR Nagpur 1 – 55 Acres – 0.8 MN SQ. FT.

RAJPURA
ESR Rajpura – 22 Acres – 0.5 MN SQ. FT.

CHENNAI
ESR Oragadam – 80 Acres – 1.7 MN SQ. FT.

BENGALURU
ESR Hoskote 1 – Coming Soon

HYDERABAD
ESR-GMR Shamshabad – 66 Acres – 1.6 MN SQ. FT.

AHMEDABAD
ESR Jalisana – 37 Acres – 1 MN SQ. FT.

"OUTSOURCING LOGISTICS WILL CONTINUE TO REMAIN ONE OF THE KEY TRENDS IN THE WAREHOUSING SECTOR AS TAXES HAVE BEEN REORGANIZED. WAREHOUSES ARE COMING CLOSER TO THE CONSUMPTION POINTS."

Vikas Choudaha
SVP and BU Head,
Godrej Storage Solutions

Key trends in the warehousing sector

Outsourcing logistics will continue to remain one of the key trends in the warehousing sector as taxes have been reorganized. Reorganisation of supply chain started with GST implementation and warehouses are coming closer to the consumption points. Share of Grade A and Grade B warehouses will grow more as demand from customers will go up for better efficiency and quality of services.

In which states across the country warehousing clusters are located?

The seven primary markets of warehousing in India are Delhi-NCR, Mumbai, Bangalore, Chennai, Kolkata, Pune and Hyderabad. The other markets where warehouses are emerging are Ahmedabad, Guwahati, Lucknow-Kanpur twin city, Coimbatore, Patna, Bhubaneshwar, Nagpur, Chandigarh, Indore, Jaipur, Vijayawada and Vizag.

Due to the rapid rise of e-commerce and doorstep delivery services across the country this year, the warehousing clusters in India have spread across the nation notably concentrated in the tier 1 and tier 2 cities in the states of the primary markets.

Future hotspots for warehousing

As far as the newer hotspots are concerned, cities like Ahmedabad, Guwahati, Lucknow-Kanpur twin city, Coimbatore, Patna, Bhubaneshwar, Nagpur, Chandigarh, Indore, Jaipur, Vijayawada and Vizag are the emerging new markets that look promising hotspots in future for the warehousing sector.

"WE ARE FOCUSED ON BUILDING CAPACITY AT STRATEGIC LOCATIONS BEFORE DEMAND. THESE CAPACITIES WILL BE GRADE A, LARGE 'BUILT TO SUIT' MULTI-USER WAREHOUSES. IN LAST 12-18 MONTHS WE HAVE CONTRACTED CLOSE TO 5 MILLION SFT SPACE."

Sushil Rathi
Chief Operating Officer - MLL Transportation & Procurement

In which states across the country warehousing clusters of MLL are located?

MLL continues to expand its warehousing capacity and is focused on tapping the huge potential in warehousing spaces across the country. Our focus on solutions has helped us grow our warehousing and value-added services. Historically, we have added around 1 - 1.5 million sq. ft. of warehousing space each year. Now, as a part of our strategy we are focused on building capacity at strategic locations before demand. These capacities will be Grade A, large 'Built to Suit' multi-user warehouses. In last 12-18 months we have contracted close to 5 million sft space in Chennai, Hyderabad, Guwahati, Kolkata, Pune, NCR and Mumbai/Thane etc

We see technology playing a key role in providing visibility and transparency and optimizing supply chains of our customers. We will see integration of autonomous technology that will go beyond warehouse and last-mile delivery solutions, to expand into inbound logistics, long-haul transportation, and cross docking. The future holds great promise for technologies like Blockchain, Drones, IoT, Robotics and Big data Analytics. At Mahindra Logistics, we have undertaken several pilot projects involving Drones, IoT devices, etc. and we intend to convert these pilots to full scale deployments across our customer sites.

In which locations PAN India do you see demand for warehousing coming up? Which will be the future hotspots for warehousing?

At Mahindra Logistics we foresee demand growing not only in Tier 1 cities but spreading to Tier 2 and 3 cities already. Customers are looking to contract a 3PL service provider who can offer pan India footprint coupled with distribution capabilities. We intent to commission about 4 mn sq. ft. of 'Built-To-Suit' warehousing capacity at strategic locations in current fiscal and an overall 12-15 mn sq ft space addition in the next five years.

In the coming months is your warehousing requirement going to increase?

Going forward, we foresee an increased adoption of large format, multiuser and compliant warehouses. We also anticipate a higher level of automation in warehousing operations. Customers are looking to contract 3PL service providers who can offer pan India footprints coupled with distribution capabilities.

We are also expanding our temperature-controlled warehousing infrastructure. We think essential services are moving a lot more onto multiple platforms. We're investing more in warehousing because we think that warehousing platform growth will continue to be there and it's how we fulfil demand in many ways.

Tell us about the use of technology/ automation in your warehouses?

We continue to invest in latest technologies that can help the business to accelerate. There is a need to continue the adoption of technology, from data analytics to automation, which will in turn help reduce the costs and improve efficiency.

The company has created a warehouse management system that has end to end visibility of the warehouse operations using paperless hand-held terminals (HHT)based operations. With real time visibility of inbound operations (Gate-In, goods received note a.k.a. GRN, a system guided Put away) and real time order processing (Order status, system guided HHT based picking, loading) coupled with Real-time inventory information (days of inventory, ageing) will lead to improved efficiencies in warehousing operations.

Additionally, facial recognition-based attendance systems have also been implemented for all warehouse and production line workforce. It gives real-time info of resources available at each site, their total working hours etc.

We have also invested in warehouse automation for the sort centre operations for ecommerce giving us capabilities to process over 5 lakh pieces a day.

"TVS SUPPLY CHAIN SOLUTIONS OPERATES MORE THAN 10 MN SQ. FT WAREHOUSING SPACE IN INDIA COVERING 29 STATES. THE PRESENCE ALSO COVERS TERRITORIES LIKE J&K AND NESA."

R. Shankar
Executive Director,
TVS Supply Chain Solutions

Key trends in the warehousing sector

Post GST, consolidation of warehousing is the trend seen in the industry which also led to Shift from Unorganized to Organized warehousing. Hub and Spoke Model became prevalent in the industry which brought the trend like consolidation, strategically located warehouses, leaner & efficient and technologically driven warehouses.

Increasing participation of international players with substantial capital investments in warehousing infrastructure. Post GST, there has been the increased attraction of foreign capital. On the other hand, demand for a better quality of storage space has been growing significantly alongside growth in signing long-term contracts showing commitment and stability in the Warehousing sector.

Customer preferences have been shifting—they have begun to treat supply chain and logistics not only as a cost centre but also as a differentiator. They are more willing to invest in supply chain digitization (GST and e-way bill have made the prospect of digitization more real), optimize the supply chain through network redesign, better forecasting, warehouse consolidation, etc. to improve operational efficiency and productivity, and cut logistics costs.

Demand for a better quality of storage space has been growing significantly alongside growth in signing long-term contracts showing commitment and stability in the Warehousing sector.

Location of warehousing clusters

Top 8 cities (NCR, Mumbai, Bengaluru, Pune, Kolkata, Chennai, Hyderabad Ahmedabad) contribute to 65% of modern warehouse supply in India. Concentration has skewed towards these locations due to higher industrial activities and presence of urban population.

Manufacturing plays a critical role in driving demand in Chennai & Pune while consumer sectors are drivers in Ahmedabad, Bengaluru, Mumbai, Hyderabad, Kolkata & NCR.

Post GST consolidation favoured large warehouses across these locations but disruption due to Covid 19 has hampered the progress.

Where are your warehouses located and what is the size?

TVS SCS is an Indian MNC with integrated and customised end-to-end service offerings. It operates more than 10 mn Sq. ft warehousing space in India covering 29 states. The presence also covers territories like J&K and NESA.

TVS SCS has planned its warehousing network across all the critical warehousing locations covering key manufacturing / consumption locations. Customer's preference is also taken into consideration while planning a dedicated warehousing set up. Network thus created is available to serve multiple sectors but customization do take place looking at the industry/ customer specific needs.

Recently the focus has been on the consolidation of warehousing facilities to offer multiuser and state of art facilities to the customers and creating technology as a backbone for on ground operations.

In which locations are you planning to expand?

Every year business expansion leads to addition of warehousing capacity as well. Strong warehousing network and capability is TVS SCS's forte. With Pan India coverage already, the focus now has been on creating multiuser facility by consolidating existing space and also creating capacity to offer a ready product to the customer which is combination of storage space, process framework, trained manpower and integrated IT systems.

"SINCE 34+ YEARS, WE HAVE BEEN PRESERVING SEEDS IN COLD STORAGE. BEYOND HYDERABAD WE HAVE PLANS TO EXPAND IN MUMBAI, BANGALORE AND VISAKHAPATNAM. BY MARCH 2022, WE WILL START OPERATIONS FOR AMBIENT PHARMA FACILITIES AS WELL."

Gubba Kiran
CEO, Gubba Cold Storage

Tell us about the cold storage operations of Gubba Group?

Gubba Group is a 34+ year old organization situated in Hyderabad, having its operations run through all over Telangana and Aurangabad. In 1987, Gubba become the pioneer by altering the view of India's vision with respect to preservation by establishing the first and back then, the only cold storage in Andhra Pradesh. Initially, Gubba started with 500 tons. With expanding further till date we have 18 facilities, one Seed Quality Testing lab, one Biotech lab and the only private company that has ventured into multi-location trials (MLT) operating all throughout India. As on date, we have invested a gross amount of ₹150 crore into serving the Seed, Pharma & Food industry. Today, we stand at 1,25,000 tons and 1.35 crore cubic feet capacity. We are proud of many 1st in our cap.

- 1st Seed Cold Storage in India
- 1st Jumbo Cold Storage in India
- 1st Private Germ Plasm Bank in India
- The only NABL accredited private seed quality testing lab in India
- 2nd largest pharma complaint cold storage facility in India
- Gubba Biotech lab – Precision and excellence in testing at molecular level
- Gubba multi-location trials – The only one in India undertaking MLT for public and private entities to produce unbiased results.
- Interestingly, Gubba has all its 18 facilities named after its locational site. This is done in the context to connect and highlight the strategic reason behind selecting that particular location – to benefit the clients.
- In Hyderabad – we have a total capacity of 1,22,500 MT (Metric tons) and in Aurangabad our capacity sizes up to 6,000 MT

In the near future what investments are you planning into cold storage? Which are the locations you are looking at?

In the near future, Gubba sets its eyes on being the lifeline of Indian Agriculture. Since 34+ years, we have been preserving the seed in cold storage facilities. Since 4+ years, we expanded our wings to serve the Indian Seed Industry and launched our Seed Quality Testing lab and Gubba Biotech Lab. Our germplasm bank which preserves years of research of companies can securely store the seeds up to 4 generations. Our dedicated team at Gubba, after working with seed companies closely over so many years understood one major pain point of the seed companies – Multi-Location trails, which demands a lot of time and resources and shifts the focus from their core work. To solve this, Gubba, with its motto to go any mile to serve the client with commitment, became the first and only private 3rd party outsourcing MLT in India. Our trained, qualified and experienced MLT team operates all throughout India. Any location that client desires, we give our word to serve them there. We are not limited to vegetable and filed crops, we shall be testing biologics as well. Having such intense connection with seed, we see a vision for our self to be the lifeline of Indian seed industry. Coming to food, we are shortly showing our foot prints beyond Hyderabad. Prime locations have been finalised and soon we shall serve Mumbai, Bangalore and Visakhapatnam. By March 2022, we will start operations for ambient pharma facilities, altering the traditional thinking of pharma companies to preserve in-house and invite them to preserve at Gubba – with a promise to provide them world class infrastructure and apex technologies.

Which industrial sectors are largely using your warehousing operations?

Seed, Pharma and frozen food are the industries that have been using the warehouse services largely. Gubba is at present serving 850+ clients in the mentioned 3 verticals. However, our major clients belong to seed – for, seed has been our core business for 34 years now. For the commitment and quality of service we provide – we have been making loyal clients since the beginning.

Tell us about the use of technology and automation in your warehouses?

Gubba has always set its priority in investing in world class technology and infrastructure for the clients. Keeping that in mind, after intense research, we have integrated an android application – "Gubba App" where our client can, any minute log in with his unique credentials and monitor the temperature and RH of his products stored in the warehouse. Apart from this, below are the pointers to summarize our technology advancements:

- Upgraded EOT crane operations for efficiently handling up to 2 ton jumbo bags.
- Motion sensors for entry and exit in chambers to maintain temperature integrity.
- Emergency fire exits in every chamber. 24*7 CCTV surveillance camera to monitor the operations from the office room
- Advanced MHE operations by trained forklift operators certified by Godrej.
- Motion sensing doors for -20° temperature maintenance
- Robotic Sleeve operations for safe handling of pallets in the racking system.
- Enterprise resource planning (ERP) enabled operations.
- We are coming up with a bar coding system to have utmost accuracy in inventory.
- Our docking will be soon streamed live such that clients can have an access to watch the operations via the comfort of one click on a smart phone.
- Our facilities are certified by WHO-GDP, HACCP, ISO, NABL etc.

What is the size of cold storage market in India? How much of it is organised?

As on March 2021, we have close to 8,200 cold storages across India. Most out of these, deal with agri-commodities and are traditionally managed. Hence, they are restricted in technology and upgradation, this leads to lesser reliability on operations. Talking of the organized cold chain sector, the number of facilities that make it to this category can literally be counted on fingers. On top of that, facilities are not evenly distributed. Most of them are located in the prime locations of the country (businesswise) as the industry is dominated by private players. Gubba is one such organization that keenly believes in structures, systems, technology and research. We believe in transparency and provide our client to trace his stock right from unloading to storage and transporting.