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FREIGHT FROSTY: REVAMPING THE BIG CHILL FILMENT





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CONTENTS

VOLUME XIII ISSUE I
DECEMBER 2021

COVER STORY

Freight Frosty: Revamping the Big Chill Fulfilment

26

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FEATURE

- Jumping the barriers to better Air Logistics Management 58
- Cargo development programmes put India's Air Freight sector into overdrive 64
- Are multimodal logistics parks heralding an Integrated Transport + Infra policy 72
- D2C model and where homegrown platforms stand today 78
- Durables Supply Chain on the pathway to value creation 82
- The march towards Dark Fulfilment centres 86

SHIPPER SPEAKS

- BHARAT BHUSHAN RATHI**, Head of Logistics
Mankind Pharma 102

REGULARS

- FRONTLINE 6
- TRENDING TALK 08
- GLORIOUS THROUGHOUT 10
- INNOVATIVE BREAKTHROUGH 14
- THE LOGISTICS HAVEN 18
- TALKING TECHNOLOGICALLY 88
- ARCHITECTURE OF THE IMAGINATION 90
- NEWS 104
- APPOINTMENTS 108
- PEOPLE CONNECT 110



SPECIAL FEATURE

- A full-cycle approach to ordering, pick-up and delivery 50



FOCUS

- Logistics of tomorrow need solutions to articulate value proposition 20

INTERVIEW

- RAJESH SHAH**, Executive Director, V-Trans (India)
(Special Incharge, V-Logis) 94
- SANDEEP CHADHA**, Co-founder and CEO,
Sameera Warehousing 96
- AKASH BANSAL**, Country Head, Om Logistics 98

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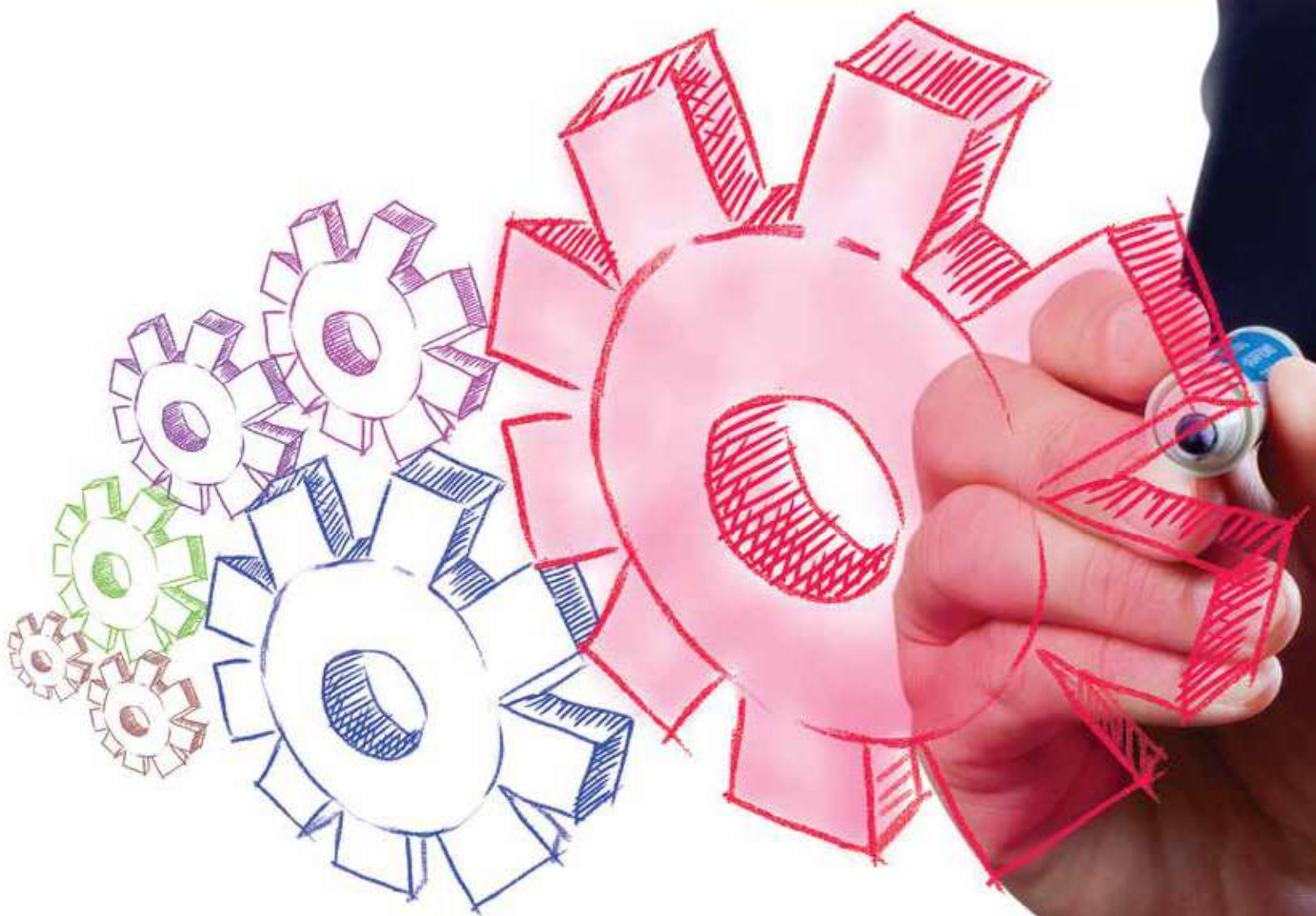
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DID YOU KNOW

Boeing forecasts 1,720 freighter conversions will be needed over the next 20 years to meet demand. Of those, 1,200 will be standard-body conversions, with nearly 20 per cent of that demand coming from European carriers, and 30 per cent coming from North America and Latin America.



India and its long-standing partner Japan have joined hands for infrastructure development in India's Northeastern states and are also **setting up an India-Japan Coordination Forum for Development of Northeast** to undertake strategic infrastructure projects for the region.

In logistics, customers are paying more and more attention to their own CO₂ emissions. The goal is to measure the CO₂ footprint as precisely as possible at the shipment level so that it can then be offset. However, current tools only provide CO₂ unit values based on weight and distance. This makes the emissions an estimate.

The government recently released the **annual Logistics Ease Across Different States (LEADS) report for 2021**, which **ranked Gujarat at the top, followed by Haryana, and Punjab, while Bihar, Himachal Pradesh, and Assam ranked at the bottom.** Within UTs, **Delhi secured the first position.** Relative to the rankings in LEADS 2019, Uttar Pradesh, Uttarakhand, and Jharkhand have emerged as the top improvers.

Over the past year, **Cainiao has been active in building an international supply chain and launching direct routes to major markets around the world even faster than Amazon.** In the meantime, **it aims to establish end-to-end logistics businesses in Japan and South Korea,** handle shipments from importers and exporters that are not sold on the platform, and **become a comprehensive third-party logistics provider.**



“Whether it is lifestyle, or medicines, or medical technology, or vaccines, every aspect of healthcare has received global attention over the last two years. In this context, the Indian pharmaceutical industry has also risen to the challenge. The global trust earned by the Indian healthcare sector has led to India being called the ‘pharmacy of the world in recent times’. Today, when 1.3 billion people of India have taken it upon themselves to make India Aatmanirbhar, we must think about ramping up domestic manufacturing of key ingredients for vaccines and medicines. This is one frontier that India has to conquer.”

Narendra Modi, Prime Minister of India



“We exported 8,000 tonne oranges last year. This year, we target to increase it to 1 lakh tonne. Now, we don't need to send them to JNPT, Mumbai, before exporting. From dry port started at Wardha, goods can be transported to Haldia port to Pangaon port and Dakha. I have plans to export cotton and yarn in huge quantum from Vidarbha. Similarly, I have plans to export cotton and yarn in huge quantum from Vidarbha this year. There is huge demand of cotton and yarn. Now, scenario is changing. Nagpur is having good infrastructure now. Soon the city will become capital of logistics.”

Nitin Gadkari, Minister for Road Transport and Highways



“The real estate sector plays a multiplier effect in the development of the economy and the ecosystem of the country. The sector is expected to reach a market size of USD 1 trillion and contribute 18-20 per cent of the country's GDP by 2030. The Securities and Exchange Board of India (Sebi) has already given its approval for Real Estate Investment Trusts (REITs), which will create an opportunity worth ₹1.25 lakh crore in the coming years. Make in India and India's growing might as a digital economy has spurred our warehousing and industrial segments. As we move ahead, technology will be a key game changer.”

Amitabh Kant, CEO, Niti Aayog



“While many of the economies that have announced a net zero have peaked much earlier, we are yet to peak; we are yet to reach that level of industrial activity in development...If you see the time lag between peaking and the timeline between net zero for many countries, clearly ours is possibly among the shortest. We are essentially a developing country. We constitute 17 per cent of the world's population. Yet, we contribute only 5 per cent to global emissions and yet we are contributing very readily through the entire overall issue of climate change because we believe in it.”

Harsh Vardhan Shringla, Foreign Secretary of India



“We will be setting up 20 micro fulfilment centres in two years, which will have a footprint in the range of 10,000-75,000 square feet and we are exploring a model for setting nano-fulfilment centres which will have an area of 2,000-5,000 square feet. The Indian e-commerce industry offers promising opportunity and we are addressing the key challenges related to logistics and inventory. Our first customers are from the automotive and personal care verticals who have taken the lead against competition by partnering with XPDEL. We will also be contributing significantly in employment generation.”

Ashish Chadha, Co-founder and CEO, XPDEL-APAC

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FACTORS ENABLING INDIA'S RENEWED TRADE GROWTH MOMENTUM

The past few years have seen a steady decline in Asia's share in India's export basket accompa-

nied by an increase in trade with countries in the west. This is likely because India is pulling away from trade partnerships in the east and looking to establish new trade relations in relatively under-tapped markets in

western countries.

The Indian government withdrew from the Asia-Pacific Regional Comprehensive Economic Partnership (RCEP) in November 2019 due to the assessment that Indian exports were not flourishing to the region despite reduced non-tariff bar-

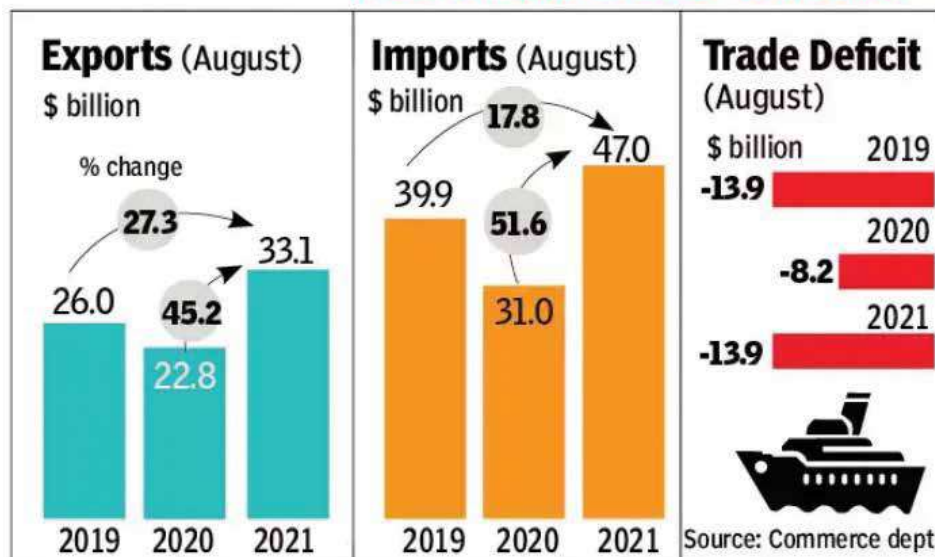
riers (NTB) as ASEAN nations and India offer similar labor-intensive products in their export basket.

There has also been a shift in the approach towards global trade as India looks to build up trade exposure with western countries, a somewhat interesting development following geopolitical events like the US-China trade war, recent Australia-China trade tensions, and BREXIT. Free trade agreement (FTA) negotiations are currently ongoing or planned to start in 2021 with the UK, European Union (EU), USA, Australia, and UAE. Both, the EU and UK are keen to re-establish their credentials as strong trade partners to India — eyeing its large consumption market and growing disposable incomes besides wanting to expand sourcing destinations.

Incentive schemes

The government remains supportive of incentive schemes. However, it has

PACE IN LINE WITH EXPORTS TARGET



INDIA'S FOREIGN TRADE POLICY

Once again postponed from October 2021 to March 2022, the next Foreign Trade Policy (FTP) (following FTP 2015-20) wants to grow India's annual good and services exports to over US\$1 trillion by FY 2026-27.

The new FTP is much awaited as it will offer government-supported strategies to cash in on the expected rebound in global economic growth.

Key objectives will include ensuring India's greater integration with the global supply chain and reducing logistics costs.

been working to revamp existing export schemes so they are in sync with WTO stipulations.

The Service Exports from India Scheme (SEIS) is expected to be revamped with a wider coverage of businesses, offering exporters Duty Credit Scrips (DCS) at five to seven per cent of the net foreign exchange earned.

For merchandise exporters, Remission of Duties and Taxes on Exported Products (RoDTEP) is expected to be a part of the new FTP, which offers reimbursement of central, state, and local taxes/duties. It replaces the previous Merchandise Export from India Scheme (MEIS), which was not compliant with WTO rules.

Currently, negotiations are underway to expand the beneficiaries of RoDTEP. This is because there

has been much disappointment among industry and trade stakeholders (and are key to the country's export base) who have been left out of the remit of the new RoDTEP scheme, such as pharmaceutical, steel, and chemical industries; export-oriented units (including bio-technology parks and electronic hardware technology parks); Special Economic Zones (SEZs); Free Trade Warehousing Zones (FTWzs) and custom bonded warehouses operating under the Manufacturing and Other Operations in Warehousing Regulations, etc.

Another trade promotional scheme is the Export Promotion Capital Goods (EPCG), which facilitates the import of capital goods for manufacturing to augment the competitiveness of India's exports.

Bilateral trade pacts

Following its withdrawal from the RCEP, India is actively working to forge new trade partnerships with other countries.

India has launched negotiations with the UAE, aiming to conclude trade talks and sign a mutually beneficial Comprehensive Economic Partnership Agreement (CEPA) by March 2022. The CEPA deal aims to improve bilateral economic relations, expand existing trade and investment relations, and could be a stepping-stone to expanding India's trade ties with the UAE's neighboring Gulf countries – presently dominated by energy items.

Progress is also being made around an India-EU free trade agreement as negotiations resumed after an eight-year halt. Political convergence on key regional and global issues provides back-

ground support as formal talks on two key pacts on investment protection and geographical indications began in September.

Meanwhile, India-UK talks are set to enter a new stage in November, with hopes to reach an Interim Agreement by March 2022, followed by a Comprehensive Agreement.

While it seems that foreign trade is on path to recovery, COVID-19 has certainly affected the ambitions of countries worldwide. The pandemic necessitated national spending to boost exports and foreign trade, but that has stretch government budgets thin, including India's.

Even prior to the pandemic, India faced massive capital requirements to improve infrastructure, R&D, logistics, etc. to establish a

Expanding trade flow, Diversifying tradable

Experts predicted foreign trade to bounce back in FY 2021-22. Now in Q3 FY 2021-22, recovery is afoot with exports growing to US\$33.1 billion in August, 45 percent higher than this period last year. Since the beginning of the current financial year, exports have amounted to an estimated US\$163 billion. The target for exports for the current financial year is set at US\$400 billion, and one India is set to achieve.

According to India's Minister for Commerce and Industry, Piyush Goyal, last year, India's services export was



We would like both services and goods exports to compete with each other and together reach the **US\$2 trillion** mark

PIYUSH GOYAL
Union Minister for
Commerce and Industry

US\$194 billion, and goods were US\$290 billion. He was quoted saying to the Economic Times, "We would like both services and goods exports to compete with each other and together reach the US\$2 trillion mark."

Goyal emphasised that the export target for the textiles sector was US\$44 billion. He also brought attention to the fact that India is trying to diversify its trade portfolio; cotton and cotton-based textiles dominate Indian exports, but work is underway to shift to man-made fiber and technical textiles, which now dominate international textiles trade.

In a related development, India recently unveiled its Production-Linked Incentive (PLI) scheme for these segments in the textiles sector. This illustrates the government's broad thinking and linkages between manufacturing aspirations and trade opportunities.

Meanwhile, to gauge India's recent positive trade performance despite the pandemic, it must be noted that a major proportion of the increase in exports is attributed to shipments of petrol and diesel. Official data showed the export of petroleum products was up by 139 per cent in August to US\$4.6 billion – driven by a spike in global prices, compared to an increase in non-oil exports by 36.6 per cent to US\$28.6 billion.

competitive advantage over Asian and global rivals. Consequently, it has liberalised market access and since last year, launched sector-specific incentive (PLI) programs to develop industrial ecosystems around key product segments.

India's government has its priorities well laid out and plans to work consistently on removing long-standing obstacles to boost jobs creation, trade growth in services and merchandise, and privatisation through investment facilitation. **CC**

Warehousing and logistics emerged as the most preferred real-estate asset class for institutional investors, pipping the all-time favourite commercial office segment for the

₹10,100 crore) attracted during the second quarter.

The flurry of investments in warehousing helped attract such a massive financial pouring to India's commercial real-estate market during Q2 2021, making it the most active second quarter in the last five years. Of the total, warehousing accounted for 55 per cent, followed by 20

Goods and Service Tax (GST) in 2017, the segment grew exponentially. Between 2017 to H1 2021, it attracted a record US\$2.14 billion, or roughly ₹16,000 crore.

Investments in April-June 2021 are the highest received by the segment in any

INVESTORS AND DEVELOPERS FLOCK TO 'INDIAN WAREHOUSE DEALS'

first time during April-June 2021. The segment attracted an all-time high of US\$743 million (more than ₹5,500 crore) in investments, accounting for more than half of the US\$1.36 billion (over

per cent in retail, 17 per cent in office and 8 per cent in residential, real-estate and investment management services firm JLL India said.

The consultancy attributed the rise in warehousing to the increasing shift towards online shopping from discretionary to essentials. "Major global funds have invested with warehousing developers and operators as scale and regional footprint are key differentiators in the sector," it said.

Data suggests, between 2005-2016, warehousing and logistics attracted around US\$100 million. There were a few other deals, which have not been reported publicly due to joint ventures or deals by investment platforms. However, after the introduction of the

quarter of a calendar year since 2005, which is mainly attributable to the US\$700 million Blackstone deal. In May, Blackstone announced acquisition of Embassy Industrial Parks, a JV of Warburg Pincus and Embassy that controls 22 million sq ft of Grade A warehousing in major industrial hubs including Bangalore and Delhi.

Besides, 2021 marked the rise of defensive sectors in real-estate like warehousing and logistics and data centres.

Property consultant Knight Frank said that annual warehousing deals for the top 8 Indian cities will log a compounded annual growth rate of 19 per cent to 76.2 million sq ft by FY26.

As per projections, for the next five years, between FY22 and FY26, e-commerce segment was expected to take up significant space estimated to be 98 million sq ft approximately,

registering an increase of 165 per cent from the preceding period of FY 2017-2021 while third-party logistics and other sectors were expected to consume 56 per cent and 43 per cent more space respectively over the same period, underlined the latest India Warehousing Market Report 2021 by Knight Frank.

However, in FY 2021, the warehousing transactions in these cities (NCR, Mumbai, Bengaluru, Chennai, Kolkata, Ahmedabad, Pune and Hyderabad) registered a 23 per cent year-on-year decline to 31.7 million sq ft on account of the pandemic-caused lockdowns, adverse impact on economic activities and occupier decisions.

The industry has been gaining steady traction for years, but the sector has emerged as the biggest beneficiary during recent COVID-19 pandemic. The supply chain is being rede-





ANNUAL WAREHOUSING TRANSACTIONS

Warehousing leasing City	FY 2021 in mn sqm (mn sqft)	Change FY 2021 YoY	CAGR FY 2017-2021
NCR	0.6 (6.9)	-20%	25%
Mumbai	0.5 (5.8)	-23%	39%
Bangalore	0.4 (4.3)	0%	35%
Chennai	0.3 (3.5)	4%	17%
Kolkata	0.3 (3.1)	-22%	23%
Ahmedabad	0.3 (3)	-42%	14%
Pune	0.3 (2.8)	-42%	9%
Hyderabad	0.2 (2.4)	-30%	18%
Total	2.9 (31.7)	-23%	23%

Source: Knight Frank Research

signed to manage orders faster and for which the warehousing sector plays an important role.

At the moment, financial institutes are lining up investment for developers to set up warehouses.

For instance, World Bank Group member IFC has extended debt support of US\$75 million to IndoSpace's logistics fund to develop logistics and industrial parks with an objective to enhance warehousing and supply chain infrastructure in India. The development financial institution is extending the loan to IndoSpace Logistics Parks-III, a US\$580 million vintage fund, and the first tranche of this amount has already been disbursed to IndoSpace. IFC's investment is expected to help IndoSpace expand and lease warehouse spaces to e-commerce players and online retailers in the country to meet their growing demand

for storage sheds. The first investment from this loan will help the company build a warehouse in Luhari-III, a site with connectivity to Gurugram (Haryana), Delhi, and other key areas in North India.

One of Asia's largest diversified real-estate groups, CapitaLand launched 'CapitaLand India Logistics Fund II', its second logistics private fund of US\$400 million (₹22.5 billion) to expand in India's warehousing sector. CapitaLand India Logistics Fund II will

pur, Kolkata and Lucknow. The new fund follows the deployment of its first logistics fund, the US\$400 million Ascendas India Logistics Programme, which was launched in 2018 to develop six projects in Bengaluru, Chennai, NCR and Pune. In total, CapitaLand targets to develop a logistics portfolio of 20 to 25 million sq ft of space in India by 2025. Ascendas-Firstspace manages the assets of Ascendas India Logistics Programme and CapitaLand India Logistics Fund II.

By consolidating the warehousing market, key developers like IndoSpace

sectors, such as automotive, engineering, electric vehicles, e-commerce, and FMCG. Offering Grade A infrastructure, it is the only world-class warehousing and industrial facility of this scale in Bengaluru, spread over 64 acre. Moreover, the company has announced plans to add four million sq ft of warehousing space by the end of 2021.

APAC focussed industrial and logistics real-estate platform, ESR India will add 44 acre to its existing park in Oragadam in Chennai, Tamil Nadu by investing an additional Rs 260 crore for construction and

As per projections, for the next five years, between FY22 and FY26, e-commerce segment was expected to take up significant space estimated to be 98 million sq ft approximately, registering an increase of 165 per cent from the preceding period of FY 2017-2021.

invest in the development of logistics assets in key warehousing and manufacturing hubs in six major cities namely National Capital Region (NCR), Mumbai, Ahmedabad, Bangalore, Chennai, Pune as well as in emerging markets such as Coimbatore, Guwahati, Jai-

are venturing into prominent clusters with land acquisitions for Greenfield projects. Recently, IndoSpace launched a new industrial and logistics park in Narasapura, near Bengaluru, Karnataka, to cater to the warehousing requirements of companies across

development. This expansion will consolidate ESR Oragadam to become an 80 acre park. Additionally, ESR India has signed an agreement with the Tamil Nadu government to develop two industrial parks with an estimated investment of ₹550 crore. ESR India will also

invest about ₹300 crore to develop an industrial and logistics park in Jalisana, an emerging industrial hub of North Gujarat as part of its expansion plan.

US private equity giant Warburg Pincus-backed Stellar Value Chain Solutions—a leading consumer supply chain services firm, has launched one million sq ft of warehousing facilities in Hosur, Tamil Nadu and Banur, Punjab. Each warehouse, spread over 500,000 sq ft, will offer fulfilment and distribution solutions to companies in sectors such as e-commerce, automotive and consumer durables. The company has identified 21 cities as core production and consumption centres.

Gurugram-based transportation and logistics specialist, Varuna Group is looking to set up 30 Grade A+ warehousing facilities

company will invest. Varuna Group will invest around ₹15 crore in each facility while the rest around ₹35 crore per facility will come from the developers. As each facility is expected to come up at a cost of around ₹50 crore, this will entail a total investment of around ₹1,500 crore. In all, the company will invest around ₹500 crore in setting up these 30 warehousing units.

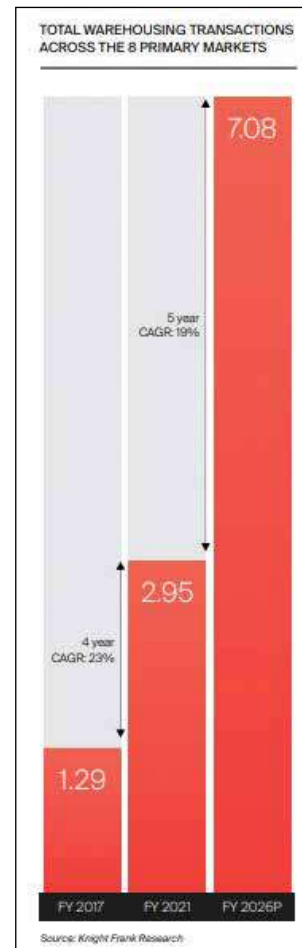
Avigna Industrial & Logistics Park, part of Chennai-based Avigna Group plans to infuse around Rs 600 crore to set up a four million sq ft Grade A warehousing facility in the Hoskote Industrial Park near Bengaluru, Karnataka. The project is part of the company's ₹2,000 crore plan for creating 10 million sq ft warehouse space over the next three years. The developer recently leased out its first one million sq ft industrial warehouse at Hosur Park, in Tamil Nadu.

Embassy Industrial Parks, the entity acquired by the Blackstone Group, will develop one million sq ft warehousing space on a land par-



across the country over the next five years. The company is looking at the hybrid model wherein both the developer and the com-

cel 60 km away from Delhi Airport. Blackstone Group has already entered into agreement to acquire land parcels spread over 36 acre for a total consideration of ₹295 crore from developer TARC. The proposed development by Embassy Industrial Parks is expected to be completed over the next 18-24 months.



Global e-commerce giant, Amazon in India launched its largest fulfilment centre in the country, with a storage capacity of more than 2.4 million cu ft

ment centre. With storage capacity of close to two million cu ft, the new fulfilment centre will house a wide selection of products. The move is a part of the company's plans to expand its pan-India fulfilment network to provide a total storage capacity of 43 million cu ft across the country.

Asia Pacific's leading logistics property group, LOGOS recently completed and delivered a purpose-built 1 million sq ft warehouse facility to Amazon at its Devanahalli Industrial and Logistics Park in Bengaluru. LOGOS has over 5 million sq ft of logistic assets operational and under construction space in the National Capital Region (NCR), Bengaluru and Chennai. Its development pipeline covers 12 million sq ft across NCR, Bangalore, Chennai, Pune, Kolkata and Mumbai.

Domestic e-commerce major Flipkart has added 66 new large-scale fulfilment and sortation centres across the country over the past four to five months and created 1.15 lakh additional seasonal jobs to strengthen its supply chain network

Asia Pacific's leading logistics property group, LOGOS recently completed and delivered a purpose-built 1 million sq ft warehouse facility to Amazon at its Devanahalli Industrial and Logistics Park in Bengaluru.

in Bengaluru, Karnataka. Following the festive season, this significant expansion in infrastructure will give over 42,000 sellers in Karnataka greater access to a larger customer base across the country.

Amazon India also announced expansion of its fulfilment network in Haryana with the launch of a new specialised fulfil-

ment centre following the onset of the festive season. The new large-scale fulfilment and sortation centres have been added in the states of Assam, Chhattisgarh, Gujarat, Haryana, Karnataka, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, and West Bengal, and the company now has more than 100 facilities across the country.

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Synergies to push forward the next wave of logistics

With the unveiling of the visionary 'Make in India' programme in 2014, which is aimed at transforming India into a global hub for manufacturing, setting forth of a well-defined aspiration to become a USD 5 trillion economy, the need for reforms in the logistics sector was further amplified. More recently, the clarion call by Prime Minister Narendra Modi for an 'Aatmanirbhar Bharat'—a self-reliant India requires an eminently robust logistics sector.

It is therefore that the centre formulated a vision "To develop an integrated cost-effective, reliable, sustainable and digitally enabled logistics ecosystem in the country for accelerated and inclusive economic growth".

APPROACH

Host of Initiatives, Announcements

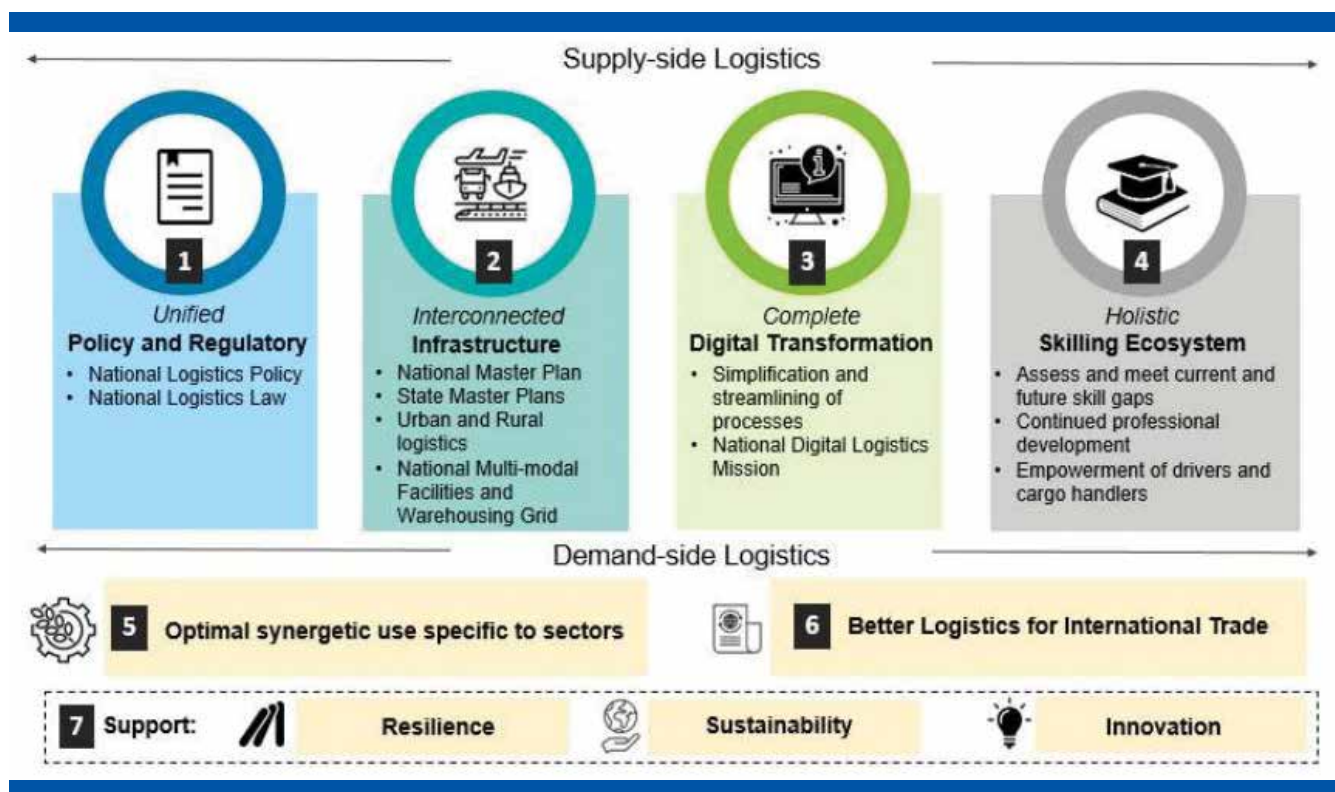
The logistics industry is one of the key sectors of the Indian economy that has seen immense growth in the last couple of years. With improved logistics infrastructure, there is a significant

growth potential of trade in general. Most importantly, during the pandemic induced lockdowns, the sector has stood the test of time by supporting the movement of essentials and non-essentials. Now it is expecting the government shower much-needed attention to it.

With whole of the government's effort planned to ensure that problems facing the logistics ecosystem are viewed in their entirety and solved with an end-to-end perspective, the key aim is to capitalise on the massive infrastructure investments already made and further planned.

Formulation of Logistics Division

vision: The Logistics division in the Department of Commerce under the Ministry of Commerce and Industry was created on July 07, 2017 to allocate the task of "Integrated development of Logistics sector" to the Department of Commerce. It is consequent to the amendment to the second schedule of the Government of India (Allocation of Business) Rules, 1961. The division is headed by a Special Secretary to the centre and has been given the mandate to develop an Action Plan for the integrated development of the logistics sector in the country.



The Logistics Division adopted a consultative approach for identification and resolution of gaps based on interaction with more than 100 with stakeholders in the public and private sector by way of policy changes, improvement in existing procedures, identification of bottlenecks and gaps and introduction of technology in this sector. The following initiatives have been planned and are underway as part of the consultation:

- The National Logistics Policy is in its final stages of being issued. The policy has been developed after wide consultations with all central ministries on the supply and demand side and takes a comprehensive view of the sector defining specific action points.
- A National Logistics Law that would provide an agile regulatory environment through a unified legal framework

for “One Nation-One Contract” paradigm (single bill of lading across modes) supporting “One Nation-One Market” agenda has been framed and is under consultation with stake holders. The provisions of the law will enable the assignment of a unique Logistics Account Number replacing unwieldy registration systems and encourage excellence certification in the currently fragmented market of logistics service providers. It will also promote common terminology, transparency in charges and better mechanisms for industry lead conciliation and dispute settlement.

- **National Logistics Master Plan:** To deal with fixed infrastructure development in an integrated and holistic manner, the National Logistics Master Plan that

is under development adopts a geo-spatial approach rather than a sectoral approach to identify gaps and blind spots. The plan aims to augment intermodal and/or multimodal transport mix through convergence of various ongoing projects/programmes. Conjoined development of related infrastructure (optical fibre cable networks, gas and utility pipelines) is planned so as to ensure no disruptions at a later stage.

It is planned to monitor the Master plan implementation through an Inter-Ministerial Committee (IMC). State and City Logistics plans are proposed to be developed in alignment and synergy with the National plans.

- **National Grid of Logistic Parks and Terminals:** Additionally, a National Grid of Logistic Parks and Terminals is planned with a unified approach for coordinated development of Inter-

modal facilities, promote intermodal and Multimodal Logistic Parks (MMLPs) as a separate class of infrastructure with a national registry of multimodal facilities to enable price discovery, optimal utilisation, and to facilitate planned development.

- **Adoption of National Packaging Initiative:** A National Packaging Initiative is planned to reduce logistics costs, ensure product safety and promote sustainability. It is proposed to issue guidelines and standards for packaging material and design, promote domestic industry for manufacturing specialised packaging materials and machines and provide certification of bulk packaging of dangerous goods for all modes.

- **Industry-best Warehousing Fulfilment:** For development of modern warehousing, recommendatory guidelines and standards for

warehousing and related physical assets are being developed to drive interoperability and compatibility. It is also planned to streamline processes for securing approvals/ clearances for setting up warehouses and their grading and certifications for excellence.

For development of a modern and agile fleet of rolling and floating stock, the steps planned include local manufacturing of containers, promoting containerisation in less than train load and palletisation in less than wagon/truckload, innovative wagon/truck design—for quick release at terminals, and high capacity and light-bodied rolling stock to meet needs specific sectors, low draft vessels suited for Inland waterways and coastal shipping, use of slurry pipelines and containerisation in railways for bulk commodities, designated well-equipped logistics facilities for movement Over Dimensional Cargo (ODC), reefer container and trucks to facilitate temperature-controlled logistics, promotion and proliferation of innovative delivery models like Double Stack Dwarf Containers (DSDC), Roll-on Roll-off (RO/RO), and road railers, etc.

➤ **Accelerating Digitalisation:** The Logistics Division has also planned 'digitalisation initiatives' to create an integrated IT backbone to bring efficiencies, reduce empty trips and enable a seamless interface. The specifications of a National Logistics Platform (iLOG) are under finalisation in consultation with Ministry of Electronics and Informa-

tion Technology (MEiTY). The iLOG will serve to bring together a single platform for the different IT solutions created over time by the various stakeholders viz logistics service providers, buyers as well as central and state government agencies such as customs, DGFT, railways, ports, airports, inland waterways, coastal shipping, etc. In addition to the iLOG, specific initiatives to fill the gap areas are also planned which shall, inter alia, enable digital document exchange, truck visibility, electronic logging in and out of truck drivers, directory of all warehouses in the country, and so on.

The specifications of a National Logistics Platform (iLOG) are under finalisation in consultation with Ministry of Electronics and Information Technology (MEiTY).

➤ **Ensuring an adequate supply of Competent Workforce:**

A National Logistics Workforce Strategy is being put in place for integrated skill development of logistic sector professionals. Building on the existing framework of skill development centres which are currently transportation mode based (for Road, Railways, Ports, Civil aviation, etc.) it is planned to enable exchange of ideas and best practices across sectors and build a workforce of professionals who will be the key drivers to development of logistics in the country. The measures include:

➤ A coordinated approach to assess and meet cur-

rent and future skill needs, bringing to mainstream the education and training in logistics sector in the regular formal education from school up to post-graduate level.

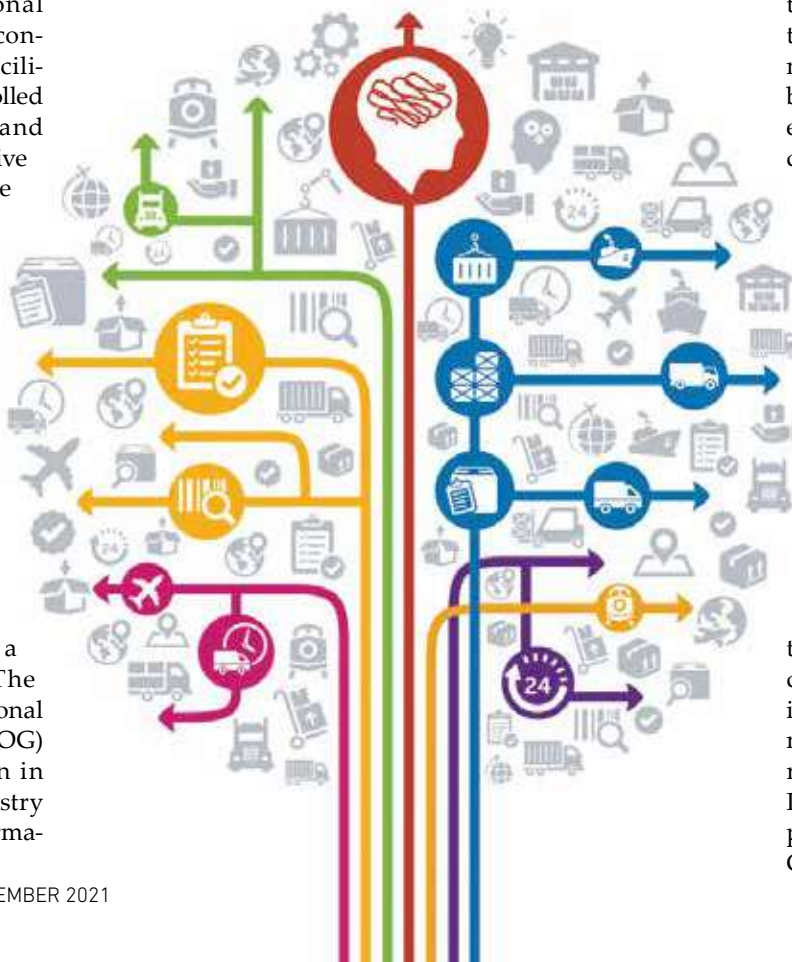
➤ Introduction of a Certified Logistics Professional (CLP) scheme and to incentivise the engagement of such professionals.

➤ Driver Employment and Empowerment Programme with the objective of reducing logistics costs due to high shortages of truck drivers by making truck driving a preferred vocation.

➤ **Improving Cold Chain Systems:**

The Logistics Division aims to meet the sector-specific needs of the Agriculture and MSME sector to ensure they are able to discover new and far reaching markets, of bulk sector by using operations research for optimisation of their logistics, pharmaceutical, fruits, vegetables, etc. by developing an efficient National Cold chain for and the special requirements in transportation of Dangerous Goods and ODC shipments by streamlining the processing and compliances involved. Specific steps are also envisaged with focus on international trade to integrate our supply chains with the world.

With above, it is hoped that in the next 5 years the targets set by the National Logistics Policy to improve India's ranking in Logistics Performance Index to 25 and to reduce cost of logistics in India by 40 per cent from 13 per cent to 8 per cent of GDP will be met. [CC](#)



LIGHT AS A FEATHER
TOUGH AS A ROCK

SLIM AND LIGHTWEIGHT | WATER RESISTANT | DURABLE |
MOBILE BCR,PHONE,TABLET - 3 FUNCTIONS IN 1



| WHY USE OUR RUGGED SOLUTIONS |



Angular
barcode



Voice
GSM



Temperature,
Drop and Shock
Resistant*
(MIL810G)



Water and
Dust Resistant
(IP66/68* rated)



Sunlight
Readable
Screen



High battery
life upto
8 hours



Light Weight
Design (weight
starting 274g)



Warehouse Management Systems



Cargo Management



Forklift Digitalisation



Logistics

Though there are similar warehousing clusters in Gurgaon, Bengaluru and Hyderabad, it is Bhiwandi, northeast of Mumbai that is becoming the flag-bearer of India's booming logistics and warehousing business.

There are numerous factors that have contributed to the rise of Bhiwandi as a logistics and warehousing hub—from ancestral land parcels to govern-

building warehouses and logistics centres. The manufacturing units in Bhiwandi also cashed in on the availability of warehousing facilities in the proximity, further propelling its rise.

Online retailers and 3PLs take warehouses like these on lease to avoid large investments required to establish one.

The cluster of warehouses and logistics centres in Bhiwandi is quite strategically placed in the north-west corridor of Mumbai. The region benefits from



ment initiatives. Traditionally, known for its century-old power looms industry which still exists in the interiors of the city—people in the region have owned huge land parcels for generations, with farming being the primary as well as family occupation. With rapid urbanisation and rising land costs, most landowners gave up farming and leased out lands to build warehouses in a bid to achieve better ROI. The industrial status granted to logistics and warehousing sector also played a pivotal role as it made it easier to avail long term loans for

superior road network to Thane and Mumbai, enabling faster and easy delivery of goods to a large consumer base in the city. It is well connected to the international and domestic airports in Mumbai, and with other regions through the National Highway number 3. However, the demand and prices are estimated to rise with the improvement in connectivity through the upcoming Metro Line 5, the Thane – Bhiwandi – Kalyan route, scheduled to be completed by 2022.

Only in the last seven years or so, modern new-fangled warehouses have come up in Bhiwandi. Here,

online retail companies such as Amazon, Flipkart, Nykaa, Pepperfry, Grofers, Bigbasket, among others, store their goods in what the industry calls fulfilment centres (FCs). When a customer places an order on one of these online platforms, the item ordered is packed in these FCs, sorted according to the delivery location and dispatched in a delivery vehicle for its final destination. Leading global 3PLs—DHL, FM Logistics, DB Schenker, Rhenus Logistics as well as homegrown specialists Safexpress, Varuna, Om Logistics, Delhivery, KD Logistics, V-Trans India, Ecom Express, TCI,

and many more—that deliver the goods to customers doorsteps—also have their own FCs and multi-client facilities (MCFs) here in Bhiwandi. Like a local train on a busy Mumbai station, a delivery truck enters and exits these centres every 30 seconds.

At the start of the 21st century, retailers like Big Bazaar and DMart set up warehouses in Bhiwandi. It was only natural for e-commerce companies to follow suit a decade later. Soon, new and international-standard warehouses began to emerge on the other side of the city's old-fashioned go-downs.

At the start of the 21st century, retailers like Big Bazaar and DMart had set up warehouses in Bhiwandi. It was only natural for e-commerce companies to follow suit a decade later.

In 2012, companies like Pepperfry started setting up bigger FCs in the city. Since 2014, e-commerce major Amazon has set up seven such centres in Bhiwandi—the highest number across its major warehousing hubs in India.

With nearly 25 million sq ft of legal warehousing space, Bhiwandi is neck-and-neck with Delhi-NCR that offers not one but two large warehousing clusters around Ghaziabad and National Highway-48.

and categories. Another significant reason is also that, most e-commerce companies tend to lease all logistics services to keep the cost low while delivering efficiently across the country.

'Indian E-commerce Logistics Industry Outlook to 2025' by Ken Research suggested that the e-commerce logistics industry of India is expected to grow to US\$492.8 billion by 2025 with a positive five-year CAGR of 23.6 per cent in terms of revenue during the forecast period FY'2020-FY'2025 due to increased demand from tier 2 and below cities owing to increased internet penetration in these areas.

Currently, most of the demand comes from metro and tier I cities. However, by 2025 this trend is expected to change, as tier II and lesser cities are emerging as new demand centres owing to higher internet penetration. Hence, it is estimated

space, Bhiwandi is neck-and-neck with Delhi-NCR that offers not one but two large warehousing clusters around Ghaziabad and National Highway-48. Here, a broker is readily available to facilitate an e-commerce player's logistics needs at every step—from their warehouse to the customer's house. These include land-leasing services; management of warehouses; manpower supply for packing, sorting, loading and unloading of goods, trucks and truck drivers to ferry those goods; security and catering staff, among other things. Hundreds of them help e-commerce companies serve customers in states such as Maharashtra, Gujarat and Goa. To put it succinctly, Bhiwandi is like a super-market for e-commerce players. The e-commerce space in the city also gives a means of livelihood to close to 3.5 lakh people from the area and nearby towns.

fulfilled by third-party logistics companies, and the need to diversify supply chains are pushing demand for warehousing and logistics.

According to industry estimates, almost one-fourth of the total warehousing space in India has been leased by ecommerce firms such as Flipkart and Amazon in the past two years. This is further expected to accelerate, due to larger behavioural change of consumer buying following the outbreak of COVID-19.

A favourable regulatory backdrop along with the government's support through policy and reforms are further expected to boost the infrastructure spend and in turn the overall demand for modern warehousing.

Property consultant Knight Frank projects that annual warehousing transaction for the top eight Indian cities as primary markets

Bhiwandi is like a supermarket for e-commerce players. The e-commerce space in the city also gives a means of livelihood to close to 3.5 lakh people from the area and nearby towns.

In 2012, companies like Pepperfry started setting up bigger FCs in the city. Since 2014, Amazon has set up seven such centres in Bhiwandi—the highest number across its major warehousing hubs in India. Although location is a prime factor as Bhiwandi is near to Mumbai and is well connected to the thoroughfares in the region, the most important factor—perhaps the clincher—is availability is labour.

Reportedly, from logistics haven—Bhiwandi, e-commerce companies manage deliveries for the entire western region—roughly 35-40 per cent of all online retail sales across players

that in the next five years, a high proportion of demand is expected to come from tier II and below cities.

With the increasing potential of local and zonal shipments, large e-commerce logistic companies are focusing on establishing new FCs near the end consumers to increase delivery speed and cater to larger parcel sizes. Moreover, with tier II and beyond cities driving the growth, several e-retailers are looking at expanding their network via strategic alliances and logistics partnerships in these areas.

With nearly 25 million sq ft of legal warehousing

As per Colliers' Indian Industrial and Warehousing Market Report 2019, occupiers seeking large facilities should consider leasing warehouse space in Bhiwandi. Developers should also consider building Grade-A quality warehouses in the nearby areas of Sape and Padgha. They can also leverage technology solutions to optimise costs and offer cost-effective solutions to occupiers, making Bhiwandi a more lucrative proposition than it already is.

It is believed, the accelerated adoption of e-commerce, same-day or next-day delivery commitments

will grow at a compound annual growth rate (CAGR) of 19 per cent to 76.2 million sq ft by FY'2026 from 31.7 million sq ft in FY21.

Recently, an affiliate of Amazon India has entered into an agreement with logistics development platform ESR to lease 606,000-square-foot warehousing space at India's biggest logistics cluster—Bhiwandi.

The deal for the space at Warburg Pincus-backed ESR's upcoming logistics park is for a long-term tenure of 20 years, indicating the e-commerce player's commitment to grow the business further. 





LOGISTICS DEVELOPMENT FOR INCLUSIVE ECONOMIC GROWTH

A major trend in the Indian logistics and supply chain sector is the strong impetus and focus on developing infrastructure for transport, so much so that it can offer valuable and customised support to key industries like pharmaceuticals, textiles and other manufacturing sectors earmarked by the government to drive the robust growth of the Indian economy. From being the backbone of a developing economy, the logistics and supply chain sector is now a frontrunner and major driver of not just national and international trade but also the lifeline of smaller business, start-ups and entrepreneurs.

Upamanyu Borah

The focus of the Indian government over the past few years has been on accelerated growth through improved bilateral trade and foreign investment policies. India has garnered tremendous goodwill and become a global brand for trade development, thanks to the proactive government initiatives.

As per research reports, the estimated size of the Indian logistics market is pegged at US\$215 billion and is growing at a CAGR of 10.5 per cent and only 10-15 per cent of the overall market is owned by organ-

ised players. Out of the aforesaid amount, the online vertical is estimated between US\$20 and US\$30 billion by 2025.

The growth in the sector is mostly being driven by the rise of international business in India which is itself the result of the improved bilateral trade.

With the government striking trade deals with countries like the US, Australia, Japan and top European nations, there's little doubt that the Indian logistics and supply chain management sector is on the path of becoming one of the most sought after sectors in the Indian economy.

As per a recent report by Arthur D Little India in collaboration with the CII, India's Logistics and supply chain costs currently amount to a staggering US\$400 billion, up

to 14 per cent of the GDP, compared to the global average of 8 per cent, raising a competitiveness gap of approximately US\$180 billion.

“Logistics will witness an uptick post-COVID as the focus will progressively be on the entire supply chain of doorstep delivery. This means specific thrust on warehousing and packing/ packaging to enable the smooth flow of goods. Warehousing will see a thrust mainly due to the higher farm produce to the market. The development of eNAM bodes well for building more warehousing space as farmers move to the market,” **Madan Sabnavis, Chief Economist at CARE Ratings** had previously revealed.

“Growth in this industry is dependent on several factors. Firstly, higher growth in GDP which goes with a recovery entails higher movement of goods across the country. Secondly, warehousing today is an integral part of the e-commerce industry which is booming. Furthermore, the growth of the food processing industry in particular will lead to growth in private demand for warehousing space. Above all, growing exports will increase demand for efficient logistics services to cut costs and become more competitive,” Sabnavis further added.

“As we celebrated 75 years of India’s independence, the announcement by the honourable PM about investing ₹100 cr for the ‘Gati Shakti’ master plan to accelerate development of transportation and logistics infrastructure in the country, that in turn is set to help



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MADAN SABNAVIS, Chief Economist, CARE Ratings



In the backdrop of the global pandemic, the Indian logistics, and supply chain sector evolved from being a support sector to a high impact sector, growing at a rate of 10.7 per cent CAGR. While the pandemic and the massive vaccination drive have already led the sector to evolve rapidly so as to meet the numerous challenges, it is now ready to take a giant leap in the coming years.

HECTOR PATEL, Executive Director and Board Member, Jeena & Company

faster ‘reach to market’ for Indian manufacturing sector that is gearing up to expand, thanks to the ‘Atmanirbhar Bharat’ initiative,” said **Hector Patel, Executive Director and Board Member, Jeena & Company**.

“In addition to this, the National Logistics Policy introduced by the government is further designed to promote seamless movement of goods through

focus on digitisation, process re-engineering, multimodal transport, EXIM trade, etc. which will further provide an impetus to trade and enhance the Logistics Performance Index for the country.”

Patel said that in the backdrop of the global pandemic, the Indian logistics, and supply chain sector evolved from being a support sector to a high impact sector, growing at a rate of 10.7



As per a recent report by Arthur D Little India in collaboration with the CII, India’s Logistics and supply chain costs currently amount to a staggering US\$400 billion, up to 14 per cent of the GDP, compared to the global average of 8 per cent, raising a competitiveness gap of approximately US\$180 billion.



Visibility would be a defining theme, with stakeholders across the value chain leading concerted efforts to effect change and eliminate opacity-related inefficiencies. The interest in data intelligence has fostered supply chain connectivity, with several consortiums created within maritime networks—notably bound by Blockchain technology.

HUSENI VOHRA, Regional Sales Director, Ocean Insights



It is quite possible that these habits are likely to stay in the post-COVID world as well, which means that the logistics and supply chain industry of the future will need to focus on optimisation of technology and automation for safe and efficient movement of goods. This also means that the supply chain of tomorrow will be leaner, faster and most importantly, self-orchestrated.

SUKRIT SONDHI, VP- Product Engineering, Fulcrum Digital

per cent CAGR. “While the pandemic and the massive vaccination drive have already led the sector to evolve rapidly so as to meet the numerous challenges, it is now ready to take a giant leap in the coming years.”

Manufacturing in India holds the potential to contribute up to 25 per cent to 30 per cent of the GDP by 2025 which will drive the growth of the warehousing segment in India. The logistics market in India is forecasted to grow at a CAGR of 10.5 per cent between 2019 and 2025. E-commerce is another major segment which is expected to support growth of the logistics industry during the forecast period. Increasing investments and trade point towards a healthy outlook for the Indian freight sector. Port capacity is expected to grow at a CAGR of 5 per cent to 6 per cent by 2022, thereby, adding a capacity of 275 to 325 million tonnes. Indian Railways aims to increase its freight traffic from 1.1 billion tonnes in 2017 to 3.3 billion tonnes in 2030. Freight traffic on airports in India has the potential to reach 17 million tonnes by FY 2040.

Practically, the factors that have contributed towards India leveraging its

growth potential to achieve fruitful bilateral trade, increasing its global footprint, and thrive for an efficient logistics sector to achieve its growth target are as below:

- **Unlocking export opportunities**
As numerous industries enter and set their manufacturing plants in India, it is a noteworthy fact that Indians no longer have to go out of their way and increase any existing trade deficit. India’s overall exports (Merchandise and Services combined) in April-August 2021* are estimated to be US\$256.17 billion, exhibiting a positive growth of 44.04 per cent over the same period last year and a positive growth of 15.79 per cent over April-August 2019.
- **Stronger open trade policies**
India is now one of the most powerful players in the global economic landscape with the logistics and supply chain sector as its backbone. The improved bilateral trade and the opened gateway to the Indian economy through globalisation and liberalisation is providing all the needed opportunities. New and improved trade policies have also helped achieve bilateral trade and increase

Futuristic Green Logistics initiatives



With India targeting Net Zero emissions across sectors, logistics companies are already on the road to reduce their carbon footprint and at the same time grow rapidly. India is introducing GPS-enabled toll payments to ensure zero wastage of fuel and resultant emissions across hundreds of Toll Plazas. E-commerce companies have committed to delivering 30 per cent of shipments using electric vehicles. Modern warehouses and logistics parks are built with solar rooftops and sell carbon-free electricity rather than consuming it. With the integration of timers, thermostats, and gauges for all forms of electricity, gas, heat, and water, energy management systems are being put to use to derive the best practices to use what is needed without excessive waste.

“Sustainability within logistics is expected to be taken up on a larger scale, with digitalisation and automation being prime movers of such operations. Ports and terminals are some of the largest nucleated sources of carbon emission within the logistics ecosystem. The situation is worsened as major ports often find themselves close to densely populated cities, strengthening their need to oversee ‘greener’ operations next year. This could be done by general electrification of terminal cargo handling equipment like cranes and forklifts,” informed **Huseni Vohra**, Regional Sales Director, Ocean Insights.

“Overall, 2021 would define how global economies break free from the pandemic’s shackles. As the proverbial ‘mid-mile’ of supply chains, the industry will have to rise to the occasion. In many ways, the pandemic served as a wake-up call to logistics, hastening the adoption of technology in an industry mired in archaic operations. Visibility would be a defining theme, with stakeholders across the value chain leading concerted efforts to effect change and eliminate opacity-related inefficiencies. The interest in data intelligence has fostered supply chain connectivity, with several consortiums created within maritime networks—notably bound by Blockchain technology.”

international business. Foreign trade policies such as the Merchandise Exports from India Scheme (MEIS) and the Service Exports from India Scheme (SEIS) have positively complemented the logistics and supply chain management and enhanced the manufacturing sector in India. Extra efforts for improved bilateral trade by the Indian government have also resulted in lower tariffs and taxes by different countries.

• Growth and innovation of infrastructure

With a major thrust on strengthening the Indian logistic ecosystem, new and improved logistics hubs and warehouses are planned, strategically around important ports. Logistic parks and specialized spaces for warehouses, is proving extremely helpful. According to a report by the National Transport Development Policy Committee, India's cargo traffic handled by ports is expected to reach 1,695 million metric tonnes by FY2021-22. Additionally, if Drones Policy 2.0 draft is implemented, India will witness droneports and dedicated drone corridors in upcoming times.

New-age technologies steering growth

New age technology has revolutionised the logistics sector by being a key differentiator. The immediate future is all about leveraging the power of AI, IoT, AR and VR to revolutionise supply



Manufacturing in India holds the potential to contribute up to 25 per cent to 30 per cent of the GDP by 2025 which will drive the growth of the warehousing segment in India.



2021 and beyond....

Change is in the air and India's logistics industry is becoming organised and technology-driven. Currently, India's logistics sector is valued at US\$160 billion and employs over 22 million people directly. It is expected to grow at a CAGR of 10 per cent to US\$215 billion by 2022.

India is also in the middle of an infrastructure building boom. The government's National Highways Development Project aims to expand the country's current expressway network of 2000 km and plans to add 18,637 km of Greenfield expressways by 2022. The Bharatmala Project is aiming to construct 83,677 km of highways by 2024.

But it is the 'Digital Transformation' that is silently underway and will re-define Indian logistics over the next decade. There is now an entire generation of start-ups focussing on solving India-specific logistics issues deploying state-of-the-art technology.

Notably, the falling cost of technology inclusion, such as cloud computing, GPS trackers, IoT sensors now enables even smaller logistics companies to modernise their systems. Even a newly started logistics company can avail itself of world-class technology at a very low monthly cost.

Logistics companies can easily integrate their systems with larger logistics companies or their customers to offer real-time visibility of inventory and shipments. This democratisation of technology of a large swathe of the logistics sector has the potential to leapfrog India's logistics ahead of many peer economies and even developed economies.

Also, the government has pushed digitisation in a major way through initiatives such as E-Way bills, FASTag, E-Invoicing, GPS-based toll, etc.

"As per The India Transport Management System Market Report 2021, transport management

system (TMS) market in India is estimated to register double-digit CAGR from 2019 to 2028. One of the factors that is accelerating this change is evolving consumer preferences and online shopping. It is quite possible that these habits are likely to stay in the post-COVID world as well, which means that the logistics and supply chain industry of the future will need to focus on optimisation of technology and automation for safe and efficient movement of goods. This also means that the supply chain of tomorrow will be leaner, faster and most importantly, self-orchestrated," explained **Sukrit Sondhi, VP of Product Engineering at Fulcrum Digital.**

Digital twins, Sondhi says, are possibly one of the most exciting logistics technology trends to keep an eye on in 2021. "This is drastically changing how the sector works: Now, physical and digital worlds can be melded into one, thus allowing, for the first time, to engage with the digital model of a physical object or part just like we would with their physical counterparts."

With above, the National Logistics Policy that is expected soon to be released by the Government of India aims to promote seamless movement of goods across the country. It will focus on several areas such as process re-engineering, digitisation, focus on multimodal transport, EXIM trade, etc. and will look at improving logistics in core sectors. It will address many issues in a seamless manner. Effective implementation of the policy would help provide an impetus to trade, enhance export competitiveness, and improve India's ranking in the Logistics Performance Index.

With opportunities galore and a business environment filled with hope, there's no looking back for our country and the Logistics sector in 2021!

chain logistics. Another emerging technology which is poised to create a profound impact is Blockchain. Driverless vehicles, wearable devices, warehouse automation is helping achieve operational efficiencies to counter supply chain cost pressures in the industry.

According to IDC's 2021 State of Digital Business Transformation report, improving customer experience and engagement continues to be the top goal fueling digital transformation. Organisations are also increasing their focus on speed-to-market and innovation. **CC**

ONE SIZE
DOESN'T
FIT ALL



75+
Warehouses

2400+
Skilled Workforce

5 mn+sq.ft.
Warehousing
Space

6 Million
Average Pieces
Handled Monthly

24 Million
Average Cases
Handled Monthly

Every organisation has unique needs and we customise our offerings to suit the requirements of our customers. Customisation may range from size of pallet, degree of temperature, co-packing area, office area, order timings, etc. amongst many other things. We take great pride in positioning ourselves as a solution driven organisation which offers great flexibility to our customers.

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FREIGHT

REVAMPING THE BIG CHILL FULFILMENT

The hiccups experienced by the cold supply chain due to the pandemic raised concerns on the food security of India. A robust cold chain infrastructure holds immense potential to strengthen supply and storage of perishables to suffice the country's population. The pandemic also certainly brought healthcare into focus. The crisis provided much required recognition to time and temp-sensitive logistics involving delivery and distribution of pharmaceuticals. More control over the cold chain is imperative to reduce losses and maintain product quality within the life sciences segment. All in all, the pandemic has in a way revolutionised India's cold chain sector and opened plethora of opportunities to invest and explore. The entire value chain starting from LSPs, airports, technology and packaging services firm, are stepping up to offer accuracy, speed, cost-efficiency, consistency, and impeccable customer experience.

Upamanyu Borah



FROSTY:



India's cold chain logistics industry is notorious for being limited and underdeveloped due to both the size of the country as well as technological hindrances, which has led to severe challenges getting food products and fresh produce.

While production of perishables has increased consistently in the past five years, cold chain sector potential remains untapped due to the high share of single commodity storage and soaring investment for land and refrigerator units.

Additionally, the lack of necessary enabling infrastructure, inadequate awareness for handling perishable goods, and lapses in service by storage and transportation providers leading to inferior quality goods, have impacted demand.

In current times, for transporting and storing temperature-sensitive products refrigerated storage has become an integral part of the supply chain. Proximity to population centres, population growth, changing consumer preferences and consumer spending are the primary drivers for cold chains.

Growth in organised retail, food processing industry, pharmaceutical sector and government initiatives including Scheme for Cold Chain & Value Addition Infrastructure, Pradhan Mantri Kisan Sampada Yojana (PMKSY), and Backward & Forward Linkages have encouraged more investments in the segment of the cold chain.

Cold chain forms the storage backbone of the pharmaceutical industry, which is highly susceptible to temperature and time requirements. India caters to over 50 per cent of global demand for various vaccines, 40 per cent of generic drugs demand in the USA, and 25 per cent of all medicines in the UK, and the sector is expected to rapidly grow by 2025.

Increased profitability has encouraged new operators to enter the market. Global and domestic investors that are new to the cold chains but versed in supply chain asset investments are beginning to show in-

terest in the sector. Rising demand from the market and the adoption of cost-cutting technological advancements have caused profit margins in the cold chains logistics industry to expand over the past five years.

Cold chain segment in the logistics sector is expected to grow at over 20 per cent compounded annual growth rate (CAGR) by 2025 owing to its transformation from conventional cold storage to modern storage space, said JLL India in a report released in May.

The estimates are based on the sector's performance over the past few months, where despite the post-COVID economic impediments; the organised cold chain segment has seen significant growth in country-wide footprint.

According to JLL, there is an opportunity for organised cold storage and palletized cold storage in tier I cities like Mumbai, Delhi-National Capital Region, Bangalore, Chennai, Pune, Kolkata, Hyderabad as well as tier II cities like Lucknow, Kanpur, Ranchi, Patna, Bhubaneswar, Goa, Aurangabad, Ahmedabad, Kochi, and Coimbatore.

An additional 1.5 lakh to 2 lakh pallet capacity (frozen and chilled) is likely to be added as part of temperature-controlled storage space in the next two to three years.

The Inescapable Front

When COVID-19 first hit, the news was full of stories of sold out food and supplies as consumers clamored to stockpile necessities. And while it may have seemed that rising consumer demand was the reason for these sudden shortages, it soon became clear that the supply chain was really to blame.

"The pandemic has, without any scope of denial, made most, safe to say all the industries realise that supply chain and logistics are too critical to be worked upon and structured at the foundation level. We, the cold chain have seen so many evident gaps that needed to be bridged," says **Kiran Gubba, CEO and Director, Gubba Cold Storage.**

"Suppliers of food and pharmaceutical products heavily rely on the cold chain to ensure shipment doesn't become compromised before they reach the market. They always want to streamline their cold chain management yet that may not be their forte. We have come to realise that with issues like

Cold chain segment in the logistics sector is expected to grow at over 20 per cent compounded annual growth rate (CAGR) by 2025 owing to its transformation from conventional cold storage to modern storage space, said JLL India in a report released in May. The estimates are based on the sector's performance over the past few months, where despite the post-COVID economic impediments; the organised cold chain segment has seen significant growth in country-wide footprint.





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Having an infrastructure and utilising it properly are two different things. India sees significant wastage through post-harvest losses due to the lack of an adequate and efficient cold chain infrastructure. The loss count for this year was around US\$13.16 billion. I think we still need to do vast improvements in this area. Maximising the cold chain infrastructure and utilising the existing infrastructure at optimum level can help us reduce the losses and grow the sector at a generous rate

RAJESH AGARWAL

Managing Director,
Crystal Group



lockdown, vaccine storage and distribution through cold chains increased remarkably, as the pharmaceutical sector grew, almost 12 per cent CAGR post-pandemic."

Agarwal feels the growth will continue in future as well. Yet, he knows there are many aspects to be improved, "such as selecting global standard cooling systems, reducing transit time, aligning with sustainability, etc."

Undeniably, the cold supply chain was long overdue for an overhaul. While there is technology in place to help add efficiencies along the chain, recent fracturing in the flow of products has shed light on where the major vulnerabilities lie in existing systems.

"Amongst the many lessons the pandemic has taught us, the most important, while acknowledged, but lesser imple-



Crystal Logistic (Cool Chain) has a strong focus on quality cold chain solutions that has helped the company to sustain in the competitive market during pandemic. The company has been growing with 100% utilisation of its cold storage facilities. India's substantial vaccine production and largest vaccination drive led Crystal to procure our newly launched portable cold storage SUPER FREEZER to store critical pharma cargo at the temperature as low as -70°C.

restrictions on manpower, travel time, etc calls for the need in upgradation of equipment and logistics. They are to become more automated."

Rajesh Agarwal, Managing Director, Crystal Group couldn't agree more. "Yes, the pandemic has reminded us of how crucial the supply chain and logistics is for any country in the time of crisis. If we talk only about India, though the demand supply cycle dismantled due to the nationwide

mented is Contingency Planning. Today, one of the key questions debated in the boardrooms is, how to ensure uninterrupted supply to the market during crises and other emergencies," says **Sunil Nair**, CEO

and Whole-time Director, Snowman Logistics.

"The last 18 months has taught us that cold chain is not an ancillary service but an essential. It is imperative to have the right policies and processes and build infrastructure around the same."

"With zero touch last-mile delivery becoming critical, companies are brainstorming on how to solve this. Furthermore, the use of innovative evaporative, reactive cooling technology that responds and adjusts to fluctuating temperatures is something that cold chain companies are toying with," Nair informs.

India's cold chain sector is still at a nascent stage. This is something that continues to hold relevance as a hot topic of discussion by the wider industry bodies and making the rounds in the tabloids. But, the collective global cold supply chain disruption makes it clear that the time to bring efficiency and transparency is now or never.

"Investment in the cold chain remains one of the most effective ways to ensure the reliable and safe movement of food and pharmaceutical products during a pandemic, and in adapting to a post-pandemic world," adds **Pankaj Mehta**, Managing Director at Carrier Transicold India and South Asia.

"India is the world leading producer of several agri-products, but we also have high wastage."

"The cold chain will play a pivotal role in establishing food security in India and around the world, while opening a plethora of opportunities to farmers and various stakeholders in the agriculture value chain."

"The trends that surfaced within the cold chain during the pandemic are a testament to how companies could acclimatise, pivot strategies, and snappily find results to keep the essential chains running. Earlier, cold-chain or supply chain was considered a cost head. This has changed now," observes **Samit Jain, Managing Director, Pluss Advanced Technologies**.

"With this change in outlook, investment in cold chain storage and transportation is a top agenda. The industry should now mainstream the learnings from the pandemic, continue to innovate and look at how to bring costs under control. A focus on reducing the costs will be the key for the sector to remain vibrant."

Raaj Jobanputra has over the years seen how supply chains have intertwined with India's growth trajectory. And it now needs a sharply targeted approach.

"Cold chain has gained more momentum and will continue to be a vibrant sector. During the lockdowns, not only the packed restaurant food delivered to homes increased manifold, sales of ready-to-eat or heat-and-eat ranges of various frozen food products have also seen a rise. This trend is now going to stay, and coupled with investments and new entrants, heralds the growth-path of a more sustainable and integrated cold chain," says the **Director of JWL Cold Store**.

"After the initial jolt of lockdown, the retail sector has definitely bounced back more aggressively," Nair informs. "We see some tweaking in the business models across organisations, wherein the focus on online/home delivery has increased, and hence, the investments and expansions are getting structured accordingly."

Several catalysts, according to Jain, will fuel the ex-

pansion within the cold chain sector. "The pandemic has created many food category demand shifts, with the foremost being a shift from high-end gourmet specialty food products related to travel, restaurants and entertainment business, to retail packaged frozen and perishable products. The growth in demand for cold chain logistics and refrigerated items will continue to thrive and modern technology will expand its critical role in visibility, monitoring and compliance going forward."

"COVID-19 has led to a drastic shift in consumer demand away from restaurants, food service towards food consumed at home, giving a sudden boost to food supply chain operators. This resulted in substantial investments in the retail food sector due to heavy demand for 'home delivered' food products as estimated around 50-60 per cent," Agarwal notes.

"At the same time, vaccines storage and distribution in India played a major role in rejuvenating the cold chain industry across the country," he adds.



The way the government is committed to vaccinate all, and storage of vaccines not being a long-term regular requirement, setting up of more infrastructure on this front may not be felt. But the demand is certainly going to increase. The indispensability of this sector in the future and the tax and duty exemptions by government has caught the sentiments of stakeholders. This presents a significant investment potential in setting up cold chain infrastructure post-COVID.

RAAJ JOBANPUTRA
Director, JWL Cold Store

JWL Cold Store has specially designed dedicated pharma and food divisions – JWL Pharma Hub with 16,500 pallet capacity and JWL Food Hub with 14,500 pallet capacity. Both facilities are FSSAI and FDA approved, ISO and GDP certified. Currently, its facilities are built to maintain temperatures between -25°C to +30°C. The company is exploring further opportunities to create specialised facilities to store highly-sensitive vaccines at temperatures as low as -80°C.



"However, as vaccine storage and distribution is a critical task, the cold chain solution industry had to go under massive improvement in terms of quality, temperature control, technology advancement, safety and rapidity. This developed the overall service level in cold chains, not only in India but across the globe. It made the industry more coordinated and organised. I feel the cold chain industry will see further growth in coming months and renewed push for better sales in the longer term."

As we continue to witness what's happening in just a few months in what, otherwise, would have happened over a decade, COVID-19 has clearly proved to be a catalyst for necessary change. The impact of the trends and outcomes are far-reaching and transformational enough.

"Indeed. This phase definitely looks like a hope for organisations to become more organised and consolidated," expresses Gubba. "We have learnt to be proactive rather than reactive. We have witnessed investments in the retail food sector; however, focus has to be more on the research and development side."

"As we saw, the consumption of frozen foods hiked up drastically during COVID times. It did break the myth of frozen food being not so nutritious. However, this fact has to be believed in consistently. A lot more of awareness needs to be spread," he puts across.

Ready for a Makeover: What's within T&L?

The increasing demand for refrigerated goods has also had a ripple effect on the companies that transport those products worldwide. Temperature-controlled transportation businesses are today being encouraged to innovate in order to keep pace with the ever-changing needs of the chilled market.

After evaluating the reports of a recent global survey, what we found out was that Shippers and 3PLs differ on some of the greatest

Gubba Cold Storage has installed live temperature indicators outside every chamber of their facility to monitor temperature in real-time. Clients have access to check up on the stock and temperature at any given point of time through Gubba App from the convenience of their smart phone. The company has also installed WiFi- and USB-based 21-CFR temperature data loggers.

challenges the sector faces. For Shippers, the proper handling of cold chain products was seen as being more difficult than anything else. For 3PLs, investing in a cold chain infrastructure and maintaining that infrastructure, as well as temperature monitoring were the key challenges.

Regulatory compliance is also top concern for shippers. That makes visibility and traceability important technological features associated with cold chain services. "Through visibility and traceability," the report explains, "logistics providers can maintain a chain of custody as well as temperature monitoring to ensure the safety of temperature-controlled products. This also helps shippers comply with regulatory requirements, for instance the Food Safety and Standards Regulations within the Indian market, and government-mandated record keeping."

The report goes on to point out that "global population growth, increased consumer demand for fresh products, strong grocery e-commerce sales and a wider variety of perishables



This phase definitely looks like a hope for organisations to become more organised and consolidated. We have learnt to be proactive rather than reactive. We have witnessed investments in the retail food sector; however, focus has to be more on the research and development side. Consumption of frozen foods hiked up drastically during COVID times. It did break the myth of frozen food being not so nutritious. However, this fact has to be believed in consistently. A lot more of awareness needs to be spread.

KIRAN GUBBA
CEO and Director,
Gubba Cold Storage





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The last 18 months has taught us that cold chain is not an ancillary service but an essential. It is imperative to have the right policies and processes and build infrastructure around the same. With zero touch last-mile delivery becoming critical, companies are brainstorming on how to solve this. Furthermore, the use of innovative evaporative, reactive cooling technology that responds and adjusts to fluctuating temperatures is something that cold chain companies are toying with.

SUNIL NAIR

CEO and Whole-time Director,
Snowman Logistics



Traditionally, cold chain in India has relied predominantly on diesel run refrigerated vehicle solutions. These cooling solutions for cold chain distribution require a continuous power source from a vehicle and runs on diesel, making them very expensive for smaller package sizes. Given the large costs incurred in transportation, conventional solutions remained unviable for most stakeholders forcing them to break the cold chain or use unproven "Jugaad", especially towards consumer/retail end of the chain. This severely impacts product quality and spoils customer experience.

Also, unlike most developed countries, cold chain in India has been restricted to secondary and tertiary distribution segments – for movement of goods from factories to



Understanding the incredibly different needs of the market, Snowman have built an e-commerce backend (fulfilment centre) for food and grocery in Mumbai – a 54,000 sq ft warehouse with freezer, chiller, ambient storage with various value add solutions, viz. sorting, grading, packing, labeling, etc. Another e-commerce facility is under construction at Pune.

are driving the need for cold storage space. Demand for cold chain services is so high that finding available, cost-effective services is difficult. There is increased demand for services that are more specialised."

Use of effective cold chain solutions was never considered a priority until a pandemic of such a scale hit us. Specific to India, as the country grappled with one-of-a-kind challenge of producing enough vaccines to inoculate every Indian, ensuring delivery of the same without spoilage happened to be a daunting challenge.

The prospects were further spiked by increasing consumer awareness and the need to comply with basic quality standards.

CFAs and from there to distributors. This meant that most of the last-mile delivery was either done in ambient conditions or with unsafe, unsustainable solutions resulting in product spoilage and wastage.

However, today with advanced Phase Change Material (PCM) based solutions, these issues are getting resolved. PCM can provide desired temperature control (from -25°C to +25°C) across enclosures ranging from a 5 litre bag to a 20 feet (10 ton) truck, enabling most manufacturers and transporters to ensure the cold chain is not broken.





The Indian cold chain landscape is witnessing a significant paradigm shift as the government has unveiled various measures to bridge the cold chain gap in the country. Not to question, the two main sectors where the cold chain can play a vital role are pharmaceuticals and agriculture. The cold chain will have to pivot in establishing food security in India, thus opening a plethora of opportunities to farmers and various stakeholders in the agriculture value chain.

PANKAJ MEHTA

Managing Director,
Carrier Transicold India and
South Asia



today. For small volume last-mile delivery, Pluss have validated products like PronGO® which can maintain temperature for up to 48 hours for frozen and chilled food delivery. Further, Pluss' Celsure® product range for temperature control in pharmaceuticals precisely maintains temperatures for up to 120 hours during transport.

The delivery segment is poised to become more organised and united, and Jain says they are already seeing a lot of consolidation in the segment. "When we talk about infrastructure, continuous innovation is needed to produce cost and energy effective products. One of our products Aagun™ reduces the dependency on cold chain. This is a 'phase change material' based integrated dryer which offers 24x7 consistent drying. This allows some products to be dried



Pluss, through use of 'phase change materials' and customised temperature control solutions, have taken a lead in serving the needs of the food e-commerce and delivery segment. For instance, Pluss have created products like passive refrigeration solutions for trucks to eliminate the use of diesel for air conditioning the cargo. The refrigeration system is charged with electricity. This enables last-mile connectivity for bulk movement, with energy-free refrigeration. The trucks run on CNG or li-ion batteries, making a very attractive proposition, given the high cost of diesel



Carrier Transicold has launched several India-specific product extensions in the Supra® and Oasis® offerings for large trucks. The units are designed to provide strong, reliable performance in hot, dusty ambient conditions and offer superior pull down and cooling efficiency. For last-mile distribution using refrigerated small vans, Carrier Transicold introduced several models of the Citimax™ series for chilled and frozen applications.

and transported, thus increasing shelf life. We have also enabled 24x7 solar cold rooms that store the cold energy generated during the day for use at night."

Jain has witnessed in the last two to three years, how several startups have established themselves to provide food delivery. "It is important for the different players to collaborate and share resources and learnings to make the system cost-effective, and also educate the farmers as well as end consumers. The ones with great technology and user experience will thrive in the longer run," he says.

Gubba Cold Storage has installed live temperature indicators outside every chamber of their facility to monitor temperature in real-time. Clients have access to check up on the stock and temperature at any given point of time through Gubba App from the convenience of their smart phone. The company has also installed WiFi- and USB-based 21-CFR temperature data loggers.

"Of course, transport and infrastructure is the life of preserving food. Minute temperature fluctuation or non-maintenance of apt relative humidity can cause more damage than one can imagine. Coming to logistics, we have



We plan to partner with logistics companies and warehousing partners to be able to provide 'phase chain materials' based cold-chain solutions nationwide. We will also be working to sensitise the consumer and user on the limitations with the traditional thermocol and gel packs in use. We believe we can move to cold chain as a service model, to reduce waste and use resources more meaningfully. This needs to evolve over time and will require the commitment of industries to work together.

SAMIT JAIN

Managing Director,
Pluss Advanced Technologies



Pluss have created products like passive refrigeration solutions for trucks to eliminate the use of diesel for air conditioning the cargo. The refrigeration system is charged with electricity. For small volume last-mile delivery, Pluss have validated products like PronGO® which can maintain temperature for up to 48 hours for frozen and chilled food delivery. Further, Pluss' Celsure® product range for temperature control in pharmaceuticals precisely maintains temperatures for up to 120 hours during transport.

started using our own temperature-controlled reefer trucks to ensure the quality of products is maintained and taken utmost care of during the last-mile delivery," Gubba adds.

As the food industry attempts to streamline its supply chains in new, ever-changing market environments, new technology and tools will play an increasingly important role in fixing the fragmented system. As farmers, distributors, producers, CPG companies and retailers navigate fluctuating conditions and weak links in the supply chain, having the right technology in place can provide resili-

ency, integration, transparency and efficiency.

"India's food processing sector is one of the largest in the world. With the government also placing emphasis on food safety, cold chain infrastructure is all the more important for food processing industries. What is impressive to see is that the current infrastructure is transforming itself towards adaptation to a more scientific approach. Digitalisation and new technologies are streamlining the processes," highlights Jobanputra.

"The Indian cold chain landscape is witnessing a significant paradigm shift as the government has unveiled various measures to bridge the cold chain gap in the country. Cold chain acceptance has also trickled down to tier II and

III towns and cities which will further bolster growth. Not to question, the two main sectors where the cold chain can play a pivotal role are pharmaceuticals and agriculture. The cold chain will have to pivot in establishing food security in India, thus opening a plethora of opportunities to farmers and various stakeholders in the agriculture value chain," asserts Mehta.

Carrier Transicold has been working with various stakeholders in the cold chain and educating them on the benefits. To clear the perception that the cold chain is complicated and too expensive for small-holder farms, Transicold recently conducted a demonstration on the "impact of the cold chain on the Kinnow fruit" from Punjab to Bengaluru.

The study demonstrated that investment in refrigeration pre-cooling equipment and refrigerated trucks can reduce





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food loss by 76 per cent while increasing profit margins up to 23 per cent.

"Having an infrastructure and utilising it properly are two different things," maintains Agarwal. "The Indian cold chain sector is still at a developing stage. For any country, quality cold storage warehouses, or refrigerated transportation are the primary necessities of the food processing industry. India sees significant wastage through post-harvest losses due to the lack of an adequate and efficient cold chain infrastructure. The loss count for this year was around US\$13.16 billion."

"I think we still need to do vast improvements in this area. Maximising the cold chain infrastructure and utilising the existing infrastructure at optimum level can help us reduce the losses and grow the sector at a generous rate."

"There have been major expansions in the cold chain industry over the last five years, both in warehousing and transportation. The good part is that all these infrastructures are almost 80 per cent utilised today," Nair says.

"What is critical is to understand that this sector operates with almost 80 per cent regulated costs which are diesel, electricity, minimum wages, etc. Hence, there is very limited scope for cost optimisation once the facility is set up," he went on to inform.

According to Nair, this demands price corrections by customers to take care of the inflation in these costs which have been challenging due to COVID and the resultant impact on customer businesses. "The ever-increasing diesel price has also put transporters in a grim situation."

Cold-ful Innovations

The cold distribution market is finding innovative ways to keep up with the changing demands of consumers and retailers. With shipping and transport companies alike preparing themselves for further growth in the distribution of refrigerated products, the sector remains buoyant. Such developments should help the refrigerated transport industry shake its "archaic" reputation and become as advanced as



There is an increasing awareness and reliance upon air cargo, which has helped sustain and grow the cargo volumes despite the challenging overall situation. The pandemic has forced players across the value chain to step up investments on their cold chain logistics, in some cases prioritising resilience and availability over efficiency and costs. Sooner, we can expect a degree of consolidation driven by the need to optimise costs and rationalise capacity across the market.

PRADEEP PANICKER
CEO, GMR Hyderabad
International Airport Ltd

the cold store facilities that serve the industry.

With increased data coverage and comprehensive information, cold chain industry vendors can make more informed decisions, better manage their product flows with greater visibility and speed across their supply chains. By automating data collection in supply chains, supplier and customer data can be made smarter through the use of AI and ML to integrate product data from various sources, both within and beyond a company.

Crystal Logistic (Cool Chain) has a strong focus on quality cold chain solutions that has helped the company to sustain in the competitive market during pandemic. The company has been growing with 100 per cent utilisation of its cold storage facilities. "Factors like growing retail and e-commerce market, world's largest vaccination drive, end-to-end cold chain requirements, Make In India movement, and shortage of containers have contributed to strategise the company's business towards success," Agarwal expresses.

"Our core business values, i.e. "Quality, Service, and Integrity" differentiate us from others. We are a complete cold chain solutions company

providing end-to-end cold chain solutions, catering to more than 20 states across the country, utilising refrigerated containers and temperature-controlled warehouses for distribution to the last-mile through reefer trucks. We have 4 cold storages at strategic locations – Kolkata, Visakhapatnam, Bhubaneswar, and Indore with total capacity of around 50,000 pallets," he adds.

"We are also specialised in installing large customised portable cold storage solutions at the clients' site. Our 24x7





GMR Hyderabad Air Cargo has expanded the capacity of 'Pharma Zone' – India's first dedicated pharma cargo export terminal and introduced a unique temperature-controlled 'Cool Dolly' to safely transport shipments from terminal to the aircraft. Furthermore, GHAC has integrated vaccine ledger, a next-gen Blockchain solution to deliver enhanced track-and-trace solution and real-time monitoring of vaccine shipments.

service and maintenance team makes it easy to resolve any post service issue at the customer's end."

India's substantial vaccine production and largest vaccination drive led Crystal to procure our newly launched portable cold storage SUPER FREEZER to store critical pharma cargo at the temperature as low as -70°C.

Agarwal says they are currently expanding their base in tier II and III cities by increasing channel partners for fastest service. "Being a smart solution company, we are focussing upon technological advancement in our cold chain solutions while keeping sustainability in mind. I feel that by 2025, Crystal Group will emerge as India's only smart cold chain company."

With the vision and determination to serve the health-care and FMCG industries, JWL Cold Store has specially designed dedicated pharma and food divisions – JWL Pharma Hub with 16,500 pallet capacity and JWL Food Hub with 14,500 pallet capacity. Both facilities are FSSAI and FDA approved, ISO and GDP certified.

"In spite of the lockdown-induced restrictions, we have worked hard for our existing customers and opened our hands to all the available opportunities. It is the world class infrastructure that we have set up with a dedicated workforce to serve the customers coupled with our readiness to embrace the new technologies have helped in contributing to our growth," Jobanputra says.

"Two-three different storage conditions are required in pharmaceuticals, while food segment requires storage conditions under five temperature zones. Slightest deviation in temperature is not acceptable in both segments. As such, we

have created exclusive facilities for both segments, besides considering the cross-contamination possibilities. We are privileged to be associated with varieties of happy customers across both pharma and food segments," he adds.

"By leveraging the resources and innovative solutions, we contribute to the overall objective of shared value chain. Our Infrastructure is developed keeping the value additions required for our customers and constantly strive to develop more assets and bring the services under one umbrella."

"At present, our facilities are built to maintain temperatures between -25°C to +30°C. We are exploring further opportunities to create specialised facilities to store highly-sensitive vaccines at temperatures as low as -80°C," he further went to inform.

According to Jobanputra, there is demand for storing of vaccines, but more importantly, the requirement of transporting vaccines is widespread across country. "The need of the hour is to distribute vaccines rather than storing. Hence, the impact felt more in transportation and distribution legs of the cold chain rather than storage. The way the government is committed to vaccinate all, and storage of vaccines not being a long-term regular requirement, setting up of more infrastructure on this front may not be felt. But the demand is certainly going to increase."

"The indispensability of this sector in the future and the tax and duty exemptions by government has caught the sentiments of stakeholders. This presents a significant investment potential in setting up cold chain infrastructure post-COVID," Jobanputra explains.

Undoubtedly, Nair says, vaccine distribution is the top-most priority of the nation today. "I don't think there is any shortage of capacity for vaccines. It is important to understand that vaccine is a high-velocity product. It will never be stored in abundance. And hence, it won't need much space for storage. Once produced, it is transported to the market ASAP. I don't see any major impact of vaccines in capacity constraints."

"There are good investments coming up in cold chain. The industry is preparing itself for the huge volume growth that is expected in the coming years, even without COVID vaccines."

Snowman is topping the chart when it comes to integrated cold chain temperature-controlled logistics. The service provider has been continuously investing in technology and building more and more capacity. Most recently, Snowman opened up a multi-temperature facility with total capacity of 4032 pallet positions. It is designed to store products ranging from – ambient temperature to -250C with 8 chambers, 5 loading bays complemented by related infrastructure that includes G+5 racking system, modern handling equipment, etc. and ample refrigerated truck parking space.

"During the pandemic, what worked for us is the design of our facilities, our standards and processes of hygiene and sanitation – personnel and facility, our strong IT systems, and above all the positive attitude of our team. This is one time when we could demonstrate our resilience and ownership to our customers. Yes, we had to overspend to ensure safe operations at the facility, but we are happy that we could contribute our bit to customers' business," Nair says.

"All our cold storages are multi-purpose and multiple-product. We can store products ranging from -25°C to +25°C. All our facilities have multiple chambers within them, and we can set the desired temperature in each chamber, thus offering complete flexibility. Besides, rooftop solar units have been installed across all our facilities, which add to energy



Cold chain is one of the key areas that would be in the spotlight. Also, with global warming impact being felt across the world, we are expected to see temperature excursions and incursions, and as a result adjustment would be required in the manner air cargo is handled for temperature sensitive products. The cold chain sector would be required to remodel itself as per the needs of each country, and India itself is going through a massive change.

KAMESH PERI

CEO, Çelebi Delhi Cargo Terminal Management

efficiency into our facility's operations."

"Within our fleet of 265 trucks, we have 40 multi-temperature trucks which can carry Frozen, Chilled, and Dry products together."

Through the SnowLink technology platform, Snowman has been progressing well in its transport aggregation model. This is helping the specialist to offer end-to-end services to an additional set of customers.

"Our end-to-end offerings – IT solutions and complete distribution visibility, differentiates us from others. Our national footprint helps our customers in quick scalability and reach faster to multiple markets," Nair adds.

"We are currently present in 16 cities. In a couple of months, we'll be operational in one more city. With this reach, we now deliver products to almost 500 locations across nook and corners of the country. But this is not sufficient. We need to add more capacity in almost 10 existing locations which are close to 100 per cent utilised. Also, we need to be present in more cities for better delivery cycles. Food and Pharma need to be delivered to customers at least lead time. Being close to the consumption centres is a must," he went to inform.



People. Partnership. Performance...



Infrastructure & Advantages

- ✓ Customs Bonded Warehouse
- ✓ LCL Import & Export Hub
- ✓ Buffer Yard & Factory
- ✓ LCL Cold Storage in the CFS
- ✓ Storage area 5,00,000 sq.m., of covered warehouse space
- ✓ Direct access to the National Highway 4B leading to the JNPT Port
- ✓ Ample space for parking of 1000 cargo trucks
- ✓ 24x7 CCTV monitoring
- ✓ CFS owned equipment- 4 Top Lifters, 200 Trailers, 30 Forklifts, 2 Empty Handles, 1 Crane
- ✓ Distance from JNCH 11 Km
- ✓ Zero toll charges, Zero congestion in the CFS,
- ✓ TEU Handling Capacity -9000 TEUs per month Carting & Stuffing done in covered area
- ✓ Ideal Location for Exporters/CHAs/Freight Forwarders
- ✓ Prompt Carting of Cargo
- ✓ Unique Temperature Controlled Pharmaceuticals product handling capabilities in the CFS

**LCL Import &
Export Hub along
with LCL Cold
Storage**



Covered Warehousing Facility



Covered Carting & Stuffing Area



Custom Area



Çelebi Delhi Cargo Terminal is more than ready to meet customer expectations with a state-of-the-art Pharmaceutical Logistics Centre spread over 1,200 sq. mt area. The centre has a pre-cool facility and four chambers within the range of +15°C and -20°C and throughput capacity of 72,000 MT annually. Recently, the cargo and ground handler achieved GDP certification for its Exports Pharma Logistics Centre and Pharma Processing Facility for Imports.

Understanding the incredibly different needs of the market, Snowman have built an e-commerce backend (fulfilment centre) for food and grocery in Mumbai – a 54,000 sq ft warehouse with freezer, chiller, ambient storage with various value add solutions, viz. sorting, grading, packing, labeling, etc. Another e-commerce facility is under construction at Pune.

Carrier Transicold products played an important role during the global health crisis to help ensure critical COVID vaccines and pharmaceutical products reach their respective locations in the best condition. The company's truck refrigeration solutions have aided interstate and local vaccine distribution across India from vaccine production centres to distribution points in tier II and III cities and towns.

Over the past few years, Carrier Transicold has launched several India-specific product extensions in the Supra® and Oasis® offerings for large trucks. The units are designed to provide strong, reliable performance in hot, dusty ambient conditions and offer superior pull down and cooling efficiency.

For last-mile distribution using refrigerated small vans, Carrier Transicold introduced several models of the Citi-max™ series for chilled and frozen applications. The streamlined design has very few serviceable parts helping to reduce repair and maintenance, resulting in low overall operating costs.

"With critical products continually on the move, Carrier Transicold dealers, strategically positioned on national

highways offer 24x7 support to customer fleets across a pan-India network of more than 65 service centres to keep the trucks running on the road. We continue to be the preferred suppliers of truck refrigeration systems due to a large and reliable service network as well as an experienced and customer-focused team," Mehta enlightens.

IoT also plays an important role in providing end-to-end visibility within the cold chain ecosystem. Data transparency and traceability ensures product quality and process efficiency. As such, Transicold's Lynx™ Fleet digital solutions empower customers to remotely monitor and control refrigeration units and help track their consignments with a strict watch over temperature integrity.

"With 25 years of market expertise and experience in the sector, we are well-positioned to understand segment needs and meet requirements with technologically superior refrigeration products. Additionally, we are part of the CII Task Force on Cold Chain Development as well as a life member of the National Center for Cold Chain Development and continues to undertake initiatives to establish a robust cold chain in India," Mehta says.

"The need for safe and sustainable cold chain technologies to preserve and protect the supply of food, medicine and vaccines around the world has never been greater. In support of this critical need, Transicold launched the Healthy, Safe, Sustainable Cold Chain Programme – designed to help customers meet rapidly evolving supply chain



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Our cargo infrastructure, powered with technology, provides rapid distribution of perishable cargo, making BLR Airport the preferred cargo airport in South India. A TagBox-developed, Internet of Things (IoT) based solution to monitor temperature-controlled cargo is enabling real-time supply chain visibility. This provides for live monitoring of temperature-sensitive products such as pharmaceutical and perishables, including fruits, vegetables, meat, sea food, dairy products, and flowers.

SATYAKI RAGHUNATH
Chief Strategy and Development
Officer, Bangalore International
Airport Ltd



Authenticity, Reliability, Quality of Service, International Certifications, and Trust are key differentiating factors Gubba has built worldwide,” says Gubba.

“Our strength is purely built on investments on our resources towards research, technology, and high-end infrastructure. Our 18 cold storage facilities are designed by a highly committed and professional Gubba Cold Infra team. Across every facility that we have set up, we ensure our heart goes into preserving products with utmost care. We stand in the shoes of our clients to present them with what’s needed,” he asserts.

Gubba Cold Storage continues to set sight on being the



demands and make their cold chain activities more effective.”

“We operate at the nexus of climate, digital and environmental technology and sustainability – and we will be at the forefront of defining the next era of the healthy, safe, sustainable and intelligent cold chain.”

Gubba Cold Storage not only emphasises on offering effective storage sheds but also provides clients with leading-edge technology and is skilled with the latest advancements. “We are a step ahead in competency. We provide clients with automated reports. Our inbuilt ERP app gives clients the accessibility to check the temperature of their product preservation in a just click of their smart phone.

figurehead by providing world-class facility in preservation of what makes and more importantly sustains life – seed and pharma by hiking the standard of innovation and technology to a whole new level.

“Understanding customer’s vision and setting forth customer satisfaction has and will always continue to be our precedence. We are looking forward to enter into the US and Singapore markets to serve their pharma and seed industries and establish a biotechnology lab in South Asia (apart from India) with trust and passion in preservation, being one of the most reliable quality partner.”

As a technology organisation, Pluss have been continuously innovating to fulfil the demands of the industry by providing customised solutions for temperature control shipments. During the pandemic, the one aspect that grew exponentially was online delivery of various items – grocery, chocolates, ice-creams, frozen meat, etc. Being pioneers in ‘phase change materials’ used in maintaining the cool chain, Pluss was able to cater to the requirement of the market.

“Overall, the industry and consumer have become more aware about importance of cold chain, and we see this impacting our business positively,” Jain remarks.

“Pluss has always believed in making a strong bond between social progress and business success. We have actively developed and worked on products for the upliftment of farmers. We are also working at the grassroots level to create entrepreneur opportunities for groups to enable them to operate cold-chain as an enterprise and provide shared service to all the stakeholders.”

“We plan to partner with logistics companies and warehousing partners to be able to provide ‘phase chain materials’ based cold-chain solutions nationwide. We will also be working to sensitise the consumer and user on the limitations with the traditional thermocol and gel packs in use. We believe we can move to cold chain as a service model, to reduce waste and use resources more meaningfully. This needs to evolve over time and will require the commitment of industries to work together,” Jain continues.

Importantly, with the help of its benchmarking PronGO® solution, Pluss, Jain says will look to achieve 4 key objectives:



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- **Replace:** PronGO® will replace one time use solutions used in the temperature control supply chain. This will provide the end customer with quality products, and the producer will have the advantage of providing quality products at the right temperature. With the help of the PronGO® solution, proper temperature for horticulture and dairy produce will be maintained for longer duration.
- **Reuse:** PronGO® solutions are reusable for around 3 years.
- **Recycle:** PronGO® can be recycled easily at the end of its lifecycle. This will also significantly reduce the addition of plastics in the environment.
- **Reduce:** PronGO® solution will reduce the one time use of EPS and gel packs, thus drastically reducing wastage.

The new Ice Age for Airport Cargo

Airports – an important node in the supply chain, acting as the interface point between the air and surface transport modes – have also taken a more central role in the value chain. Today, airports have information in real-time, the capability to integrate shipments from different parts of the world and consolidate any type of cargo. They've made it possible to clear goods as fast as possible. Most importantly, airports have ramped up cargo capabilities by inducting unique Unit Load Devices (ULDs) cool dollies to maintain unbroken cold chain for time and temperature sensitive shipments, purely pharmaceuticals and perishables. Even Indian airports are utilising and bringing together data analytics and information to help the supply chain to focus on potential pinch points, training needs, safety and security, as well as supplier and risk management, and most importantly, quality.

"The pandemic period and the resulting lockdowns/restrictions that disrupted most other modes of transportation meanwhile highlighted the importance of air transportation as the most reliable mode. There is an increasing awareness and reliance upon air cargo, which has helped sustain and grow the cargo volumes despite the challenging overall situation," affirms **Pradeep Panicker, Chief Executive Officer at GMR Hyderabad International Airport Ltd.**

Key elements of the temperature-controlled infrastructure at GMR Hyderabad Air Cargo (GHAC) are all being expanded in terms of both capacities as well as capabilities. GHAC has expanded the capacity of 'Pharma Zone' – India's first dedicated pharma cargo export terminal and introduced a unique temperature-controlled 'Cool Dolly' to safely transport shipments from terminal to the aircraft. Additionally, GHAC has increased capacities of all temperature zones, viz. 15 to 25°C, 2 to 8°C and -20°C. It has also introduced 'Cold Super Store' as part of the extended pharma zone to mitigate any temperature excursions during unloading of pharma shipments. Furthermore, GHAC is

gearing up towards technology enhancements and recently integrated vaccine ledger, a next-gen Blockchain solution to deliver enhanced track-and-trace solution and real-time monitoring of vaccine shipments. Together, these initiatives have enabled GHAC to offer an unparalleled and truly unbroken cold chain for vaccines, pharmaceuticals and perishables from truck offloading point till aircraft loading.

"As the premier hub for handling pharmaceuticals and vaccines in the South Asia region, GHAC has specialised infrastructure and facilities including the country's first dedicated 'Pharma Zone', a dedicated export terminal catering exclusively to pharma and vaccine handling, with end-to-end temperature-controlled facilities certified to WHO-GDP standards. The entire export processing zone has been converted into a temperature-controlled facility that assures safe handling of all export consignments irrespective of weather or other external factors," informs Panicker.

"Our efforts to ramp up infrastructure facilities for capacity increase have been a constant endeavour with prime focus on increased movements of pharmaceuticals, vaccines and other materials. We will continue to work in that direction to meet the market demand and will invest in technology to enable higher efficiencies and improved customer experience."

"The pandemic has forced players across the value chain to step up in-

The current cargo capacity of BLR Airport is 715,000 MT annually, which is the largest cargo processing capacity, with 42% market share in South India and 14% among Indian airports. The airport is now working towards the vision to expand the cargo infrastructure and provide a capacity of approximately 1.5 MMT by mid-2030.



vestments on their cold chain logistics, in some cases prioritising resilience and availability over efficiency and costs. Sooner, we can expect a degree of consolidation driven by the need to optimise costs and rationalise capacity across the market,” Panicker adds.

As India’s food processing industry develops and matures further, Panicker firmly believes the transport and infrastructure aspects will need continued investments and focus to deliver higher quality solutions to the food processing industry customers, and GHAC is aligned to the broader industry vision.

GHAC is said to be developing a dedicated ‘Cooltainer Yard’ which will be India’s largest on-airport hub to store, service and manage active and passive temperature-controlled containers, with a capacity to hold up to 250 containers at any point in time.

Under the challenging pandemic environment, Bengaluru Airport has been registering record tonnage month-on-month with international cargo (both imports and exports) continuing to be the growth drivers.

Key factors that have led to this growth include a conducive geographic location with easy access to manufacturing hubs in South India, adequate airline capacities to service key sectors across the globe and world-class cargo infrastructure, operated by Air India SATS (AISATS) and Menzies Aviation Bobba (Bangalore).

“Our vision is to make BLR Airport a flourishing cargo hub by providing state-of-the-art infrastructure, equipped with cutting-edge technology and facilities. We are rightly distinguished in terms of infrastructure, the quality of our terminals and terminal operators, and automation,” **Satyaki Raghunath, Chief Strategy and Development Officer at Bangalore International Airport Ltd (BIAL).**

“We currently have adequate capacity for vaccine storage distribution, and we would be expanding our capacity from 60,000 MT to 80,000 MT over the next few years. Recently, we invested in an express cargo terminal, which is India’s first dedicated facility, adding about 200,000 sq ft of capacity,” he informs.

“We have a dedicated cold zone AISATS Coolport – with the capacity to handle 40,000 MT per annum and temperature zones ranging from -25°C to +25°C under the same roof. Menzies Aviation Bobba (Bangalore) too has a cold zone with capacity of 20,000 MT per annum, and added capability to handle 20 ULD pallets under temperatures 15°C to 25°C and 2 ULD pallets between 2°C to 8°C.”

Time always plays a critical part in perishable logistics to ensure that products reach their destination while still offering the same freshness, quality and appeal for consumers. Taking heed of this, BLR has made significant tech-driven interventions to ensure there is no temperature excursion, reduce the handling time and speed up clearance of consignments.

“Our Air Cargo Community System (ACS) has made the air logistics process paperless and further streamlined. Also, a TagBox-developed, Internet of Things (IoT) based solution to monitor temperature-controlled cargo is enabling real-time supply chain visibility. This provides for live monitoring of temperature-sensitive products such as pharmaceutical and perishables, including fruits, vegetables, meat, sea food, dairy products, and flowers.”

According to Agricultural and Processed Food Products Export Development Authority (APEDA), BLR Airport has processed 48,130 MT of perishables in the Financial Year 2020-21, accounting for 31 per cent of India’s total perishable shipments. In the process, BLR Airport has emerged as the leading airport for exports of perishable shipments, including poultry products and flowers during the same period. It processed 28,182 MT of poultry products and 1,296 MT of flowers.

“Perishable cargo has been one of the major growth drivers for BLR Airport. Our cargo infrastructure, powered with technology, provides rapid distribution of perishable cargo, making BLR Airport the preferred cargo airport in South India,” Satyaki informs.

The current cargo capacity of BLR Airport is 715,000 MT annually, which is the largest cargo processing capacity, with 42 per cent market share in South India and 14 per cent among Indian airports. The airport is now working towards the vision to expand the cargo infrastructure and provide a capacity of approximately 1.5 MMT by mid-2030. “To achieve this, BIAL will continue to develop state-of-the-art infrastructure, introduce market-leading technology, improve operational efficiency, and customer service,” Satyaki adds.

Çelebi Delhi Cargo Terminal Management today transacts close to 600,000 tonnes of cargo, which is almost double



of what it used to do a decade ago, before Çelebi took it over in partnership with Delhi International Airport Ltd (DIAL).

Çelebi has made investments of over US\$220 million in its decade long presence in India. The company employs close to 6000 Indians at different airports in the country and equips them with world class training. It is currently one of the largest employers in this sector.

From the onset of the COVID-19 pandemic, Çelebi has been working dedicatedly on preparing proficient handling scenarios for the import and export of various types of vaccines, pharmaceuticals, and medical aid in a safe and efficient way.

The cargo and ground handler is working closely with its customers to understand their specific requirements and more than ready to meet expectations with a state-of-the-art Pharmaceutical Logistics Centre spread over 1,200 sq mt area. The centre has a pre-cool facility and four chambers within the range of +15°C and -20°C, capacity of 72,000 MT annually.



Recently, Çelebi Delhi Cargo Terminal achieved GDP certification for its Exports Pharma Logistics Centre and Pharma Processing Facility for Imports.

"Cold chain is one of the key areas that would be in the spotlight given the fact that world attention to supply and distribution of pharma products is changing. Also, with global warming impact being felt across the world, we are expected to see temperature excursions and incursions, and as a result adjustment would be required in the manner air cargo is handled for temperature sensitive products. The cold chain sector would be required to remodel itself as per the needs of each country, and India itself is going through a massive change," explains **Kamesh Peri**, CEO, Çelebi Delhi Cargo Terminal Management.

"The cold chain industry in FY22 is expected to see a growth of 9 per cent in value. This growth would be led by a recovery in segments such as frozen food, meat, and seafood. The pharma segment will continue its growth trajectory aided by COVID-19 vaccine deliveries."

"Çelebi understands the criticality of cold chain handling services and therefore been working on our processes,

keeping customers requirements in mind. Çelebi Delhi Cargo Terminal offers a wide range of cold storage facilities with temperature ranges of +15°C to +25°C, +2°C to +8°C, -4°C to -20°C. We have developed our facilities keeping in mind the growth level of pharma and perishable cargo in the coming years. We have also created flexible cold storage areas for transit vaccines at the airside."

Peri says India has come a long way. The momentum was built at a time when the airports were being privatised – so the catalyst, whether be it the Greenfield airports at Bangalore and Hyderabad or other big airports like Mumbai and Delhi handed over to the private players. We could see a huge change towards what is being done to improve the infrastructure at airports and bring the whole ecosystem at par with the international standards which is a very important part of the process.

"There's a sea of change in the airports now – cargo terminals, passenger terminals – the infrastructure has remarkably improved than it was before privatisation.

Everything has changed – from appearance, performance, safety and security, customer service, etc. Today, the airport infrastructure of India could very well be classified or categorised as world-class or truly international."

"The public-private partnership (PPP) model is now an important and excellent initiative as it involves the expertise and drives initiatives in place complemented by government agencies and authorities who make up for an integral part of the airport ecosystem of India. This blend seems to nurture and unlock the growth potential by facilitating the best solutions for airports to go forward after privatisation. That said, we will soon see efficient and prosperous airports outside metro cities as well."

The Indian cold chain logistics sector, Peri says is expected to grow at over 18 per cent CAGR by 2025 due to its transformation from conventional cold storage to modern storage spaces. The government and stakeholders, he says need to play a major role in terms of simpler compliances and general encouragement to the sector.

There has been an initiative from both sides to promote technically sound, energy-efficient, and sustainable cold chain facilities.

"A robust cold chain infrastructure with effective policy support and implementation strategy can go a long way in unprecedented times to ensure cost-effective and constant supply of different goods. Further, the cold chain companies must emphasise on the last-mile and ensure robust IT infrastructure to monitor temperature excursion and control wastage. It would not be wrong to say that the cold chain industry is evolving and becoming more vibrant than ever before." 

Today, airports have information in real-time, the capability to integrate shipments from different parts of the world and consolidate any type of cargo. Even Indian airports are utilising and bringing together data analytics and information to help the supply chain to focus on potential pinch points, training needs, safety and security, as well as supplier and risk management, and most importantly, quality.



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A FULL-CYCLE APPROACH TO ORDERING, PICK-UP AND DELIVERY



There is already a surge for on-demand and instant delivery services across the Indian urban space. With logistics service providers and delivery companies brimming with orders, the strong need for technology-based instant last-mile delivery models has not only improved delivery speed but also optimised utilisation of resources, thereby improving unit economics. In fact, efficient last-mile delivery has become a key determining point as far as customer satisfaction is concerned and all kinds of businesses are evidently looking to provide a seamless and service competitive experience.

Upamanyu Borah



E-commerce in India has truly transformed the way people shop—and providing a fillip to other sectors as well, namely fintech and the logistics industry.

While deep-pocketed bigger players have access to logistics in a way that smaller players don't, last-mile logistics is posing a great problem to solve. And this is where logistics technology startups are making a difference.

A big problem plaguing the trucking industry is gross under-utilisation of assets. This coupled with inconsistent earnings and delayed payments render the space ripe for tech intervention.

The on-demand delivery industry is already disrupting traditional markets by adopting a full cycle approach to three essential components of a delivery experience: ordering, pick-up, and delivery. This is receiving a significant boost as businesses today fully adapt to COVID induced changes.

More importantly, these companies are having a set plan to invest locally in electric trucks/vehicles for urban distri-

bution as a sustainable and environment-friendly solution to support urban intra-city logistics strategy and taking steps towards minimising the current high air and sound pollution from which Indian cities are suffering.

According to a KPMG research, 80 per cent of customers today look for same-day shipping. In fact, 50 per cent of shoppers are actually willing to pay extra money for faster delivery. As consumers become accustomed to extremely quick delivery experience, offering shipping options will increasingly become a 'need rather than a choice' for retailers.

"To enable last-mile connectivity, digital tools and data analytics also came to the forefront. These tech deployments enable complete and constant visibility of the consignment through GPS installation. Leading-edge technologies like AI enabling predictive analysis of supply chain data, Industrial Intelligence of Things (IIoT) enabling predictive repairs and maintenance, and smart factories are expected to drive the future of e-commerce logistics in India," said **Jasmine Singh, Senior Executive Director and National Head- Industrial, Land & Logistics Services** at real estate consulting firm **CBRE India**.

"With online shopping and e-tailing garnering popularity among the masses, end-to-end delivery has become central to an efficient supply chain flow. Identifying the enormous growth potential of e-commerce, many online retail platforms began investing in warehouses to ensure a smooth supply chain," explained Singh.

Making the Difference

Often, while inter-city transportation has been efficient, the final stage delivery remains a challenge. This is where efficient intra-city logistics and last-mile delivery services are gaining prominence. Intra-city logistics for enterprises is not just about delivering parcels in 30 minutes. It is about solving the actual business challenges.

Innovative technology is the bedrock of a system that efficiently matches the needs of demand and supply to ensure a seamless function together with optimisation of resources and positive unit economics.



KEY TAKEAWAYS

Growing Demand from Tier 2 cities

Higher demand is emerging from tier II and below cities primarily due to cheap data plans, increase in usage of Smartphone and increasing propensity to purchase online in these areas.

Increasing Technological disruptions

E-commerce Companies are embracing advanced technologies such as IoT, advanced algorithms, data analytics and more to meet higher consumer expectations.

Rising supply chain innovations

With the increasing potential of local and zonal shipments, large E-commerce logistic companies are focusing on establishing new Fulfillment Centers and expanding their network via strategic alliances.

Ongoing government initiatives

Government is constantly supporting start ups by initiatives such as providing them with rental/lease subsidy, allowing higher investment in E-commerce warehousing projects and more.



To enable last-mile connectivity, digital tools and data analytics also came to the forefront. These tech deployments enable complete and constant visibility of the consignment through GPS installation. Leading-edge technologies like AI enabling predictive analysis of supply chain data, Industrial Intelligence of Things (IIoT) enabling predictive repairs and maintenance, and smart factories are expected to drive the future of e-commerce logistics in India.

JASMINE SINGH

Sr Executive Director and National Head- Industrial, Land & Logistics Services, CBRE India



"Customer's expectations are increasing greatly and both individuals and businesses are expected to get goods faster, more flexibly, and in the case of consumers—at low or no delivery cost. As a result, the logistics sector is undergoing immense pressure to deliver a better service at an ever-lower cost," said **Sushil Rathi**, COO at **Ma-hindra Logistics**.

"In the future, we will witness many breakthroughs in last-mile delivery models and technology integrations, offering greater comfort for the end consumers. The consumers are expecting same day delivery, especially for the groceries and essential items, and hence the concept of hyperlocal delivery business model has emerged. Meanwhile, an increase in omnichannel

and integrated distribution services. These are evident in our continued growth in value-added services and in the e-commerce and consumer segments. The new facilities are developed to sustainable standards and allow us to provide flexible and scalable fulfilment and integrated distribution solutions for the e-commerce industry," says Rathi.

"Companies should develop ways to interact and deliver directly to consumers," stated **Aniruddha Banerjee**, Senior VP- SCM, **Spencer's Retail & Nature's Basket**. "FMCG companies need to focus on omni-channel and flexible online delivery models with a dark store fulfilment setup. Also, the focus should be towards investing more on infrastructure development for a strong last-mile delivery setup. Focus should also

as Fresh F&M delivery in 3 hours, alongside some of the first-in-industry practices like immunity and health advisor programme in collaboration with Dr Lal PathLabs across all the hyper supermarkets," Banerjee shared.

"Leading players of consumer products have a strong distribution network in rural India. They also stand to gain from the contribution of technological advances like internet and e-commerce to better logistics performance," he put across.

"Introduction of products with focus on quality and efficacy will be on

The on-demand delivery industry is already disrupting traditional markets by adopting a full cycle approach to three essential components of a delivery experience: ordering, pick-up, and delivery. This is receiving a significant boost as businesses today fully adapt to COVID induced changes.

distribution models especially in e-commerce segment can be observed. A higher level of service integration and a greater adoption of technology would help logistics players in creating the customer value proposition."

Rathi says they are constantly looking and working towards expanding growth significantly around consumer durables, e-commerce, and pharma.

"We consider them as consumption driven industries. We have deepened our focus by launching new solutions, like return processing, pop-up sort cen-

be on personalisation of shipments."

"Companies need to build infrastructure that allows customisation of orders within the supply chain, without adding any cost. Smart supply chain control towers are the need of hour, which can anticipate potential problems in an automated and optimised fashion at a regional and global level," Banerjee added.

"During the pandemic, we had successfully implemented concepts like Residential Welfare Association (RWA) list for delivery of essential items, such





The consumers are expecting same day delivery, especially for the groceries and essential items, and hence the concept of hyperlocal delivery business model has emerged. Meanwhile, an increase in omnichannel distribution models especially in e-commerce segment can be observed. A higher level of service integration and a greater adoption of technology would help logistics players in creating the customer value proposition.

SUSHIL RATHI

Chief Operating Officer, Mahindra Logistics



surge as Indian consumers are highly adaptable to new and innovative results. With the rise in disposable income, mid- and high-income consumers in urban areas have shifted their purchase trend from essential to premium products. Premium brands are manufacturing smaller packs of premium products. All in all, online portals are expected to play a key role for companies. Internet has contributed in a big way, facilitating a cheaper and more convenient mode to increase a company's reach."

Bengaluru-based startup LetsTrans-

port provides intra-city logistics solutions using tech, thus enabling truck vendors on one side and solving for businesses looking to have their cargo moved on the other. Founded in 2015, it is one of the largest urban logistics service providers in India. With the aim to improve the livelihood and work environment of the urban trucking community along with improving the efficiency of the sector, the firm has on-boarded 100k+ trucks across India. Currently, the firm is catering to urban logistics operations of 17 cities in India by working

across industry sectors such as organised retail, FMCG, e-commerce, distribution, and 3PL companies.

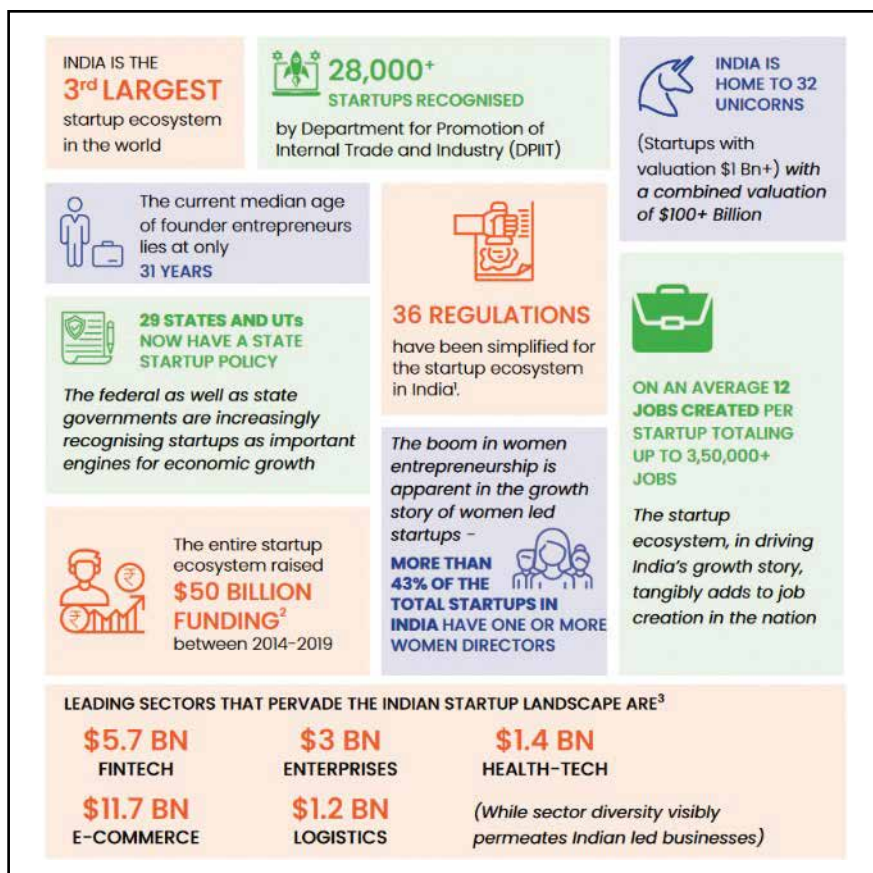
In a bid to drive sustainable growth of intra-city and last mile logistics, LetsTransport recently announced it will augment its electric vehicle (EV) fleet on its platform to 1,000 by June 2022. Having already commenced EV-led operations in Delhi-NCR, Hyderabad, Bangalore and Mumbai, the tech-driven logistics firm will introduce EVs to its fleet in Chennai, Pune, and Kolkata.

LetsTransport has already tied up with 8 OEMs towards strengthening its 100-vehicle strong EV fleet across cities. The primary deployment of these EVs is in intra-city, last-mile logistics for e-commerce, retail, FMCG, and 3PL distribution sectors.

"Local intra-city logistics providers cannot provide a service that outstand the rest. We at LetsTransport have always worked towards adding features that make it simpler for truckers to transact through our application directly, without any hassles. Logistics industry, despite being one of the largest in our country, is very unorganised and with evolving consumer behaviour, last-mile logistics has become a bigger challenge and we at LetsTransport are trying to solve it through our platform," said **Pushkar Singh, Co-founder & CEO of LetsTransport** in a media interaction.

"Modernisation and Automation are now getting into almost every industry, and logistics is also not untouched. In fact, logistics per se has been the most difficult industry to implement technological changes, but companies like LetsTransport have transformed the whole domain of logistics."

"The next big trend in logistics will





Companies need to build infrastructure that allows customisation of orders within the supply chain, without adding any cost. Smart supply chain control towers are the need of hour, which can anticipate potential problems in an automated and optimised fashion at a regional and global level. Leading players of consumer products have a strong distribution network in rural India. They also stand to gain from the contribution of technological advances like internet and e-commerce to better logistics performance.

ANIRUDDHA BANERJEE

Senior Vice President- SCM, Spencer's Retail & Nature's Basket



be the adoption of electric trucks. EV evolution has already started and that will be one of the biggest turnaround for the logistics industry in our country," Pushkar anticipates.

"With low operational and maintenance costs, we expect EV to play a pivotal role in intra-city and last-mile logistics, and we are well prepared for it. In augmenting our fleet, we are also contributing to strengthening the EV ecosystem by enabling financing of EVs, setting up charging infrastructure as well as enabling a marketplace for resale of EVs in the near



Statistics has it that while most logistics startups have been focussed on shaping inter-city logistics, around 40 per cent of the total supply chain cost is intra-city. Also, there seems to be a clear industry-agnostic trend towards higher fulfilment rates at faster delivery times within cities.

future. This in turn will encourage more driver-entrepreneurs to move to EVs as it becomes a more profitable asset."

LetsTransport is already showing its commitment towards strengthening the EV ecosystem in the country by enabling finance for vehicle owner-operators, educating potential entrepreneurs on the commercial benefits of electric vehicles, and contributing to the charging infrastructure. It is an established fact that the cost of operating a commercial 3-wheeler EV is around 20 per cent of equivalent traditional internal combustion engine (ICE) vehicles. While the EV ecosystem is still at a nascent stage,

the sustainability impact and operational costs of EVs are key drivers for early adoption in logistics.

Another Bengaluru-based tech-logistics firm Blowhorn decided to differentiate itself by offering micro fulfilment services. It says to have pioneered the spot and fixed-contract transportation market and is now turning its attention and accelerating initiatives towards speed across logistics offerings. It provides fixed contract-based as well as variable engagement models for large enterprises, SMEs, and individuals. Consequently, Blowhorn remains as India's first and only 'full-stack' logistics

company, operating across Bengaluru, Chennai, Delhi, Hyderabad, and Mumbai markets. Full-stack refers to its capabilities in all three elements of the logistics value chain—warehouses, transportation, and tech-enabled systems.

Statistics has it that while most logistics startups have been focussed on shaping inter-city logistics, around 40 per cent of the total supply chain cost is intra-city. Also, there seems to be a clear industry-agnostic trend towards higher fulfilment rates at faster delivery times within cities. Customers are no longer willing to wait for the goods they have ordered. This represents a huge challenge for intra-city supply chains, and a huge growth opportunity for nimble logistics start-ups optimised for speed such as Blowhorn.

"The benefits of technologies reach far, effecting the most basic operations in the supply chain. They provide a simple, yet impressive and impact-heavy approach to delivering optimisation and

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Local intra-city logistics providers cannot provide a service that outstand the rest. We at LetsTransport have always worked towards adding features that make it simpler for truckers to transact through our application directly, without any hassles. Logistics industry, despite being one of the largest in our country, is very unorganised and with evolving consumer behaviour, last-mile logistics has become a bigger challenge and we at LetsTransport are trying to solve it through our platform.

PUSHKAR SINGH, Co-founder & CEO, LetsTransport



More importantly, leveraging adaptive technologies has proven to increase productivity and profits. Done right, the companies in question have their growth strategy served on a silver platter. The COVID-19 lockdown affected the logistics sector and Blowhorn too was hit by it. Our business faced a drastic dip. Driver partners were affected. But it gradually improved. In this time period, we partnered with some FMCG brands which benefitted driver partners as well brought continuous business.

SANTOSH DESAI, CTO, Blowhorn



efficiency. More importantly, leveraging adaptive technologies has proven to increase productivity and profits. Done right, the companies in question have their growth strategy served on a silver platter," said **Santosh Desai, CTO, Blowhorn** in a statement to the media.

"In Bengaluru itself, we have several small warehouses, not more than 1000 sq ft, spread across various localities. For consignments that needs some storage or transit, we keep them in these warehouses. None of these consignments stay for more than 24 hours."

Blowhorn not only uses technology to connect drivers and manage trips but also to manage this inventory. While it aggregates transport partners and drivers, it does not charge them.

"If a driver says he wants to earn Rs 1,000 a day, then our platform will connect him with trips that is relevant, based on the vehicle he drives. Our agreement is with the enterprise or whoever requires the logistics service and we charge them accordingly," noted Desai.

"We want to provide end-to-end services which include fulfillment services and analytics."

"With the increasing demands of transaction volumes by end-customers, it is important for firms operating in the

logistics and supply chain sector to have reliable, fast and flexible business operations. They have to be ready to create new, innovative delivery solutions to ensure the sales-readiness of their retail network."

"The COVID-19 lockdown affected the logistics sector and Blowhorn too was hit by it. Our business faced a drastic dip. Driver partners were affected. But it gradually improved. In this time period, we partnered with some FMCG brands which benefitted driver partners as well brought continuous business," he added.

Assessing the relative importance

Today, it is about building capabilities to seamlessly execute movement of goods irrespective of scale and size.

Major e-commerce players as well as small businesses are today looking to improve delivery time and experience as

a critical tool to gain new customers and satisfy existing ones. Hyperlocal players are increasingly witnessing a rise in express delivery, next day delivery or two day delivery. Instant on-demand delivery is another relatively new focus area gaining increasing prominence in recent times. However, executing express deliveries and on-demand requires highly sophisticated logistics and last-mile delivery capability. The relatively nascent logistics sector in India therefore needs to grow at a rapid pace to meet the rising needs of a digital economy. Clearly, an infinite space for last-mile delivery services is emerging in India.

With above, the process of digital transformation in logistics is more than just installing a brand new system or software. It is a collaborative endeavour that needs strategic repositioning of the corporate. Businesses are striving to become more adaptive and customer-centric with the aim being to achieve optimisation in distribution networks. Speed and timing are your best friends in order to gain a competitive advantage, offering reduced time-to-market. This calls for increased agility in supply chain automation solutions—the only way to make a mark in today's cutthroat and fast-paced market. 



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JUMPING THE BARRIERS TO BETTER **AIR LOGISTICS MANAGEMENT**

After navigating through the extraordinary challenges and unprecedented circumstances imposed by the COVID-19 pandemic, the global air logistics industry is all set to move forward utilising technology as a 'Survival Kit'. For those still depending on the conventional ways of operating and manual functions may still find it difficult to exist in this current challenging environment, but companies who have embraced 100 per cent digitalisation are all set to welcome rapid growth and build on agility and resiliency over time. Technology has truly become a means to reinforce business competitiveness and performance in the New Normal scenario and it has truly been playing a pivotal role in defining the success of the supply chains, by enhancing the effectiveness and efficiency of the logistics system, writes Ritika Arora Bhola...



Logistics Operational Efficiency

With the onset of COVID-19 crisis, the global logistics industry witnessed a boom in adoption of Internet of Things (IoT), data analytics and the cloud, robotics and automation, chatbots, and new age technologies like Artificial Intelligence, Machine learning, Blockchain, that is helping enhance logistics efficiency and maintain operational consistency.

The last few years saw emergence of several young global tech startups like CargoAi, Cargoflash, Web-Cargo, etc. offering highly efficient and innovative tech solutions to the logistics and related sectors, for boosting speed and cutting down on paperwork and other rigorous manual operations. With digital technology and cloud data becoming increasingly available from multiple sources, now

cargo handlers and customers are beginning to see the potential benefits of greater visibility and ability to improve and analyse efficiency of business operations.

"The new, evolving technologies are generating strategic opportunities to make competitive advantages in various functional areas including logistics and supply chain management. Within the logistics sector, automation technology has substantially increased the speed of identification, data collection, processing, analysis and transmission, with a high level of accuracy and reliability," says **Jasraj Chug, Director and Co-founder, Cargo Flash Infotech**. "Technology has become a means to reinforce business competitiveness and performance. However, the degree of success depends on the choice of the technology, availability of proper organisational infrastructure, culture and management policies."



With the newest technologies being utilised in logistics and supply chain management, including automatic identification, real-time communication and information, apart from supply chain and logistics software SaaS companies that helps firms globally optimise their supply chain and logistics operations, digitisation is making the Indian logistics arena more advanced, connected, and lucrative. Amongst risk mitigation, cost optimisation, and increased customer satisfaction, technology and automation has become the foundation for increased efficiency within the domestic logistics sector.

"Thanks to the liberalisation of the Indian economy, the competitive pressure is built up and therefore the only choice to face the competition is to qualify certain technology-enabled operations," says Chug.

"Data and technology can be very powerful tools to create new business opportunities with better efficiency and lower transaction costs when compared to traditional methods," says **Aashish Agrawal, Managing Director at Freightos India.**

"For the overall logistics space, technology enriches the user experience at all levels by standardising and streamlining how freight moves. This is especially impactful in India, as it is one of the major countries for air cargo, with multiple airlines and freight forwarders who are part of the ecosystem," according to Agrawal.

"For freight forwarders, technology provides both faster operations and customer service. Conveniently, these are also two main factors considered by customers when choosing freight forwarders to work with. Our platform Web-Cargo connects forwarders to airlines by providing them access to instant, bookable rates and capacity, through our API connectivity with airlines, which otherwise wouldn't be available in a live environment."

"The efficiencies created for air cargo booking transactions benefit both forwarder and airline, and airlines further benefit from selling cargo directly to their customers on a self-service model with transparency and accuracy. One could easily draw parallels between what Web-Cargo is doing on the freight side and what the Indian online travel company MakeMyTrip is doing on the either side. This type of digitisation adds value to an industry by providing much faster and standardised transactions at faster speeds compared to what is available otherwise," adds Agrawal.

"Technology and especially APIs enable a complete reconciliation of all records of a shipment to ensure the best service for the end customer," agrees **Matthieu Petot, CEO, CargoAi.** "Technology-based airfreight distribution ensures visibility over the best price, the best route, and the best carbon footprint for the customer to choose from. Final invoices match quotes and bookings. Operational efficiency opportunities are thus everywhere."



CargoAi.co operates as a SaaS marketplace and therefore, we strive to gain user adoption, which depends on a variety of factors that include the adoption and use of tech solutions in the B2C environment, the cost of manpower, the overall appetite for technology. Our mission at CargoAi remains to really help our customers 'future-proof' their airfreight procurement activity.

MATTHIEU PETOT
CEO, CargoAi



Cédric Millet – ECS Group Chief Strategy and Digital Officer says no differently. “Data has been there in a way or another. The most important thing is not to have data. The most important thing is to know how to make use of it, and to share it factually, without interpretation, to the various stakeholders. Technology plays an essential role in how quick it extract, transforms and loads (ETL) data into big databases. Technology also ensures to make that data available everywhere, at all times and in a secured manner. The role of Data Engineers, Data Analysts and “BI Labs” became essential in order to do that. They deliver all the ingredients necessary to give visibility and facts. On the quality side, this plays a major role in identifying the root cause of structural problems, so that corrective actions can be implemented. On the operational side, this prevents documents to be lost when the information is transmitted electronically. It also speeds up the delivery when customs clearance can be anticipated. Exchanging information also means that you can trigger alerts when things do not go as planned. This helps speeding up the recovery.”

“There is still a long way to go before having a clean, streamlined, standardised way of handling data across all stakeholders of the air cargo industry,” says **Nathanaël De Tarade, Chief Commercial Officer at Wiremind**. “That isn’t to say that there is not a trend. On the contrary, things are moving in the right direction, the right level of priority is often given to data-related topics. In short, we have taken off, but the flight is not over. Talking about the role of technology and operational efficiency, I think this is very clear to everyone when we look at concrete examples. Take the efficiency of a customer service agent: if one has to send 12 emails to ask for a quote, make 5 phone calls to ask for a follow up, it’s quite obvious than efficiency is raised by cutting this process to just a few clicks.



For freight forwarders, technology provides both faster operations and customer service. Conveniently, these are also two main factors considered by customers when choosing freight forwarders to work with. Our platform WebCargo connects forwarders to airlines by providing them access to instant, bookable rates and capacity, through our API connectivity with airlines, which otherwise wouldn’t be available in a live environment.

AASHISH AGRAWAL

Managing Director,
Freightos India

Thanks to the utility of integrated solutions, platforms, etc. that speak to each other.”

Technological Progress and Potential Benefits

There are numerous benefits of tech adoption in terms of efficiency gains, quality, communication and costs reduction, to name the most primary.

Digitisation of the air sector’s supply chains has been one of the most significant factors, which already resulted in noticeable improvements in terms of resiliency and agility in worldwide operations. Airline and logistics management firms are now reconsidering all the processes to be digitalised at a breakneck speed. Air cargo is going to be a critical zone of durability for airlines and airports within the conceivable future, considering the management make it a strategic priority to introduce simple, end-to-end technology solutions to automate whole of the management process and operations.

A large number of service providers in the sector are deploying modern technologies to reinforce flexibility, efficiency, and sustainability.

Recent years witnessed the emergence of cargo bookings on one platform allowing a convergence of multiple airlines and freight forwarders on a singular interface. Integrating a technology solution will augment operations and improvise transit operations. This protects the agency time and money. Also, the ‘last-mile delivery’ conundrum is making on-demand shipping affordable and achievable, making an organisation stand out from the crowd.



Witnessing such an advantageous opportunity, Cargo Flash Infotech is thinking ahead of the curve and designing future-ready systems to collaborate between the key stakeholders of the air cargo domain. "Technology must be embraced to extend efficiency, show real-time performance resulting in an eco-sustainable operation, which successively will result in better decisions and increased revenue," Chug says.

CargoAi's customer offering starts with transparent information at their fingertips, which translates into immediate efficiency gains. "Better information means better procurement decisions, in terms of costs but also sustainability for sure. Our mission at CargoAi remains to really help our customers 'future-proof' their airfreight procurement activity," adds Petot.

Agrawal says, "While the entire freight logistics industry benefits from advanced technology, the air cargo sector in particular has an advantage as the passenger side of air travel has already been digitised across many platforms for decades. Customers benefit from the immersive experience, better optionality, and standardised pricing and booking access. Airlines improve overall load factors, and provide a better customer experience."

Millet highlights, "Technology has a role to play in all processes of the air cargo sector. In the commercial domain, making use of an advanced 'business intelligence and reporting system' allows you to implement a data-driven sales approach where your sales teams can identify performance gaps, and find the right leverages to improve revenue optimisation. On the reservation side, digitising the quotation process and the booking process for simple shipments can free up time so that your teams can focus on more complicated added-value shipments, on flight optimisation or on a better interaction with GHAs."

"General cargo shipments below 500 kgs represent 40 to



Cargo Flash comes into the image by providing integrated, intuitive and seamless software solutions that incorporate all the possible operational and administrative solutions for the air cargo domain. Our single-platform solutions allow the aviation stakeholders to access real-time information, which is poised to become the forerunner for proactive data analysis, resulting in better air freight transport management.

JASRAJ CHUG

Director and Co-founder,
Cargo Flash Infotech



50 per cent of the business in terms of the number of AWBs issued, and there is no good reason to still have these shipments booked via emails or phone calls, requiring human interaction. On the customer service side, technology allows you to have a real-time track and trace of all shipments, with even on-flight geolocation, and advanced notification functionalities. Optical Character Recognition (OCR) coupled with Machine Learning allows the teams to stop making manual entries, and sometimes double or triple entries. There is a long list of other examples of the benefits that advanced technology can bring to the air cargo sector," he adds.

Industry's Bottlenecks

Amidst the pandemic, freight forwarders, end-users and air cargo operators, etc. are embracing technology whole-heartedly as the only way possible to survive in these trying times. Experts say there have been many positive tech developments in the last few years and many tech-based start-ups have emerged providing excellent services to the logistics industry/air cargo sector, making operations smoother and fast and with zero human intervention. However, the adoption process is still relatively slow in developing markets like India. High costs, greater dependence, less awareness, manual operations are considered to be some of the reasons.

"In the global logistics market, many new technologies are being utilised whilst in India, the adoption process is relatively slow. The supply chain is predicted to play a key role in increasing customer satisfaction, effectively predicting product demand and making better use of the resources in hand. As a result, the demand for accurate higher cognitive processes and forecasting is on the increase. An increasing number of logistics professionals are now keen to interpret data trends to not only anticipate stocks but also to optimise capacity and asset utilisation. However, the very pace of embracing automated operations isn't sufficient to date. The Indian logistics sector is more enthusiastic about normal modes of operations, by choice, and is vehemently hesitant about

up-skilling their technological skills and awareness," briefs Chug.

"Even as the industry understands and supports many of the advantages of today's technologies, some questions remain the same, on how they're going to acquire it and who will help implement the improvements," he adds.

Cargo Flash aims to join such implicit dots through its integrated and intuitive systems and supply end-to-end software solutions together with the flexibility of handpicking the system, supporting the need of the industry.

"CargoAi.co operates as a SaaS marketplace," Matt says, and therefore, they strive to gain user adoption, which depends on a variety of factors that include the adoption and use of tech solutions in the B2C environment, the cost of manpower, the overall appetite for technology. "In India, specifically, we certainly see many of these factors at play. Overall we are quite pleased with our development in India."

"Tech companies with simplified flows, immersive user experience, cost-effective implementations, and far reaching outcomes provide a competitive advantage," Agrawal puts across.

"Looking at the context surrounding Indian logistics, there are a lot of positive developments and attitudes towards technology adoption, with many startups and established companies, including WebCargo that have made a positive start in India," states Agrawal.

"A lot of logistics organisations are still working from home and while this helps speed up adoption with certain technologies, rolling out any large-scale transformation in logistics is always a challenge! However, the biggest challenges can also be seen as opportunities. Technology that is transparent and responsive, such as WebCargo, can address these issues by providing simple-to-use tools providing visibility into carrier capacity and pricing in real-time."



Technology has a role to play in all processes of the air cargo sector. In the commercial domain, making use of an advanced 'business intelligence and reporting system' allows you to implement a data-driven sales approach where your sales teams can identify performance gaps, and find the right leverages to improve revenue optimisation. On the reservation side, digitising the quotation process and the booking process for simple shipments can free up time.

CÉDRIC MILLET
Chief Strategy and Digital Officer, ECS Group

Millet use of technology hinges on knowing how to manage technology efficiently and overcoming barriers that come with integrating it:

- First, some people do not necessarily want to change, and want to stick to their existing way of working. A digital transformation will be as fast as the weakest link that needs to embrace it. In that respect, change management plays an essential role when it comes to implementing new technologies. Deploying a technology or a new digital solution is not only about making sure how to use the functionalities. It goes beyond that: it is about changing old habits, and integrating that technology in day-to-day activities to adopt a much more efficient way of working. Companies have a tendency to consider change management as the second priority, whereas it is actually an essential part when implementing a new technology.
- Second, some of the actors in the logistics chain still have heterogeneous requirements. Take the example of e-freight; one can theoretically stop using paper documents to accompany your shipments. But the customs authorities of certain countries still require that packing lists, certificate of origins, and even AWBs are printed prior to performing the customs clearance. Paperless is in that case a wishful thinking, whereas the technology is available to make it possible.

Tarade agrees. "One of the constraints I see is integration between systems; it is often seen as a big hurdle. While having a simple MVP-type of integration is something that can generally be done quickly without large investments. And it's the best way to see whether something would work in real life or not. Another issue lies with the data; it does not make money in itself. Having a modern data warehouse and



clean data is essential, but it does not always get the same attention as the rest. If you go to your board, it's always easier to ask "I need to invest X\$, because I will get a return of 3 times X\$" than to say "If we don't change our database and invest in core systems, we will not make money immediately but we will lose XXX\$ in the future."

"Lastly, I think that there is a constraint that has to do with complexity. There are many stakeholders, many systems, and many things to optimise in air cargo. And we tend to neglect the fact that while there might be a solution offered by technology, ultimately it all comes down to execution,

which requires a great deal of human interaction.”

Reimagining Future Supply Chains

From transportation to shipment tracking and last-mile delivery, supply chains, with the evolution of technology, end-to-end visibility, resiliency and transparency of a shipment from placement to delivery has been improved and customers worldwide are acknowledging and appreciating the benefits and opportunities being generated. With the increased usage of technology, the supply chains of the future are believed to be truly more tech-friendly, resilient and efficient.

“Digitisation has the ability to connect an industry fragmented across various modes of transport and between many major logistics players, so that every step across the supply chain maintains a seamless flow of information, documentation, and of course, the physical flow of goods,” notes Agrawal. “The ideal way to make that happen is through technology that let customers, logistics service providers and carriers plug into a system which connects them all and creates a standard which can be adopted across the globe. This will help create more reliable processes, enabling better planning and execution of freight and shipments while allowing flexibility for unpredictable situations such as the COVID pandemic that we’ve been experiencing from the last couple of years.”

Chugh understands how digital transformation of supply chains enables resilience through prompt management. “Increased visibility and transparency of operations allows decision-makers to determine real-time judgment that affect the result and help prevent disruption. Predictive analytics, along with AI, are often very effective for recommending optimised inventory levels, restocking inventory, and growing operational efficiency alongside warehouse optimisation. Similarly, the key benefits of incorporating technology



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NATHANAËL DE TARADE

Chief Commercial Officer,
Wiremind



within the air cargo domain are broadly classified into the aspects of speediness, seamlessness, smartness (predictive) and transparency.”

“The supply chain is now seeking a single-system solution that encompasses all the operational and administrative facets, and which become more beneficial when executed via technology.”

Here, Cargo Flash comes into the image, Chugh says, by providing integrated, intuitive and seamless software solutions that incorporate all the possible operational and administrative solutions for the air cargo domain. “Our single-platform solutions allow the aviation stakeholders to access real-time information, which is poised to become the forerunner for proactive data analysis, resulting in better air freight transport management,” adds Chug.

Future supply chains will have a new platform, IATA ONE Record which will provide one single source of truth for a shipment. Explaining the process, Petot shares, through the platform, information will seamlessly flow across the supply chain, including manufacturers, shippers, importers and any other players in-between. “Data will also seamlessly be available across multiple modes of transport and most importantly, its quality will have greatly improved. Thanks to secure interoperable systems.”

Millet says, “The supply chain of the future should see some of the processes completely digitised and paperless. What can be digitised should not remain manual, however not everything can be automated.”

“I see several focuses for the coming 5 to 10 years,” adds Tarade.

1. There are still many areas to optimise. At Wiremind, we see that Flight Planning, ULD buildup, Dynamic Pricing, etc. are things where we can bring a lot of value.
2. There are many challenges to face. Investments that are made now in technology will pay off. Right now, the market is peaking, but we all know cargo works in cycles - we have to build an industry that is more robust, and takes advantage of the peaks to ensure that when the market is low, we have solid foundations that can handle turbulence.
3. Sustainability is not a ‘priority’. For us, it’s just like safety. That means it is the condition with which we can operate in the long-term. 

CARGO DEVELOPMENT PROGRAMMES PUT INDIA'S AIR FREIGHT SECTOR INTO OVERDRIVE

Since the last many years, India's air cargo industry has established its worth internationally and also witnessed a great transformation in terms of infrastructure and throughput capacity—from world-class airports with state-of-the-art cargo hubs and handling capabilities, storage and transportation facilities, excellent turnaround time and performance made possible with the best of automation and technologies in place—the sector is now considered capable of acting as a force multiplier in making India's vision of a US\$5 trillion economy further possible. Even during the pandemic which wrought massive devastation across the nation both from a humanitarian and economic standpoint, the domestic air cargo sector emerged as a success story as it facilitated the uninterrupted supply of goods and essential commodities countrywide and across continents.

Ritika Arora Bhola



Predictions: 2022 and beyond

It seems the Indian air cargo industry is taking great strides at the moment, mostly benefitted by the efficient and ambitious initiatives and schemes launched by the government in the last few years.

While other industries were on standstill during the pandemic, Indian air cargo gained momentum and the cargo business proved to be a great contributor towards revenue generation for the domestic aviation sector.

According to the WorldACD air cargo rankings, the number of freighters being operated by Indian carriers has increased from 5 as of March 2020 to 25 as of today, and the share of cargo carried into and out of India by sovereign flag carriers has increased from 2 per cent to 19 per cent. And for the first time, an Indian flag carrier has broken into the top ten carriers of cargo from India.

Also, Indian government's recent initiative of withdrawing the unrestricted 'Open Skies Policy' to promote Indian carriers has commendably assisted the industry's growth.

Another initiative, Krishi Udan has connected Indian farmers from regions with sporadic and problematic road and rail connectivity, thereby lengthening transit times, to the main consumption centres of India through air cargo.

The Ministry of Civil Aviation's Incentive Scheme has also benefited the shippers, farmers, and the regional airports. This has utmost helped the domestic air cargo industry grow and establish itself as a feasible mode of transport of perishable commodities.

Further propelling the growth, the National Air Cargo Policy 2019 (NACP) also rightly proposes to capitalise on the advantage of India, from a geographic point of view, of being positioned between the manufacturing hubs to the east and south east of Asia, and with the consumption centres in Europe and the Americas by highlighting the creation of transportation hubs at all major Indian airports in the run up to 2025.

Observing the above, it would be apt to say that Indian air cargo industry is moving in the right direction and is ready to achieve the pre-COVID-19 growth levels in the coming years.

"Undoubtedly, the cargo business has been a great contributor towards revenue generation for the Indian aviation industry during the pandemic," says **William Boulter, Chief Commercial Officer at IndiGo**.

Talking about IndiGo's operations, Boulter states, "We also had to adapt ourselves to the fast evolving business environment during the pandemic. By using the aircraft cabin (with minor changes) as well as belly space, we have been able to carry significant payloads on our passenger aircraft as 'CarGo



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charters'. For the fiscal year 2021, our cargo revenue increased by 9.6 per cent compared to the previous year, even though our normal belly space from passenger operations was absent for a couple of months, and at a much reduced level for the remainder of the year. This has really supported us during this pandemic period when our operations have been severely impacted. We have flown over 6500 'cargo-in-cabin' charters since April 2020 and these have made a positive contribution to our cashflow when passenger services were at a thin level."

Further, highlighting their growth, the global air cargo expert added that IndiGo has initiated a freighter programme and is in the process of sourcing four A321CEO aircraft.

"The A321P2F—Passenger-to-Freighter conversion is the most efficient narrow-bodied freighter available, offering 24 container positions and supporting a payload of up to 27 tonnes. The delivery of our first freighter

is expected in first half of CY2022. Our investment in the Freighter Programme will help strengthen our product and services in the segment, and not only accelerate our own business recovery but will also be a strong engine of economic growth for the country.”

“Looking at the current pace and scenario, we do see potential in the cargo business, which will remain one of the key revenue generators for all the airlines and continue to contribute to economic growth in India,” suggests Boulter.

“Domestic cargo has certainly proven itself to be a key revenue generator for Indian airlines in the chaos and duress of a global pandemic,” veteran freight forwarder **Cyrus Katgara, Partner, Jeena & Company** also feels.

However, Katgara says that growth is still relatively low as compared to pre-COVID-19 times.

“At present, we are doing 15-17 per cent lesser volumes compared to the pre-COVID 19 levels, however now the stage is set for domestic air cargo to grow.”

Keku Bomi Gazder, CEO of AAI Cargo Logistics and Allied Services Company (AAICLAS)—a fully owned subsidiary of Airports Authority of India (AAI) says, “We are seeing green shoots across the air cargo industry. The domestic cargo throughput has reached close to pre-pandemic levels but we need measures to sustain these levels.”

Gazder informs that he is working with the industry to work out ways to remove bottlenecks and hurdles to make the industry attractive and shift more cargo from other modes of transport to air.

The Ministry of Civil Aviation's Incentive Scheme has also benefited the shippers, farmers, and the regional airports. This has utmost helped the domestic air cargo industry grow and establish itself as a feasible mode of transport of perishable commodities.

“We work alongside the larger industry to ensure needs and wants of the industry is listened to, addressed and resolved. Most of domestic cargo moves through the large metro airports at present. However, we are now seeing a shift to that phenomenon, which is being driven by the pandemic. Tier II and III cities now account for a large chunk of the business, thanks to e-commerce and door to door supply.”

“At AAICLAS, we are fortunate to have the responsibility to manage and operate these cargo terminals. What we did during the vaccine movement was an eye opener. A lot of bottlenecks got removed and funds allocated to be deployed for building cool chain assets got deployed in creating better basic infrastructure. We feel these numbers are sustainable and will move only northwards. Furthermore, the government at centre is coming up with various schemes to stimulate growth and facilitate freight.”

Triumph over hurdles

Despite various uncertainties and challenges of what lies ahead—like capacity crunch, high fuel costs, and multi-modal connectivity issues, the air cargo sector recorded modest yet impressive growth. The industry saw growth opportunities in innovation and digitalisation and readily moved towards it. The domestic air cargo stakeholders worked 24x7 to ensure the continuity of supply chains and logistics operations, proving that even disastrous crises are never meant to stop them to achieve their goals.



Interesting developments in India's recent aviation and air cargo industry

- On December 21, 2020, IndiGo announced that it has collaborated with Urban Drive car rental company to offer self-driven and chauffeur driver services across 60 Indian cities.
- In October 2020, Zurich Airport International signed the concession agreement for the development of Jewar Airport on the outskirts of Delhi. The agreement has granted Zurich Airport International the licence to design, build and operate Noida International Airport (NIAL) for the next 40 years.
- In October 2020, the Airports Authority of India (AAI) announced plan to upgrade runways at seven airports across the country by March 2022.
- In January 2020, IndiGo became first Indian carrier to have an aircraft fleet size of 250 planes and became the first airline to operate 1,500 flights per day.
- On January 19, 2021, the Airport Authority of India (AAI) signed a concession agreement with Adani Group for three airports—Jaipur, Guwahati and Thiruvananthapuram. The concession period is 50 years from the date of commercial operations.
- On February 25, 2021, the Airports Authority of India (AAI) issued tenders for construction of the first phase of an international airport at Dholera in Gujarat, entailing an investment of ₹987 crore (US\$135.07 million). The new facility is being set up in Greenfield city under the Delhi-Mumbai Industrial Corridor (DMIC) project at Dholera.
- On March 25, 2021, Union Minister of Civil Aviation Hardeep Singh Puri inaugurated the Kurnool Airport, Orvakal, Andhra Pradesh, in a virtual ceremony. The flight operations at Kurnool airport will commence on March 28, 2021 under the Regional Connectivity Scheme – Ude Desh Ka Aam Nagrik (RCS-UDAN).
- In March 2021, the government submitted a proposal to develop a water aerodrome project at the Ujjani Dam, under the Ministry of Civil Aviation's UDAN-RCS (regional connectivity scheme).
- In March 2021, the government announced plan to set up two water aerodromes in Assam and four water aerodromes in Andaman & Nicobar Islands this year to boost tourism and connectivity.
- In March 2021, the Indira Gandhi International (IGI) Airport in Delhi announced a key expansion project to increase its passenger handling capacity. The expansion project includes a new terminal, advanced facilities, an additional runway and improved capacity to handle more passengers.
- In April 2021, Boeing, an aircraft manufacturer, announced that it has partnered with the Indian Aviation Academy (IAA) and the University of Southern California (USC) to conduct safety management system training sessions for all stakeholders in the domestic aviation industry.
- In June 2021, SpiceJet announced its ambitious target to fly 100 million domestic passengers on Sustainable Aviation Fuel (SAF) blend by 2030 under the aegis of World Economic Forum (WEF).
- AAI plans to invest ₹25,000 crore (US\$3.58 billion) in next the five years to augment facilities and infrastructure at airports.
- An UK business group is set to invest ₹950 crore (US\$135.9 million) in Hyderabad-based Turbo Aviation's new airline TruStar.



KEKU BOMI GAZDER, Chief Executive Officer, AAI Cargo Logistics and Allied Services Company (AAICLAS)

India has moved significantly up in the Logistics Performance Index. We are working with other ministries to accurately ascertain the bottlenecks. We have reached a long way in terms of thinking outside-in with the end user in mind. E-freight is everyone's agenda and is enabling a lot of frictionless and efficient movement of information and goods. AFS, CFS, and SEZ are some of the areas that we are working with other departments to ensure logistic providers are facilitated.



The domestic industry is poised for fast growth, influenced by the current demand and supply scenario. It is vital that facilities at cargo terminals need to be further improved in relation to space available, also terminal charges need to be reduced to boost domestic cargo.

At present, the domestic industry is poised for fast growth, influenced by the current demand and supply scenario but challenges like inadequacies in gateway and hinterland connectivity through rail, road for air freight; skyrocketing jet fuel prices; higher GST slabs makes it uncompetitive if compared to road and other modes of transport; inadequate infrastructure in tier II airports still looms large, as Katgara points out.

Suraj Agarwal, Director at Monopoly Carriers agrees, "The biggest challenge is the lack of required infrastructure to meet the growth. Higher prices of terminal and freight are also a matter of concern and 18 per cent GST is adding to the woes," he adds.

Boulter emphasises it is vital that facilities at cargo terminals need to be further improved in relation to space available, also terminal charges need to be reduced to boost domestic cargo.

"We also believe that while many of us are adopting digitisation to greater levels, an increased utilisation

Major initiatives undertaken by the government

- ✦ In February 2019, the Government of India sanctioned the development of a new green-field airport in Hirasar, Gujarat, with an estimated investment of ₹1,405 crore (US\$194.73 million).
- ✦ Under Union Budget 2021-22, the Indian government expanded the scope for 'KrishiUdaan' in convergence with Operation Green Scheme, wherein air freight subsidy of 50 per cent for agri-perishables would be provided to North East states and 4 Himalayan states/UTs. The expansion of product-coverage will boost the 'Krishi Udan' scheme and improve air cargo transportation from these states.
- ✦ Under Union Budget 2021-22, the government lowered the custom duty from 2.5 per cent to 0 per cent on components or parts, including engines, for manufacturing of aircraft by public sector units of the Ministry of Defence.
- ✦ In September 2020, the Government of India sanctioned ₹108 crore (US\$14.73 million) for Jagdalpur, Ambikapur, and Bilaspur airports in Chhattisgarh under the UDAN scheme for upgrade and development.
- ✦ The government is planning to start 14 more water aerodromes across the country, after the successful launch of seaplane service by Prime Minister Narendra Modi, between the Statue of Unity near Kevadiya in Gujarat's Narmada district and Sabarmati Riverfront in Ahmedabad in October 2020.
- ✦ The Airport Authority of India plans to abolish royalty and offer steep discounts in lease rent to encourage MRO units to set up facilities at its airports.
- ✦ In March 2021, on the launch of the 'Azadi Ka Amrit Mahotsav (India@75)' by the Government of India, the Ministry of Civil Aviation (MoCA) has proposed 392 routes under the UDAN 4.1 bidding process.
- ✦ On May 08, 2021, AAI commenced commercial operations at Rupsi airport—Northeast India's 15th airport and Assam's 7th airport.
- ✦ The MoCA increased capacity of domestic flights to 65 per cent, from 50 per cent, effective from July 05, 2021.

tion of other evolving technologies will further help in reducing dwell times, while lowering the overall costs, thereby increasing efficiency," he mentions.

"Domestic transportation of cargo is extremely cost-driven. Another challenge for air cargo is from the road and rail operators. We at the air cargo industry are working with the government to attract cargo from other modes to air. This will help to ensure producers and consumers of goods do not lose value during transportation," Gazder reveals.

Taking a favorable perspective on initiatives, Gazder says, "As an example, the Government of India's Krishi Udan Scheme saw success amongst farm producers transporting their goods to buyers who were willing to pay a premium. We did routes like Guwahati – Delhi – London. Imagine the yields that a farmer who sold his produce at a 250 kms radius now selling halfway around the world. It is therefore of paramount importance to bring key stakeholders together and address their needs whilst working on a lean cost structure."

According to the data released by the Department for Promotion of Industry and Internal Trade (DPIIT), India's air cargo industry is expected to witness ₹35,000 crore (US\$4.99 billion) investment in the next four years. The Indian Govern-



WILLIAM BOULTER,
Chief Commercial Officer, IndiGo

We feel the government is taking efforts in the right direction and only such concerted effort will yield positive results. The government launched a bold vision and initiatives to augment the logistics infrastructure and efficiency for India to compete with international markets. The government is planning to set up logistics parks, bolstering highways infrastructure, making 100 tier II and III airports operational, amongst many other activities.

India's air cargo industry is expected to witness ₹35,000 crore (US\$4.99 billion) investment in the next four years. The Indian Government is planning to invest US\$1.83 billion for development of airport infrastructure along with aviation navigation services by 2026.

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Reports say the government has also asked Inland Waterways Authority of India (IWAI) to develop 'freight villages'. The IWAI will also provide inland waterways connectivity to these freight villages. The first of such freight villages was built at Varanasi in Uttar Pradesh. The village provides connectivity through all three modes of transportation—road and rail connectivity through Eastern Dedicated Freight Corridor (EDFC), and water connectivity through the country's longest waterway—National Waterway 1. A similar freight village is proposed on 335 acres of land in contiguity with the terminal at Sahibganj. Indeed, these are great moves.

Taking cue of the same, Gazder says, "India has moved significantly up in the Logistics Performance Index. We are working with other ministries to accurately ascertain the bottlenecks. We



have reached a long way in terms of thinking outside-in with the end user in mind. E-freight is everyone's agenda and is enabling a lot of frictionless and efficient movement of information and goods. AFS, CFS, and SEZ are some of the areas that we are working with other departments to ensure logistic providers are facilitated."

On a positive note, Katgara highlights that the logistics infrastructure for multimodal logistics in India is growing at brisk pace.

"The government is working towards setting up 35 MMLPs in India and out of the 35 identified locations, 24 are situated on the national corridors planned to be taken up for development in the Bharatmala Pariyojana Phase-I. The work has already begun on the detailed project reports (DPRs) for seven locations—Nagpur, Mumbai, Bengaluru, Chennai, Surat, Sangrur, and Jogighopa. These locations would be developed from the point of view of external connectivity infrastructure, which means they would have rail and road connectivity, and where applicable, inland waterway connectivity to ports," informs Katgara.

"We feel the government is taking efforts in the right direction and only such concerted effort will yield positive results," Boulter stresses.

"The government launched a bold vision and initiatives to augment the logistics infrastructure and efficiency for India to compete with international markets. The government is planning to set up logistics parks, bolstering highways infrastructure, making 100 tier II and III airports operational, amongst many other activities."

Further shedding light on the positives, Agarwal adds, "In the last few years, road transportation has also improved, all thanks to the Road Ministry on ramping up projects and towards timely completion, and GST which has reduced the barriers in transit resulting in less turnaround time."

"But, still a lot needs to be done. The government under its



CYRUS KATGARA, Partner, Jeena & Company

We are surely moving in the right direction as digitalisation will certainly help it improve the way it runs. Technologies like predictive analytics are providing better visibility over movement of goods and robotic technology is helping distribution centers to keep pace with the demand throughput. All these advanced technologies have started to play a major role in digital air cargo supply chain management. The logistics infrastructure for multimodal logistics in India is growing at brisk pace.

The sector is undergoing a technology transformation, expanding from heavy use of legacy mainframe systems to more customised interfaces used for networking planning, flight operations, revenue accounting and other processes.

Ministry of Commerce is working but things still have a long way to go."

Embracing digital Technology to remain Competitive

Despite the major investments and infrastructural developments India has always been far behind the developed nations when it comes to adopting newest



technologies for robust and efficient operations. But, the pandemic accelerated the need for more advanced, automated, and digitally resilient operations. The air cargo stakeholders are now readily embracing highly-advanced technology platforms and harnessing the benefits.

Now is a crucial point where a fast-track approach to digitalisation is required to keep pace with competitive modes of transport. The sector is certainly undergoing a technology transformation, expanding from heavy use of legacy mainframe systems to more customised interfaces used for networking planning, flight operations, revenue accounting and other processes.

Commenting on the same, Katgara says, "We are surely moving in the right direction as digitalisation will certainly help it improve the way it runs. Technologies like predictive analytics are providing better visibility over movement of goods and robotic technology is helping distribution centers to keep pace with the demand throughput. All these advanced technologies have started to play a major role in digital air cargo supply chain management."

"There are certainly no two thoughts about it. Digital India as envisioned by the Prime Minister of India and e-freight led by IATA is the way forward. The industry and its end users have started seeing the gains out of adopting technology to improve efficiency and attaining effective resource deployment," Gazder supports.

Agarwal do not take account of the same. He says that the domestic air cargo industry is still poor in terms of technology. "We have been asking MoCA regularly to integrate all data in one platform but due to the involvement of multiple agencies, it is not happening."

Leading Indian carrier IndiGo has achieved almost hundred per cent digitalisation of its processes and operations. Two years ago, IndiGo implemented a new CarGo system 'SmartKargo'



SURAJ AGARWAL, Director, Monopoly Carriers

The biggest challenge is the lack of required infrastructure to meet the growth. Higher prices of terminal and freight are also a matter of concern and 18 per cent GST is adding to the woes. The domestic air cargo industry is still poor in terms of technology. We have been asking MoCA regularly to integrate all data in one platform but due to the involvement of multiple agencies, it is not happening. Still a lot needs to be done.



Leading Indian carrier IndiGo has achieved almost hundred per cent digitalisation of its processes and operations. Two years ago, IndiGo implemented a new CarGo system 'SmartKargo' which takes care of the acceptance, shipment tracking and other functions of the cargo network.

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"While moving vaccines, we incorporated real-time tracking of all the COVID 19 vaccine boxes which have moved across the length and breadth of India. Considering the sensitivity of the commodities we have been carrying, such as oxygen concentrators, medical equipment and other critical hospital supplies, the speed of movement coupled with the use of technology has been a winning combination for our success in CarGo logistics," remarks Boulter.

He further informs that the launch of IndiGo's very own CarGo application for shippers on both Android and IOS platforms has been a grand success, with over 48 per cent usage across the network.

"Our goal is ease of business with the use of technology and we have a number of digital implementations planned towards the end of this year, to improve ease of payments among other aspects of the business." 

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ARE MULTIMODAL LOGISTICS PARKS HERALDING AN INTEGRATED TRANSPORT + INFRA POLICY?

India's first multimodal logistics park (MMLP) is being constructed in Assam, a project of US\$ 407 million. This project aims to provide around 2 million direct and indirect employment to the youth in the North East. The MMLP aims to reduce trade cost by 10 per cent and have cargo capacity of 13 million metric tonnes. Looking at the ongoing developments to build world-class MMLPs it seems the industry is set for immense growth and exposure. MMLPs in India have a very bright future and in the coming years, the country will see MMLPs being utilised in most efficient ways by industry stakeholders. With the emergence of highly-sophisticated and efficient MMLPs established at strategic locations, transportation of a variety of goods will become easy and with the successful implementation of advanced technology, robotics and automation, supply chain will become more robust and resilient. However, impediments for multimodal logistics movement in India changes the need for multimodal transportation, and therefore, the need of the hour is coordinated action.

Ritika Arora Bhola



"I

n today's times, warehousing and logistics cannot be simply seen in isolation, rather, they have become an integral part of every company's value chain. Warehouses, therefore, need to support the new age of logistics which encompasses full-fledged, large-format Grade A parks that are flexible and in line with global standards. This includes infrastructure that allows for modular racking systems, palletisation, etc. where even the day-to-day business operations are driven by automation, IoT and AI, and that provides a safe and hygienic working environment, ensuring minimum employee attrition," says **Anshul Singhal, Managing Director, Welspun One Logistics Parks.**

"Another gain is, Grade A logistics parks are strategically located in close proximity to transport hubs and infrastructure arteries while accommodating sufficient parking spots for employees and trucks, enabling high throughput and low transportation costs. Further, such warehouses and even the amenities within are built to last, and when accompanied with regular maintenance can easily serve a business for over 30 years."

"Here, a significant advantage is that Grade A developers with the right construction capabilities and strong financials ensure that their clients get their warehouse as per promised specs with-



As per industry reports, Grade A currently constitutes 35 per cent of the total stock compared to 34 per cent in FY 2020. In the coming years, this demand is only expected to grow further as preferences and focus are gravitating towards compliance, safety, and zero tolerance to regulatory lapses.

in the timelines—enabling accurate business planning while also managing transition and growth. Going by the customer demands, in the future, warehouse managers and technicians would simply like to monitor the operational status from their homes, using laptops or tablets, make adjustments as needed, and occasionally respond to more serious situations by riding out to the facility,” Singhal goes on.

Given this, in the recent years, Grade A development is seeing an upswing. However, India fundamentally faces a lack of Grade A warehousing with only under 90MM SFT of Modern (Grade A) warehousing stock.

As per industry reports, Grade A currently constitutes 35 per cent of the total stock compared to 34 per cent in FY 2020.

In the coming years, this demand is only expected to grow further as preferences and focus are gravitating towards compliance, safety, and zero tolerance to regulatory lapses. Warehouses are the hub of a supply chain, and as a backbone of the entire sector, it needs to evolve. In fact, in India, industrial parks are yet to reach where one of its key occupiers—e-commerce is already at.

Singhal says, “We are building Grade A warehouses that are future-oriented and smart enough to speak to the external world. We are doing so by



Grade A developers with the right construction capabilities and strong financials ensure that their clients get their warehouse as per promised specs within the timelines—enabling accurate business planning while also managing transition and growth. Going by the customer demands, in the future, warehouse managers and technicians would simply like to monitor the operational status from their homes, using laptops or tablets, make adjustments as needed, and occasionally respond to more serious situations by riding out to the facility.

ANSHUL SINGHAL

Managing Director,
Welspun One Logistics Parks



using a combination of technology and processes in an integrated manner and taking care of every critical component from site selection, sourcing, and due diligence to financing, construction, leasing, and exit.”

“Compared to the Asian counterparts, India is still lagging behind in logistics infrastructure,” says **Abhijit Verma, Executive Director & CEO of Avigna Group**. “The Indian government should shift focus on the massive coastline and utilise the significant inland waterways for movement of freight like our neighboring countries. This way, the pressure on road and rail will be minimised and will ensure smooth and timely delivery.”

Although, Verma says, “The good news is that the infrastructure is being upgraded and maintained. There is the emergence of primary and secondary hubs of manufacturing, logistics and allied services. Also there are new tax laws that are working in favour of India’s logistics industry.”

“In the last couple of years, the government has taken several initiatives and launched many programmes to strengthen the logistics sector of the country. The government is known to have given approvals for building 35 MMLPs as part of Bharatmala Programme which is the flagship highways development project. Under the programme, the government has also started developing elevated corridors, bypasses and ring roads to ease traffic congestion caused by heavy trucks. Besides, the government is seen encouraging private participation through PPP model which is also expediting the process of setting up MMLPs across the country.”

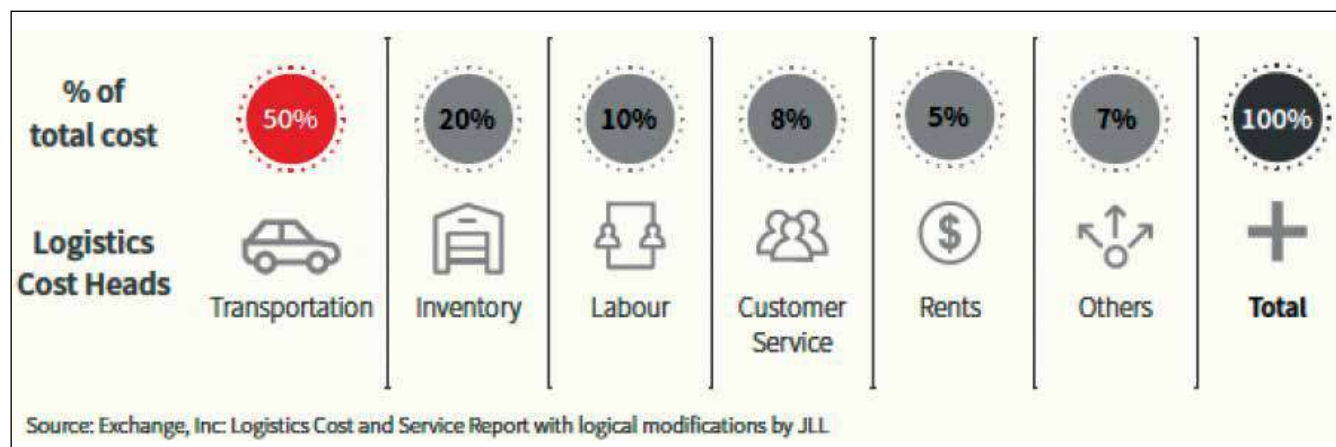
“With the rapid growth of sectors

such as pharmaceuticals, e-commerce, retail, there have also been changes in the taxation structure. Furthermore, there’s been an increase in export and import as well as rise in manufacturing across the country driven by initiatives such as ‘Make in India a’ and ‘Atmanirbhar Bharat’, all leading to the emergence of logistics parks. Such measures are sure to boost the MMLP efficiency,” Verma feels.

“Over the last few years, JLL transaction experience indicates two key features from logistics parks perspective,” informs **Chandranath Dey, Head- Operations & Business Development, Industrial Services, JLL India**.

- The first and the most important feature is larger warehouse space demand (200-500K sq ft) by single occupier which indicates higher volume of consolidated cargo to focus on their facility.
- The second part is to create footprint over tier II and III cities by same occupiers which indicates diverse spread over different parts of the country over historical trend to concentrate in and around major metro cities.

“This pattern of occupier’s demand creates an attractive future prospect for rail linked logistics facilities. In near future, MMLP facilities will help to integrate occupier’s cargo in different geographical locations through use of railway as most cost-effective solution in cargo movement. However, there is still perception gap exist with conventional logistics park developer to focus road-based logistics facility due to lack of clarity in operational side of terminal infrastructure. It is time industrial real-estate developers explore this service





In near future, MMLP facilities will help to integrate occupier's cargo in different geographical locations through use of railway as most cost-effective solution in cargo movement. However, there is still perception gap exist with conventional logistics park developer to focus road-based logistics facility due to lack of clarity in operational side of terminal infrastructure. It is time industrial real-estate developers explore this service offering by allocating railway siding facilities within their logistics park to capture the future need for cargo transportation.

CHANDRANATH DEY

Head- Operations & Business Development, Industrial Services, JLL India

offering by allocating railway siding facilities within their logistics park to capture the future need for cargo transportation," explains DeY.

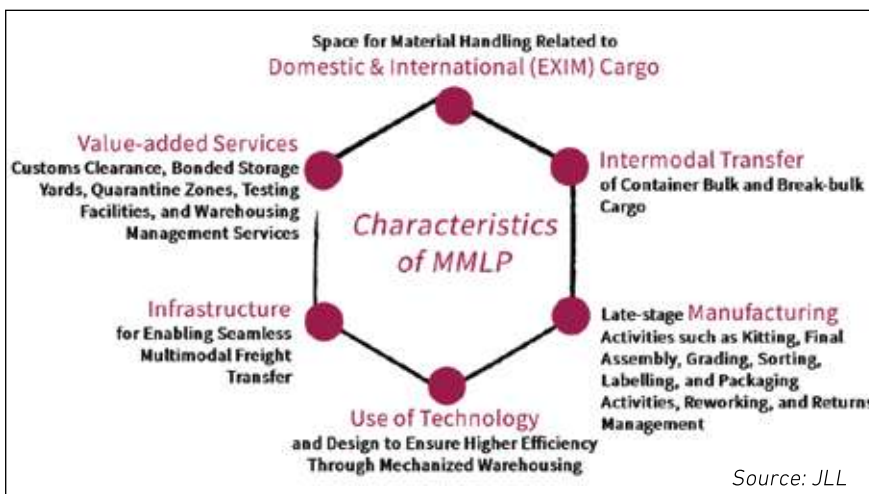
The 'much-needed boost'

Transportation, with share of over 50 per cent of total logistics cost, comprises the highest share of the logistics cost in any cargo movement. Thus, achieving cost optimisation in the logistics component can only be possible through significant focus on optimisation in transportation cost. Any attempt to shift to a mode which reduces the cost of transportation

Illustration of 5,000 tonne cargo to be transported by 1,000 km distance in Rail & Road				
Modes	Transport Unit	Transportation Cost (In ₹ Million)	Transportation Time (in Hrs.)	No of Unit
Railway	Rake	7	42	2.50 Rakes
Roadways	Truck	13	83	200 Trucks

Note: Rake (train), a line of coupled freight wagons (excluding the locomotive) that typically move together.

Source: JLL, Logistics & Industrial Services.
JLL has considered certain standards and logical assumptions to derive the same.



would bring down the overall logistics cost significantly.

Railways is one of the most cost-effective mode of transport as compare to roadways. The following illustration indicates impact on logistics cost on multimodal connectivity based on assumption of 5,000 tonne cargo to be travelled 1,000 km distance.

Despite cost and time effectiveness, India still relies more on roads, because of the reliability and the consistency of the road network as compared to other modes of transport. For encouraging the multimodal model of logistics infrastructure, it is very important to get the confidence of developer-cum-operator of rail-linked hinterland logistics infrastructure. Licensed private rake operators like Adani Logistics, Dubai Port World, Hind Terminal, JM Baxi & Co, etc. could be the key focus entities for exploring rail-based facilities. However, to attract these segments of investors, it is very important to focus on the inherent challenges; few of those are mentioned below:

- Availability of network of rail-based logistics infrastructure (like private freight terminal (PFT), dry port, etc.)
- Convergence with major stakeholders like NHAI, Railways, Dedicated

Freight Corridor Corporation of India Limited (DFCCIL), and respective state departments and bodies

- Cargo consolidation at project locations to achieve return cargo
- Availability of land near road and rail connectivity, cargo and consumption destinations
- Affordability in land price

The above chart indicates "infrastructure" component is linked with the desired feature of MMLP facility having multi-modal connectivity primarily road and rail. In terms of rail share in cargo movement, India is still lagging its comparable countries in terms of population and distance to cover to connect production zone to consumption market. India currently is at 20 per cent rail share in cargo transportation whereas USA and China are in the range of 30 per cent to 40 per cent. The bottleneck for having preference of road to rail is waiting time of rake availability, desired rail linked logistics infrastructure near origin point of the supply chain and efficiency in cargo handling capability. Modern MMLP facility with material handling equipment and ability to service customers' requirement would help to attract more cargo in rail-based transportation mode.



With the rapid growth of sectors such as pharmaceuticals, e-commerce, retail, there have also been changes in the taxation structure. Furthermore, there's been an increase in export and import as well as rise in manufacturing across the country driven by initiatives such as 'Make in India a' and 'Atmanirbhar Bharat', all leading to the emergence of logistics parks. Such measures are sure to boost the MMLP efficiency. The government is seen encouraging private participation through PPP model which is also expediting the process of setting up MMLPs across the country.

ABHIJIT VERMA

Executive Director & CEO, Avigna Group



As such, National Rail Plan 2030 is one of the key initiatives that have been taken up to focus enhancement of rail share in cargo logistics. The Plan is going to focus on overall long term rail development plan, rail infrastructure deficiencies, securing infrastructure requirements in fixed and rolling stock, funding, and financing strategies. In addition, upcoming dedicated freight corridors project also act a catalyst to encourage railway mode for movement of cargo. The proposed network of 35 multimodal logistics parks by NHAI and dedicated rail connectivity from DFC track to private player are also helpful to establish an integrated logistics plan form in India.

However, for achieving the desired success from proposal of NHAI and DFCCIL, it is very important to identify most suitable land parcel having direct connectivity to Rail and Road at affordable price. Private investors are also bullish in creating an integrated logistics infrastructure pan-India.

The logistics sector in India is in a transition phase transforming from an unorganised to modern way of functioning. And this change is visible across different stages of logistics right from storage, transportation to inventory management. The country seems to be bringing down the logistics cost from 14 per cent to 7-8 per cent.

Half of the logistics comprises of transportation that currently relies on roadways, making it expensive and time-consuming. Experts believe, a shift from road to rail can reduce the transportation costs by 45 per cent and travel time by half and for this, as mentioned before, the government has come up with the National Rail Plan 2030 to enhance the infrastructural capacity.

This plan is expected to increase the modal share of railways in the total freight in the country from 27 per cent to 45 per cent by 2030 which also will get a push from the dedicated freight corridors and high-intensity Indian Railway corridors.

Making Infrastructure + Tech a reality in the portfolio

As news has it, the foundation stone of India's first international MMLP at Johighopa, Assam was being laid last year, with the NHAI planning to build MMLPs and 1100 km of port roads. Further MMLPs have been planned in Chennai, Surat, and Nagpur.

In addition to several parameters of supply chain planning, experts say, the investment planning is another important aspect in this segment. For development of a 100-acre logistics facility, around ₹250-300 crore investments takes place. This investment is excluding the cost of land, external infrastructure, and extended track laying cost. This CAPEX heavy model of development requires strategic planning from its development perspective, more investors (pre-dominantly road-based logistics park developer) and time bound development / implementation assurance.



The foundation stone of India's first international MMLP at Johighopa, Assam was being laid last year, with the NHAI planning to build MMLPs and 1100 km of port roads. Further MMLPs have been planned in Chennai, Surat, and Nagpur.

Key sensitive cost for any investor in this segment is the land price which requires several technical parameters (like rail-head proximity, shortage distance for siding connectivity, direct road connectivity, availability of power, water, and other external infrastructure) to comply. Support from all government stakeholders is very important to minimise these components of risk and investment sensitivity for a private investor or developer.

Dey jots down key complexities of using a MMLP facility from an occupier/cargo owner's perspective:

- Identification of suitable infrastructure having rail siding facility both at Origin and Destination Location
- Minimisation of multiple handling



at origin and destination points for availing rail rakes

- Minimum distance to cover to avail rail cargo
- Waiting time for having connecting railway rakes with desired rake specification
- Involvement of modern technology and material handling equipment for efficient handling, movement and tracking of cargo
- Achieving minimum volume of cargo for each shipment
- Average cost effectiveness for railway-based cargo transportation as compare to roadways
- End-to-end time efficiency and its reliability for moving cargo
- Value proposition to cargo owners for availing rail linked facility from freight terminal operators
- Availability of skilled manpower for handling cargo and managing supply chain through rail linked facilities

Experts say, overall viability and sustainability of these facilities are critical for creating an integrated logistics platform with one of the most cost-effective mode of transport. Thus, a consolidated and comprehensive effort is required from various stakeholders to integrate India's logistics platform and to

achieve vision of National Rail Plan 2030 in terms of 45 per cent rail share in cargo transportation.

COVID-19 has definitely highlighted the need for greater regionalisation of the supply chain. If we talk particularly about railways, for the first time in its 167-year history, Indian Railways had to shut down all its passenger services. The entire railway network had to be put on hold for passengers and the situation has not come back to its pre-COVID-19 stage yet.

But, in this challenging economic disruption, Indian railways had played a vital role in cargo transportation. Despite the COVID-19 crisis and challenges, the Indian railways has witnessed the highest ever freight loading in FY2020-21. According to the Railways Ministry, Indian Railways recorded the highest ever freight loading in a year by loading 1233 MT during the year 2020-21 compared to 1210 MT during the financial year 2019-20. This noteworthy freight volume demand was achieved despite decline in transportation of core commodities—such as coal, cement, and iron ore, which comprises ~50 per cent of total conventional cargo and high rated cargo (excluding food grains) in 2019-20.

Even air and road transport were utilised in the most well-organised and

effective ways to transport essential commodities.

Multimodal transport route has proven its importance in this challenging scenario. However, maintaining the infrastructure both at loading point and destination point is necessary. Few points which require direct involvement of various stakeholders are:

- Developer cum operators needs to focus on enhancement of service efficiency to maximise its occupancy
- Securing reliability of the service offerings to cargo owners / occupiers and create a competitive market proposition in terms of its pricing
- Availability of long-term funding for escalating large scale expansion of MMLP facilities in different parts of the country
- State and Central government and bodies to act as facilitator to identify suitable land parcels at affordable cost for developing rail linked logistics infrastructure
- Indian railways should create an implementable railway infrastructure development plan and to look at various policy level bottlenecks

Conventional logistics park developers would need to explore their future business propositions having dedicated railway siding facilities

“Development of MMLPs is critical for the overall efficiency of the supply chain contributing to India's growth trajectory. Best part is development of MMLPs will generate employment opportunities in interior regions of the country as well,” Verma says.

“MMLP can lower the transportation cost to a great extent and around 20 per cent reduction in congestion was resulting from high freight movement caused by large sized trucks and rail. Improved performance and utilisation of Inland Container Depots (ICDs) and Container Freight Stations (CFS) where they exist are some other benefits of multimodal logistics parks to the logistics industry.”

As we see, today, huge investment and planning has been put in developing world-class MMLPs around the country by both Indian government and private authorities. There are several complexities involved when it comes to ferrying cargo from the logistics parks to the destinations and those are some of the major challenges the industry is currently dealing with. [CC](#)

D2C model and where homegrown platforms stand today



Redistribution challenges, absence of retailers to put your brand on the ground and generating a solid online presence backed with revenue growth without compromising on profitability have resulted in few success stories of the D2C model. Nevertheless, the unprecedented corona crisis has led to a new wave of enthusiasm and optimism for the current and upcoming D2C facilitators.

Upamanyu Borah

leading to a better delivery experience.

Shiprocket, India's leading tech-enabled D2C aggregator in its report, which compiled various trends observed by the brand from January to December 2020 including the year-on-year growth of D2C merchants, shipment volumes, etc. identified a 214 per cent increase in D2C sellers on its platform and a 107 per cent upsurge in the volume of shipments vis-à-vis last year. With multiple drivers of growth in various segments, Shiprocket also noted a 188 per cent surge in online sellers during Q3 of 2020, when compared to Q2 as a majority of people, began shifting from offline to online shopping, owing to the pandemic facilitating soaring usage of the Internet.

Based on the merchant

By 2025, India's Direct-to-consumer (D2C) segment is going to become a whopping US\$100 billion market, as per a report by Avendus Capital.

Buoyed by this growth, D2C brands will be driving the next big wave in the e-commerce industry in India, which will be supported by technological advancements and growth in online spending at a CAGR of 35 per cent.

The e-commerce industry is buzzing with change in

the post-COVID-19 world, largely due to the game-changing behaviour of new-age consumers who have got more disposable income to spare. But all of this arose out of the new world order that the multiple lockdowns brought upon all of us.

Today, speed is the primary contributing factor to customer satisfaction with delivery, as customers are willing to pay extra for faster

delivery. This is in addition to factors like contactless doorstep delivery, choice of payment options, and ease of exchange/return. Fulfilling these criteria with a captive logistics arm entails a major CapEx investment that could hinder growth and expansion for online retail.

D2C brands are moving closer to the consumer, partnering with 3PL warehousing and delivery partners



mapping conducted by Shiprocket, with a sample size of over 85,000 sellers, 48 per cent of shippers opted for Cash on Delivery and Express Delivery for their orders during the year.

True to its commitment of helping MSMEs across the country, the fulfilment platform noted that around 51 per cent of the sellers on its platform were from tier-II and tier-III cities and nearly 49 per cent from tier I cities, striking an impressive balance between the metro and non-metro cities in the country.

Shiprocket's report also observed that online stores such as Shopify, Magento, Woocommerce, etc. contributed to over 32 per cent of the total traction while social media platforms including Facebook, WhatsApp, and Instagram contributed to almost 35 per cent. Moreover, there was considerable traction from offline sellers, who contributed to over 19 per cent, and marketplaces such as eBay, Amazon, Etsy, etc. that comprised over 12 per cent of the total traction.

D2C has been one of the fastest-growing sectors for Shiprocket. "The past year

US\$400 billion market India's Direct-to-consumer (D2C) segment is going to become by 2025, as per a report by Aventus Capital

has been phenomenal in terms of the D2C sellers' onboarded onto Shiprocket. There was a 200 per cent increase in the number of D2C sellers' year-on-year with a majority of the D2C orders coming in through social media platforms such as Facebook, WhatsApp, and Instagram," **Saahil Goel, Co-founder and CEO at Shiprocket** mentioned in a recent interaction with us.

"Besides, with several sellers also beginning to avail the services of third-party platforms, as the lockdowns made it nearly impossible for them to move goods from one place to another, inventory distribution has been one of the most exciting

innovations in the industry. Shiprocket fulfilment has been dedicated to ensuring timely, frictionless deliveries with a platform to automate Non-Delivery Reasons (NDR) and this has decreased RTO up to 50 per cent."

"Industry players also adopted automation in supply chain operations which offers huge scope and will facilitate operational efficiency to a large extent. Overall, the untapped market largely lies in bolstering automation in the supply chain and warehouses. The 3PL space offers much scope for growth and development for players who innovate, analyse consumer behaviour, and alter their approaches, and harness technology," he noted further.

While some D2C brands preferred self-shipping of their products, a majority of them were dependent on advanced logistics partners to send their orders to customers.

Things were not looking up for these sellers because a lot of issues arose with traditional logistics partners. Therefore, they started looking for an ideal shipping partner who would give them a smooth logistics experience and cut down on expenses.

Founded in 2015, end-to-end global trade and logistics management startup Shiprocket's state-of-the-art platform leverages AI, big data, and cloud capabilities to help customers reduce logistics costs, achieve transparency, and ensure timely delivery of goods across different transportation modes. The company presently offers freight procurement, transportation management, logistics management solutions via intelligent modules and centralised dashboard configurations.

"In a world that's getting



There was a 200 per cent increase in the number of D2C sellers' year-on-year with a majority of the D2C orders coming in through social media platforms. Besides, with several sellers also beginning to avail the services of third-party platforms, as the lockdowns made it nearly impossible for them to move goods from one place to another, inventory distribution has been one of the most exciting innovations in the industry.

SAAHIL GOEL

Co-founder and CEO, Shiprocket



increasingly virtualised, logistics is one of those actual physical touchpoints that's bridging the gap between businesses and customers. Above that, with skyrocketing demands for home/online deliveries of both essential and non-essential goods post-COVID, the supply chain and logistics industry have rapidly transformed into a key business enabler and a revenue generator," stated **Soham Chokshi, Co-founder and CEO, Shipsy Logistics**.

"For many young logis-

tics management companies, their mission to expedite the digital transformation goal is gaining rapid momentum resulting in endless possibilities to drive innovation. In other words, the SaaS-based logistics management ecosystem will witness exponential growth in the coming years. It will indeed prove to be a viable investment option for investors across the globe."

At Shipy, the success and innovation ratio is just improving. "Most of our

tions, and deploying Blockchain technology to make financial transactions safer and traceable are other areas we are focussing on."

"Making deliveries eco-friendly, helping businesses manages unprecedented demand-supply gaps, and empowering brands to use 'customer experience' as a well-defined revenue stream, pose great opportunities for us. We also foresee tremendous potential in the D2C segment," he further added.



plans revolve around resolving current and future business challenges for our customers. To empower businesses to build future-ready logistics operations, we have worked round the clock to enhance our capabilities. For instance, our smart Auto AI-location system now delivers a 94 per cent success rate. We have made our Hub operations tool completely mobile. We enhanced our AI engine to optimise delivery routes literally in real-time. This has helped our customers reduce the distance travelled by 5 per cent and increase average trips by 6 per cent."

"Our latest deployment of gamification tools is assisting businesses to boost delivery productivity and driver performance."

Chokshi added, "Completely automating logistics partner selection based on multiple factors, rate negotia-

The Inside Edge

With as much homogeneity in product and UI/UX across online retail platforms, there are few things that act as differentiators for the customer. Delivery experience leads the pack and it is something which has evolved—right from the brand or platform communicating at regular intervals about the order being shipped, to providing the customer visibility as the shipment moves through the delivery network making its way to the customer.

The super-digitalisation generated by the COVID-19 crisis will affect many who don't accelerate their efforts in D2C, Online-to-Offline or other channel transformation solutions in the face of new consumer habits. The data by Scalefast on Consumer Behavior below is a testimony to the fact that the D2C model is only going to

expand in the near future.

- 61 per cent of consumers would be willing to share more information with brands if it would allow them to have a better shopping experience.
- 54 per cent of consumers expect to receive a personalised discount within 24 hours of the first contact with the brand.
- 51 per cent of consumers see it as vital to receive a personalised experience through the brand's various digital channels.
- 26 per cent of consumers believe that improved security and user experience on the payment gateway facilitates their consumption at D2C.
- For at least 22 per cent of consumers, having the option of same-day-delivery becomes an important purchase decision.

Now, the question is what actually lies ahead?

The new generations will play a fundamental role in the growth of D2C. Gen Z and Gen Y are more environmentally aware than ever, and are looking to commit to brands that are not only greener and more sustainable, but also demonstrably socially aware (and contributing, of course).

Brands that position themselves with transparency throughout their business strategy (production, supply chain, supplier relations, etc.) will in the long term capitalise on trust and credibility with much greater probability. D2C allows companies to have total control over these factors, and at the same time a greater capacity to prolong this positioning without friction throughout its journey.

So, brands take note, the D2C model is here to stay!

And as Kunal Bahl, CEO & Co-founder of Snapdeal



For many young logistics management companies, their mission to expedite the digital transformation goal is gaining rapid momentum resulting in endless possibilities to drive innovation. In other words, the SaaS-based logistics management ecosystem will witness exponential growth in the coming years. It will indeed prove to be a viable investment option for investors across the globe.

SOHAM CHOKSHI

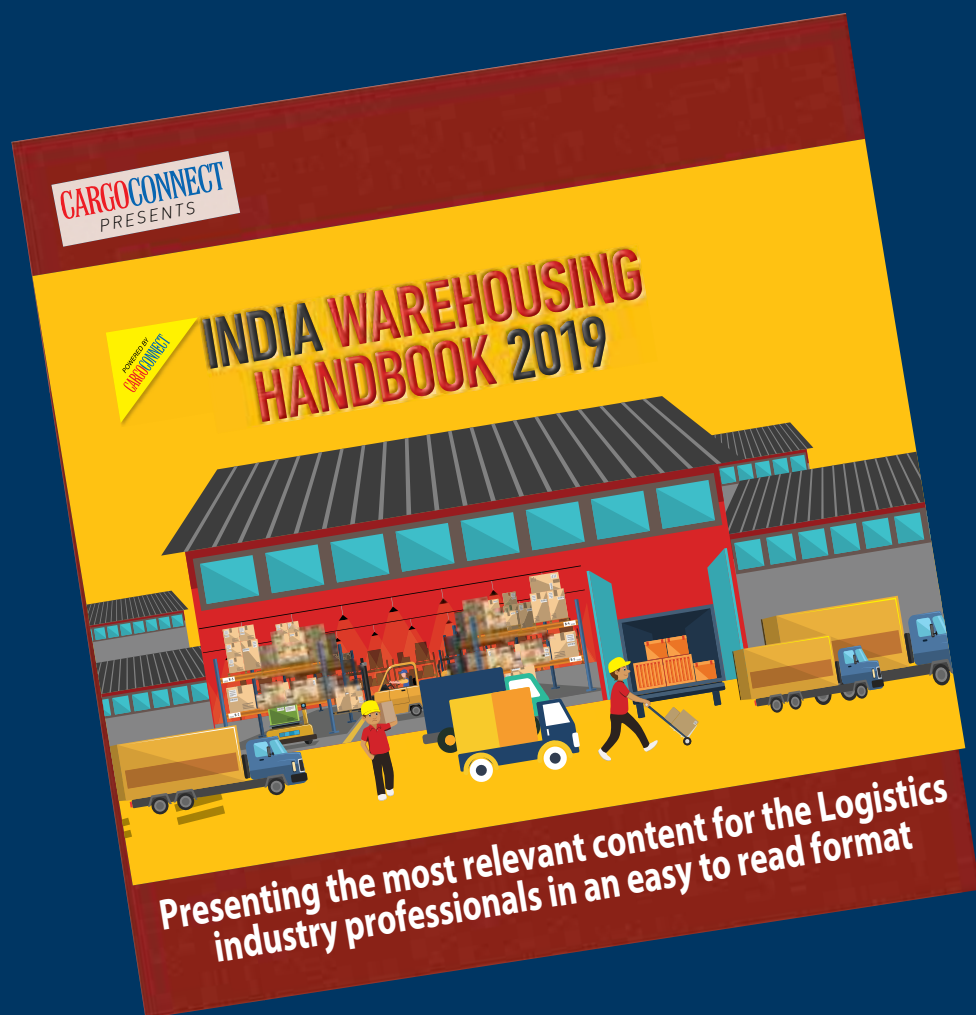
Co-founder and CEO,
Shipy Logistics



had once rightly said, "Pretty much every brand that I've seen succeed in an enduring manner in the D2C space had a very strong instinct around an unmet customer need or a friction point for consumers."

And importantly, it's not just the speed of delivery that brands are looking at for growth. They are transforming in three ways: trend-spotting and developing products faster, getting their products to the consumer faster, and marketing through pay-per-click instead of advertising alone. **CC**

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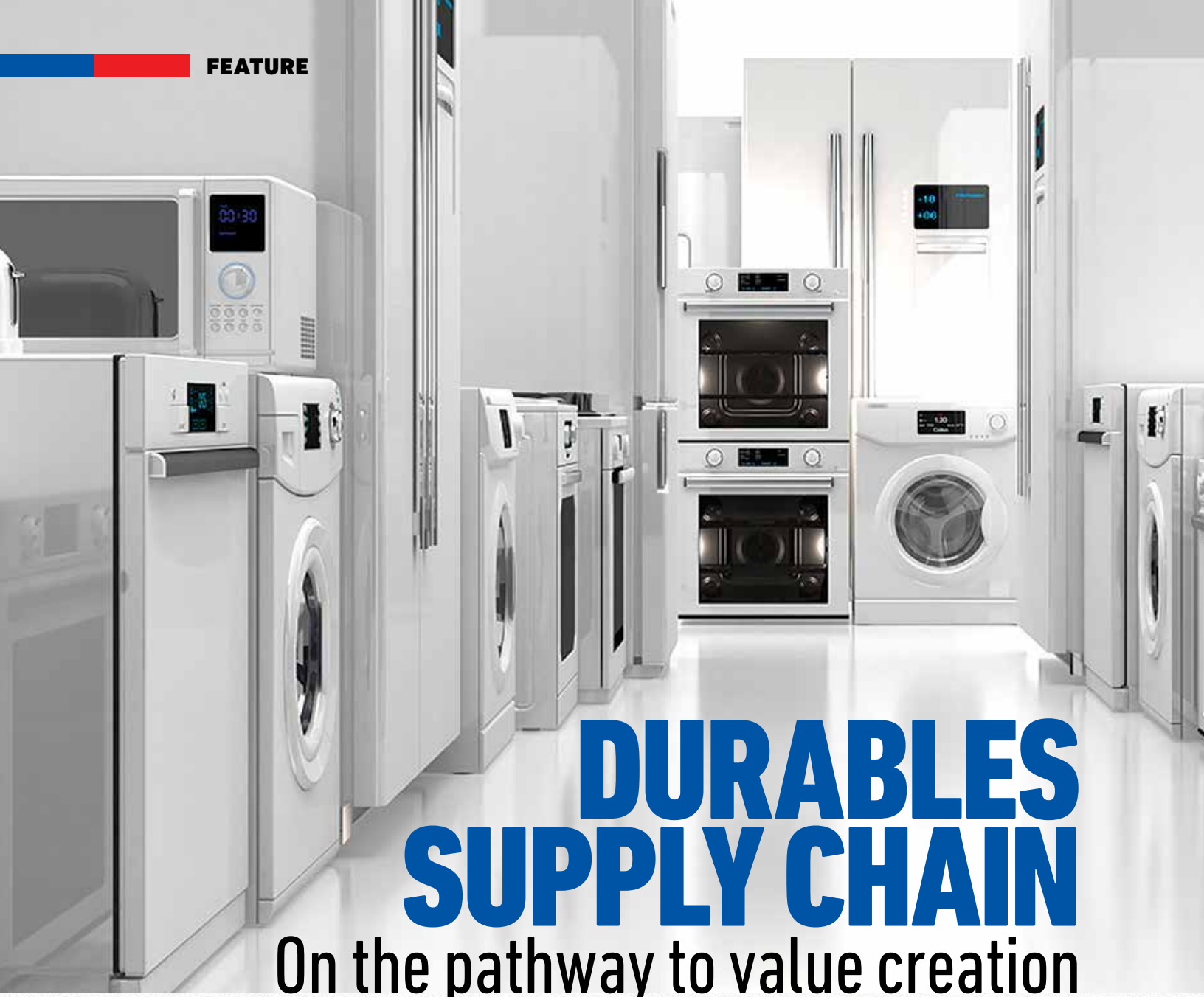
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DURABLES SUPPLY CHAIN

On the pathway to value creation

The consumer durables companies in India have successfully combatted the challenges thrown upon like supply chain disruptions, downfall in demand and shortage of manpower, etc. The end-users and LSPs are now well-prepared to ensure business continuity in the long run — through various initiatives like maintaining higher inventories, technology-led service and business models, door-to-customer service, growing e-commerce, reactivation of rapid task forces, as well as measures to ensure de-risking of logistics, production, supplies and inventory levels. Besides, due to factors like pent-up demand, continued work from home, changing weather conditions — which aid sales of consumer durable products — as well as vaccination drives, sector experts say they are already seeing good demand coming.

Ritika Arora Bhola

Winning themes
consumer
durables
companies need
to consider

Keeping in mind the learnings gathered in the last one year, the consumer durable companies in India have adopted various efficient and unique strategies to move forward and achieve growth. The players expect this demand to be high in the coming few months, owing to an increased need for electrical and home appliances and interior products due to the continued work-from-home culture.

Pradeep Bakshi, MD & CEO, Voltas says, “Learning for the first and second wave, we have taken many



nation's needs at large."

"Considering a very dynamic external situation outside which has a big impact on the assessment of demands, we want to ensure that the demand received is vetted and same is refined for a proper supply alignment. That means a robust Sales and Operations planning approach resulting into a demand forecasting with a high-level accuracy," says **Vidyut Kaul, Head- Personal Health - Indian sub-continent at Philips.**

He underlines few other efficient strategies adopted:

- Continuous alignment with global supply chain and suppliers to ramp up production of material to meet up the demands in India.
- An optimal safety stock of all the A & B class articles mitigates the hike in the demand.
- An alignment with global service providers for vessels reaching India on time to ensure that the supplies are on time.

"India being a vast country with multiple distribution points for Philips, we look for timely arrival of shipments at the ports to ensure a further warehouse to warehouse movement and finally to the end customer which takes place within the stipulated time, and revenue too gets recognised the same month," Kaul highlights.

As an organisation, Kaul says, they have focussed on their planning process – as is the case with most of the organisations. They say well begun is half done – it is the same approach in sales planning, a good plan is half the job – the other half is ensuring timely availability of stock and at the right location. We have stepped our effort in optimising our sales and planning process that allows our teams to deliver on our customers and our consumer needs by doing the following:

- Monitoring past data as a reference for trends and patterns
- Refining the plan together with end-to-end teams to reflect current plans and market reality
- Sharing the plan with the factories and suppliers via an end-to-end planning tool
- Giving visibility to the sales team on availability of stock for sales and sharing tracking reports for visibility and transparency

steps in terms of material handling, tracking and storage. We are also attempting to deliver to the customer directly from the warehouses or factory. We are running operations with close coordination with our channel partners. We are also extending support to channel partners in terms of transportation in order to avoid any delay in delivery."

"As market leaders with the highest reach in the country, we are prepared to deliver for specific channel formats, both offline and online, and have adopted a flexible approach towards fill-ins at the store level. At Voltas, we have always strived to ensure that our services remain focussed on our consumers and the



The consumer durable logistics market is likely to grow in line with the growth expected in this sector. One step forward is the adoption of technology as an enabler for efficient, accurate, and organised mobilisation of resources. A robust logistics sector can go a long way in the quest to Atmanirbhar Bharat. Indigenisation of currently imported parts as well as the government led Make-in-India initiatives will provide the necessary push to this sector.

ARNAB BAAGCHI

Associate Vice President and Head- PSI, Godrej Appliances

A close watch on consumer behaviour, strong scenario and risk planning is important to manage supply chains and vendors for **Godrej Appliances.** "We are currently relying on weekly planning, daily monitoring and a very dynamic response system to schedule production and dispatches. Continuous communication with no gaps, with all stakeholders in the supply chain is being followed for strong alignment," says **Arnab Baagchi**, the company's **Associate Vice President and Head- PSI.**

"We are keeping our operations lean and adjusting production as per current requirements. We are also ensuring the availability of spares at our respective branches, so that the local team is equipped to address consumer complaints, if any, on priority."

Baagchi in general highlights two the key factors considered in optimising their supply chain operations:

- Inventory control through proximate supplier's base, localisation of imported items, JIT supplies, following 'make to order' format,



We have focussed on the company's planning process – as is the case with most of the organisations. They say well begun is half done – it is the same approach in sales planning, a good plan is half the job – the other half is ensuring timely availability of stock and at the right location. We have stepped our effort in optimising our sales and planning process that allows our teams to deliver on our customers and our consumer needs.

VIDYUT KAUL

Head- Personal Health - Indian subcontinent, Philips

periodic review of inventory, minimising operating and distribution cost.

- Digitisation of supply chain for better visibility of stock/finished goods, EOL monitoring and promoting transparency for multi-level decision making.

Digital-led supply and sales channels

Over the pandemic, e-commerce contribution has doubled for most players from high single digits to mid double digits. Urban consumers are likely to demand more convenience while the semi-urban consumer is likely to demand value products with great service. Consumer durable manufacturing companies are aggressively adopting digitalisation to enhance efficiency, transparency, traceability and end-to-end visibility of shipments and overall manufacturing and supply chain processes. Adoption of sales force automation (SFA) and dealer management system is underway and will ensure analytics drive appropriate levels of stocking and reduce dead stock at

dealer points. Leveraging GPS tracking for planning the optimal transit routes can further drive transportation and logistics efficiency. In fact, while most leading consumer durables firms are evaluating sales, marketing and service clouds, many have already set forth with the initiatives.

As they scale up significantly, Bakshi says, they have taken several initiatives in this direction—connecting suppliers and vendors through electronic data interface (EDI), portals which give real-time inventory and sales insights, and mechanisms capable of generating auto fulfilment of orders are some of them. “We also follow the system of E- PODs to get instant confirmation of material delivery. We have GPS-enabled vehicles to keep real-time tracking of material and their transit. We are also working on smart demand forecasting tools for a more accurate forecast. Advance WMS and TMS modules are the some of the recent initiatives we have taken recently.”

By tapping into the above levers, Kaul jots down initiatives through which Philips builds on market outreach:

- Visibility of what is available for sales and by when the new stock will arrive
- What has been sold to the customers including delivery dates
- What stock is left in the warehouse and for how long
- Balancing of stock between – regions/state/districts

“Common software for end-to-end planning of demand and supply that allows the sales as well as planning is essential. They enable us to do the following,” says Kaul.

Logistics activities and supply chains are being majorly transformed through digitalisation to eliminate inefficiencies, enhance customer service and lower costs. However, the true value of digitisation is achieved only when all operations in the supply chain are digitalised and connected, allowing for end-to-end visibility and predictive forecasting.

He shares some of the key processes implemented to embrace this transition:

- End-to-end product tracking and tracing using bar codes on every product and spare parts through a

According to reports, Appliances and consumer electronics industry is expected to double to reach ₹1.48 lakh crore (US\$21.18 billion) by 2025. In May 2021, consumer durables output increased by 98.2 per cent, compared with 70.3 per cent decline in May 2020.

Electronics hardware production in the country increased from ₹4.43 trillion (US\$72.38 billion) in FY19 to ₹5.47 trillion (US\$89.38 billion) in FY20.

As of FY20, electronics, domestic appliances and air conditioner market in India were estimated to be around ₹5,976 crore (US\$0.86 billion), ₹17,873 crore (US\$1.80 billion) and ₹12,568 crore (US\$2.56 billion), respectively.

According to India Cellular & Electronics Association (ICEA), India has the potential to achieve a value of US\$ 100 billion in manufacturing of laptops and tablets by 2025.

Smartphone shipments in India increased 8 per cent y-o-y to reach 152.5 million units in 2019, thereby making it the fastest growing among the top 20 smartphone markets in the world.

The dishwasher market in India is expected to surpass US\$90 million by 2025-26, driven by rising demand from metro cities such as Mumbai, Hyderabad, Delhi and Bangalore.

According to a report by Care Ratings, consumer electronics and appliances manufacturers are set to increase their production by 5-8 per cent in FY22, after witnessing a contraction in demand in FY21.

According to RedSeer, India's consumer digital economy is projected to reach US\$800 billion by 2030, from US\$85-90 billion in CY20, driven by increase in online shopping.





comprehensive ERP in place at factories, branches and warehouses.

- World-class CRM deployment that provides precise information on what's moving in the market.
- Equipping factories with tracking tools to digitally inward and issue raw material for inventory accuracy and traceability.
- Sophisticated planning tools to improve forecasting and planning accuracy.
- Robotic process automation (RPA) initiatives to increase productivity and operational efficiency.

"Industry 4.0 helps in ensuring end-to-end transparency and real-time tracking. Gaps in the supply chain processes, if any, can lead to supply chain disruptions, sales loss and increase the non-value added cost. Today, digital optimisation is the key to success. We can make what the market requires through flexible manufacturing—orders can be amended in the shortest possible time, while VSM used for process optimisation and operational efficiency can be enhanced by real-time monitoring. Industry 4.0 has helped us to improve our process, operation and relationship with customers," Baagchi says.

Efficient logistics is going to be the differentiator

Experts predict a huge surge in demand for the consumer durable products in the coming years. With e-commerce sector flourishing by leaps and bounds, door-to-door service available and supply chains becoming more tech-friendly, the growth is definite. The pandemic had actually accelerated opportunities in innovation this sector.

The demand for consumer durable products like Television, Washing Machine, Furniture, household appli-

ances and interior products, etc. never saw a decline and in fact, customers have become more aware and are not shying away or hesitating from purchasing the products online.

Kaul says, "2020 saw a fundamental shift in consumer behaviour and has witnessed emergence of several new trends that is driving more experimentation in categories like personal grooming at home. Overall increased staying at home has re-defined the role of consumer durables in our lives. E-commerce and digital avenues have continued to be the channels which have been leveraged and have continued to perform and they can be potential channels for exploring new launches. At Philips, we expect personal grooming, cooking, cleaning and purifying appliances to do well and are investing in the same. Consumers are identifying the needs which were already there and are looking at products and solutions that can make their life easier and self-sufficient. This growth is going to sustain because these are the needs which are not going to go anywhere."

"We believe that satisfied customers and consumers is one of the essential factors for any organisation to stay relevant and succeed over a long term. Supply chain is the backbone of any organisation and thus its role becomes more challenging when there are factors which can severely impact both demand and supply. It is important to collaborate with customers to understand the short- and long-term demand and supply projection scenario have a strong end-to-end supply chain and align with suppliers across regions which enables a continuous improvement cycle," he adds.

"Moreover, we believe that good forecasting leads to a better accuracy

We have taken several initiatives—connecting suppliers and vendors through electronic data interface (EDI), portals which give real-time inventory and sales insights, and mechanisms capable of generating auto fulfilment of orders are some of them. We have GPS-enabled vehicles to keep real-time tracking of material and their transit. We are also working on smart demand forecasting tools for a more accurate forecast. Advance WMS and TMS modules are the some of the recent initiatives we have taken recently.

PRADEEP BAKSHI, MD & CEO, Voltas



in terms of maximising the efficiency for the supply chain structure which in turn ensures better fulfilment and customer satisfaction. Additionally, warehouse network optimisation is essential wherein moving warehouses to locations near customer base ensuring incurring low cost in last-mile delivery," Kaul further explains.

"With the shift from conventional logistics to e-commerce, consumer expectations for instant or on-time deliveries have become a norm. This has boosted the logistics industry, which has become more organised as a result," says Baagchi.

"The consumer durable logistics market is likely to grow in line with the growth expected in this sector. One step forward is the adoption of technology as an enabler for efficient, accurate, and organised mobilisation of resources. A robust logistics sector can go a long way in the quest to Atmanirbhar Bharat. Indigenisation of currently imported parts as well as the government led Make-in-India initiatives will provide the necessary push to this sector," he aptly feels. 

THE MARCH TOWARDS DARK FULFILMENT CENTRES

India's FMCG market is set to contract by -1 per cent to -3 per cent this calendar year, market researcher Nielsen said in its revised estimates for the sector. This is despite an estimated 3,000 products in the health and hygiene category having been launched in the September quarter alone. The ongoing pandemic has also pushed consumers to buy goods online, a habit that is likely to stick. Keeping that in view, companies are enhancing their digital capabilities and charting out strategies to ensure their presence on e-commerce. This in turn is pushing the demand for dark stores from e-commerce players in city central locations, prompting growth of urban logistics spaces.

Urban logistics spaces typically serve as dark stores, cloud kitchens, sortation centres, hybrid retail stores and micro-fulfilment centres. Urban Logistics spaces are functionally in-

The current global pandemic has turned the retail world on its head and created huge unknowns going into the future. Accelerated adoption of e-commerce, trends like same-day or next-day delivery commitments fulfilled by 3PL companies and the need to diversify supply chains are pushing demand for warehousing and logistics services in the hot spots of consumption. Although urban logistics is at a nascent and fragmented fringe state in India now, it is on the cusp of going mainstream.

Upamanyu Borah

city facilities for last-mile delivery services of goods while multi-storey warehouses are a single location facility, either in cities or on the outskirts. Today, in-city logistics spaces are coming up in varied sizes between 5,000 sq ft and 20,000 sq ft.

Dark stores can help improve customer experience by providing easier access

to essential items, and the practice could pave the way for the future of retail. Dark stores are driving efficiencies, faster delivery capabilities and reducing logistics cost as these house goods used to fulfil orders placed online, for the last-mile connectivity and have the potential of saving between 10 per cent and 30 per cent of logistics costs. Many wholesale distribution centre businesses at present are moving towards dark store concepts in India.

Cashing in on Opportunities

Since the lockdown began in March-end, the demand for commercial warehouse space in large cities has gone up as a breakdown in the supply of essential commodities increased the need to store daily necessities, FMCG products and electronics near major consumption centres. The rapid growth in demand for these items pushed supply chains to quickly find solutions for

automation and fulfilment. A shift from retail to urban logistics is thus generating change in the demand curve for automated and sustainable spaces, encouraging e-commerce and third-party logistics players to implement micro-fulfilment technology to maximise efficiencies and optimise last-mile logistics to boost their businesses. These spaces operate primarily for e-commerce, grocery, non-grocery, retail and omni-channel players, ranging from Amazon and Flipkart to omni-channel firms such as Adidas, Pepperfry and Urban Ladder.

"Due to the pandemic, a lot of customers have shifted to online buying which has triggered the demand for more space. There is genuine demand from end users like the branded FMCG companies who want to upgrade to large tech-enabled warehouses," said **Dhruv Agarwal, Director** of Kolkata-based developer **Prospect Industrial Parks**.

"Focus should be on the best utilisation of vertical space, along with efficiency in mechanised loading and unloading operations in warehouses."

Urban logistics spaces in India are expected to exceed 7 million sq ft by 2022, as demand surges, property advisory JLL said in its latest report. Now, this itself underlines the importance and pace at which the segment is growing. The increasing trend of faster goods distribution and e-commerce penetration nationwide is expected to push the demand further.

According to JLL, urban logistics will help address infrastructure, community, and environmental concerns via the efficient movement and transport of goods



in urban areas through last-mile storage spaces. Furthermore, the urban logistics is expected to expand significantly beyond 2022, as the increasing trend of faster goods distribution and e-commerce penetration increases nationwide.

"Urban logistics will play a more front-and-centre role in the metropolitan economies of India as consumers have become more tethered to the convenience, transparency and hygiene benefits of online purchasing throughout and post-COVID," said **Radha Dhir**, CEO and Country Head-India at JLL.

"The surge in e-commerce has led to increased storage space and logistic delivery capabilities, thereby giving owners and developers a clear opportunity to capitalise on the demand, which we believe will easily exceed 7 million sq ft by 2022," the expert analyst predicted.

According to JLL, the opportunities with urban logistics in resolving SKU problems are manifold. SKUs are becoming cost-effective real-estate alternatives helping companies avoid high traffic areas in cities, serving numerous online stores simultaneously and far more variation per item at a far lower space cost.

Collaborative logistics will also result in a more sustainable urban logistics infrastructure model in India, JLL believes. Key initiatives such as vehicle load consolidation, automatic route mapping, data gathering, and analysis, will lead to fewer delivery vehicles on the road and savings on fuel and emissions.

Almost one-fourth of the total warehousing space in India has been leased by e-commerce firms



Due to the pandemic, a lot of customers have shifted to online buying which has triggered the demand for more space. There is genuine demand from end users like the branded FMCG companies who want to upgrade to large tech-enabled warehouses. Focus should be on the best utilisation of vertical space, along with efficiency in mechanised loading and unloading operations in warehouses.

DHRUV AGARWAL

Director, Prospace Industrial Parks



Urban logistics will play a more front-and-centre role in the metropolitan economies of India as consumers have become more tethered to the convenience, transparency and hygiene benefits of online purchasing throughout and post-COVID. The surge in e-commerce has led to increased storage space and logistic delivery capabilities, thereby giving owners and developers a clear opportunity to capitalise on the demand, which we believe will easily exceed 7 million sq ft by 2022.

RADHA DHIR

CEO and Country Head-India, JLL

such as Flipkart and Amazon in the past two years. They are further looking to scale up operations amidst growing online shopping and robust consumer demand in India and have floated lease transactions for large warehousing spaces totalling around 4 million sq ft, according to industry estimates.

Flipkart is ramping up food and grocery-specific warehousing capacity by lining up small storage spaces in metro cities.

In September this year, Flipkart launched its hyperlocal service, Flipkart Quick, which assures delivery within 90 minutes, in three more cities, taking the total to 10 cities. It plans to introduce this service to other cities and aims to be present in over 200 cities by the end of 2022.

Tie-ups with local retailers and dark stores are

expected to help the company in express deliveries.

While typical lease tenures are for three years or longer, there was also a surge in short-term demand for warehouses with lease tenures of 6–11 months, since lockdown began, indicating the need for companies to have substitute locations.

The lockdown also led to an increase in demand for premium construction quality Grade A warehouses, which offer more sq ft space and better height for vertical storage, better safety mechanisms against storms or fires, and mechanised loading and unloading operations.

At present, a balance in demand-supply dynamics is expected to support the sustenance of an increase in rental growth.

"With the increase in e-commerce over the last three years and with the

potential growth of consumer essentials during the pandemic, demand is growing for space and so are the rentals," said Agarwal.

"I feel the supply demand curve is very subjective and depends on location to location. For tier II and III cities, I feel that supply has to catch up to meet the increasing demand. The lack of quality infrastructure is also boosting the new demand for Grade A warehousing."

"Nonetheless, properties should facilitate better safety measures against storm and fire, in a way reducing the carbon footprint for the industrial sector. Overall, the industry should focus on accessibility from all fronts and build more Grade A logistics hubs," Agarwal stated.

So much to gain with better Infra

Urban logistics will offer unique tailor-made solutions for the transport of goods in cities by consolidating and rationalising the existing logistics platforms and creating innovative solutions for the future through the use of information and communication technologies.

To tap on the growing market, we will see more infra investments by the sector and more innovations which will open gates of opportunities and enhance economic competitiveness, reduce logistics-related costs, improve air quality, create jobs, and help achieve climate goals. Most importantly, the formalisation of the warehousing industry has brought in renewed vigour and investor interest. The expected growth in demand for warehousing is likely to attract investments in this space in hopes of higher returns. [CC](#)

The popularity of the Transport Management System (TMS) platform is continuously growing in India. According to recent studies, almost 35 per cent of the businesses are now using the platform for managing their transportation network. With increasing complexities of logistics and transportation, as the business grows, the need for transportation manage-

ment systems can never be exaggerated. Technically, TMS enables better transactional and communication system to allow users to leverage from vast real-time data, makes easier decisions, and plan and strategise for optimal transportation solutions.

Top impacting factors

By component, the global transportation management system market continues to be dominated by the solution segment as it help in optimising the overall supply chain process, thereby resulting in higher profit margins and growth. Digital transformation in the transportation industry has proven to encourage competition to improve any

company's ROI. Therefore, the introduction of digital from connected warehouses to new mileage delivery services ultimately increases the value and presence of TMS, transforming the old industry into an exciting place to drive change in community development.

Reduced costs for the business, the end customer, and automation of business operations for faster and more accurate billing and documentation drive the market growth. Moreover, advancement in adoption of cloud and IoT applications in planning and execution of TMS provide opportunities for the growth of the market. Furthermore, nowadays, retailers are inclining toward omnichannel systems that incorporate brick-and-mortar, online, mobile, catalog, and other sales channels under one umbrella. This increases freight transportation, and TMS helps in increasing visibility to all shipments under one user control.

DISRUPTING THE TRANSFORMATION OF TRANSPORT

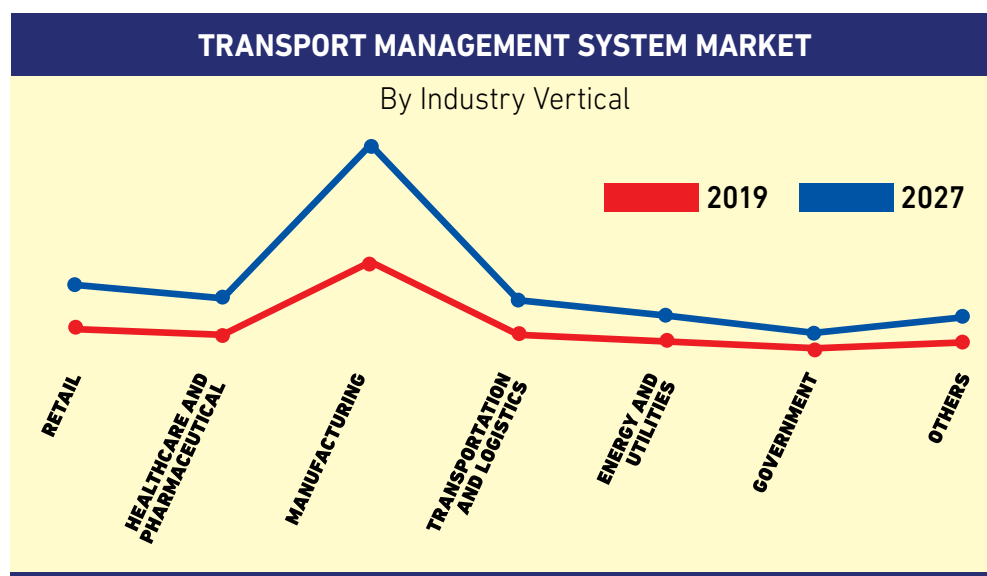


Factors, such as colossal technological advancement across the transportation and logistics sector, create a positive correlation for the TMS market. Furthermore, exponential growth within the e-commerce industry has raised the demand for efficient transportation solutions, which is further estimated to emerge as a key driving factor for the overall market. However, there is growing data security concern to create a staggering effect on the market. Rising popularity of autonomous and connected vehicles coupled with increasing adoption of cloud technology and industry 4.0 are estimated to have a positive impact on the market's growth.

Exponential growth of e-commerce

The e-commerce sector is witnessing rapid growth as more consumers are leveraging online platforms and smart devices for this purpose. As per the analysis conducted by Allied Market Research, e-commerce is on track to become the dominating force in all sales. According to Grant Thornton, e-commerce in India is expected to be worth US\$ 188 billion by 2025 while manufacturers, distributors, retailers, reverse logistics managers, third-party freight brokers, and logis-

tics services providers are working to keep up with the trend. However, the industry is still facing the issue of higher cost as some of the players have failed to integrate the e-commerce and transportation management system, which has resulted in an increased spending within the shipping capacity. This issue has raised the demand for effective transportation management system. The use of TMS in e-commerce allows shippers to leverage all modes of transportation, critical during peak shipping times and through the ongoing capacity crunch. TMS provides an extra opportunity to find the most cost-effective shipping options, and with e-commerce affect-



TMS provides an extra opportunity to find the most cost-effective shipping options, and with e-commerce affecting 96 per cent of all shippers, the need to leverage the benefits of e-commerce and TMS connectivity.

ing 96 per cent of all shippers, the need to leverage the benefits of e-commerce and TMS connectivity.

Reach Analysis

North America dominates the transportation management system market as the

TMS industry is one of the major sectors in the North American landscape, providing the largest revenue worldwide due to large number of players and industry columns. The US and Canada are cooperating for a greater share of the transportation management system market. In addition, Canada is projected to be the fastest growing sector in the transportation management system market. North American countries continue to be more com-

petitive and focussed on consumers, raising expectations for a better transportation management system. The transportation sector is a major factor in the supply chain as it relies solely on transportation professionals to achieve their financial goals, customer delivery commitments, and their profits. Asia-Pacific is expected to achieve a rapid growth rate due to growing international trade, especially in emerging economies such as China and India. In addition, in the Asia-Pacific region, smartphone penetration is increasing with non-renewable revenue. These factors contribute to the development of e-commerce in these areas. Therefore, a proper transport management system is needed to cater to the maximum number of customers. 





FTWZs

WELL POISED FOR GROWTH SPURT

FTWZs are considered as direct contributors towards overall economic development. FTWZs are established to easily facilitate the foreign trades without involving manufacturing processes and allow hassle-free handling of EXIM cargo to achieve efficiency and cost effectiveness. In the long run, FTWZs are believed to help in attracting foreign investors for servicing India's manufacturing and consumption demand more efficiently. Apart from the domestic demand, these suppliers will have the opportunity to consider India as a potential transshipment destination for servicing the neighboring countries.

Location wise also, India offers excellent position on the Global Maritime Trade Route, which carries almost 60 per

cent global transport, thus offering excellent transship opportunities for FTWZs in India.

According to World Bank Data, International trade accounts for 58 per cent in 2019 of Global GDP and for India, trade comprises 39 per cent of India's GDP for the same year. This comparison indicates an ample opportunity to increase trading activity in India. However, for carrying out efficient trading activities, improvement of infrastructure at warehouses across the country needs special attention of the developers.

Also, the WDB states that GDP share of India's Export and Import of goods and services is recorded at 18 per cent and 21 per cent respectively. Focused programmes under Make in India and other fiscal initiatives to promote India's manufacturing activities are expected to increase the share of EXIM cargo for Indian economy in the coming years. This dynamic of Indian economy in-

Indian logistics industry is witnessing a revolution with several Grade A warehouses and Free Trade Warehousing Zones (FTWZs) gearing up to offer world-class services to the customers. However, in this post COVID-19 scenario, rapidly growing Indian economy will need an efficient and fairly vast network of warehouses and logistics facilities. The government's recent initiatives like Make in India, Vocal for Local, Ease of Doing Business, Manufacturing in India, and various other ambitious schemes and policies launched have definitely triggered growth opportunities in the right direction for the Indian logistics industry.

creases the potential and opportunity of FTWZs in India.

According to the Ministry of Commerce and Industry, there are eight approved FTWZs in India. Out of eight FTWZs, four have been notified. Out of 4 notified FTWZs, only three are operational at present.

According to the reports, there is no investment made by the Central Govern-

FTWZs IN INDIA

Free Trade and Warehousing Zones (FTWZs) SEZs in India				
Sl. No.	Name of the developer	Location	Area Hectares	SEZ status
1	Arshiya International Limited	Taluka Panvel, District Raigad, Maharashtra	57.898	Notified/Operational
2	J Matadee Free Trade Zone Private Limited	Sriperumbudur Taluk, Kancheepuram District, Tamil Nadu	40	Notified/Operational
3	Arshiya Northern FTWZ Limited	Moujpur, Bulandshar, Uttar Pradesh	51.4394	Notified/Operational
4	Arshiya International Ltd	Taluka & District Nagpur, Maharashtra	43.26	Notified
5	Lepakshi Knowledge Hub Private Ltd	Chillamaturu Mandal, Ananthapur District, Andhra Pradesh	40	Formal Approval
6	ISPRL FTWZ Padur (Indian Strategic Petroleum Reserves Ltd)	Padur, Karnataka	41.20	Formal Approval
7	Cochin Port Trust	Thoppumpady Ramesaram Village, Cochin, Kerala	40.85	Formal Approval
8	Venkatesh Coke & Power Ltd	Ponneri Taluk, Thiruvalur District, Tamil Nadu	46.71	Formal Approval

Source: JLL

ment in these FTWZs yet. Total amount of ₹3,315.81 crores have been invested mainly by the private Developers/Co-developers in these FTWZs during the last five years. Further, revenue of ₹13,051.19 crores has been generated by these FTEZs during the last five years.

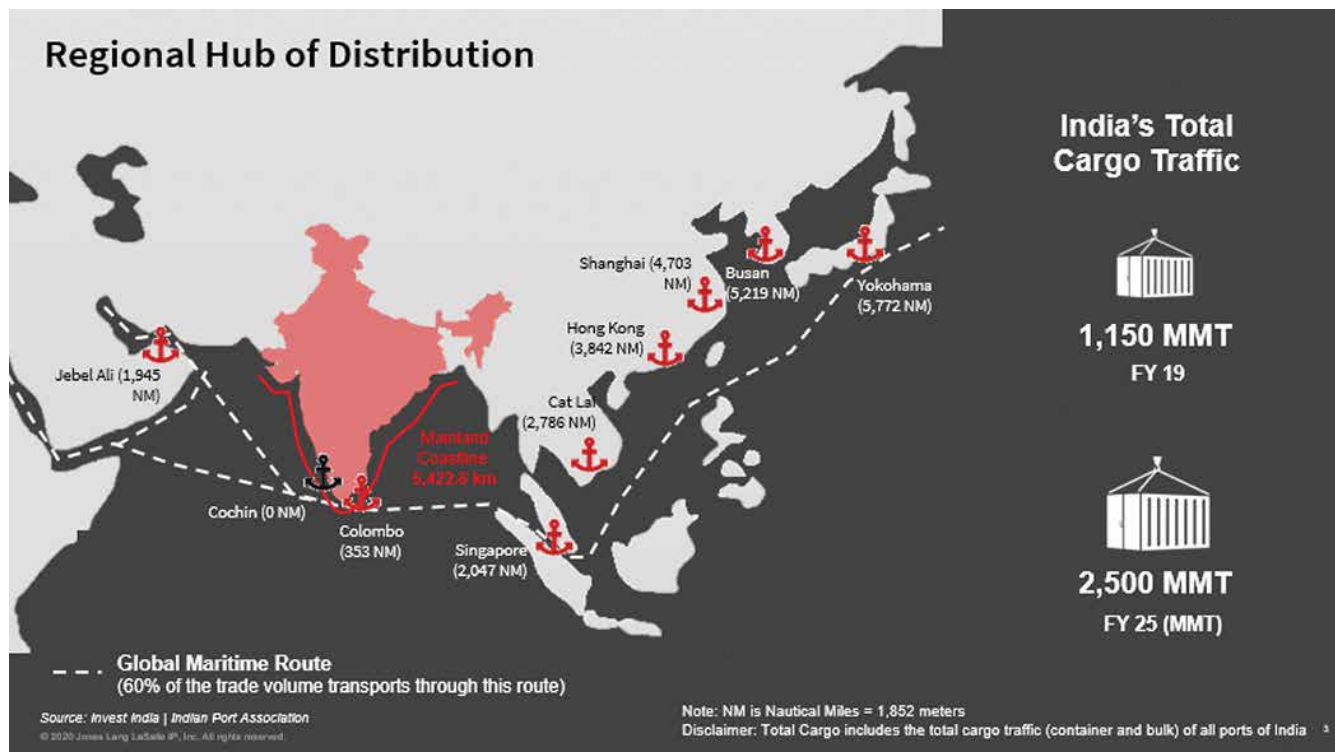
Setting up of new FTWZs and/or SEZs is primarily private investment driven in India.

Future Growth Prospects

A recent report by the research firm, JLL states that India has not yet achieved its optimum stage in FTWZ development. There are very few operational FTWZs facilities currently in India. These are Arshiya; Khurja, MMTC & ILFS; Kandla, Adani; Mundra, Arshiya; Panvel, J Matadee; Chennai, NDR, Ennore. ₹3,315 crores have been invested by the private developers/co-developers in these FTWZs during 2015-2019 and revenue of ₹13,051 crores have been generated by these FTWZs during 2015-2019.

As per reports, new investments from DPW (Chennai and JNPT), NDR (Raigad), Karanja (Mumbai) are expected.

Also, the recent policy intervention through notification in October 2020



Source: JLL

(G.S.R. 678 (E)), also allows domestic supplies from domestic tariff area to foreign suppliers in FTWZ with admissible drawback or any other benefits. This notification in turn allows international buyers to consolidate, pack, and prepare more efficient supply chain plan for their cargo from India.

“From a user’s perceptive, there shall be a driver for marketability of the FTWZ facility,” says, Chandranath Dey, Head- Operations & Business Development, Industrial Services, JLL India.

“In the Indian context, Computer Hardware, Computer Peripherals, Consumer Electronics, Electronics Components, Electronics Instruments, Telecom Instruments, Defence Equipment along with various components related to planned manufacturing units all come under Make in India programme,” Dey further adds and jots down the benefits:

- Very high supply reliability (including spares) to domestic customers
- Quality control on imported spares, parts and component prior to duty-payment
- Value Added Services after SKU level break bulking + CKD assembly
- Bring down lead time of equipment and spare parts for end customer delivery
- Deferment of import duty till the date of supply to domestic customers
- Warehouse/storage hub in India comparable to origin countries

FTWZs operating in India at present are highly competitive and offer state-of-the-art warehousing and trading facilities. This includes expedited customs clearance, cutting-edge technology and infrastructure, inland container depots and yards, commercial complexes, etc. Companies can operate via FTWZs in two efficient ways:

- **As a Trading Unit:** For the purpose of carrying out authorised operations such as trading, warehousing, labelling, consolidation, etc.
- **As a Service Unit:** Availing the services of an authorised trading unit.

According to government’s policies in this regard, companies that are registered as Trading Units must be an Indian entity with a nature of the business that

includes import-export, trading, shipping, etc. Authorised operations are listed in the Letter of Approval (LOA) which is granted by the Unit Approval Committee. LOAs are valid for five years with the option to extend for another five years. Several specific activities are allowed to be conducted in FTWZs like:

- Trading which is inclusive or exclusive of labelling
 - Packaging and repacking
 - Re-export, resale, re-invoicing of goods
 - Warehouse storage of goods for domestic or international clients
 - Value add or optimising activities on goods
 - Assembly of complete or semi-knockdown of goods
- FTWZs offer unparalleled advantages

to international trade. Aside from the reduction in formalities for customs and excise, other incentives include income tax and demurrage costs exemptions. Increased logistics efficiency, supply chain management and operations add to faster turnaround times.

Comparison: FTWZ or Grade A warehouses

For establishing robust and efficient supply chain for cargo movement, demand for Grade A warehouse space is becoming more attractive propositions for 3PL, e-commerce, and other occupiers. Grade A specification and its development model helps to achieve efficient use of built space, adequate use of modern material handling equipment and other technology for in-box cargo tracing,



FTWZs	Domestic Warehouses
Only for EXIM cargo	Only domestic cargo can be handled
Manage EXIM cargo with diversified value added services (packing, grading, labeling etc.)	Diversified value added services (packing, grading, labeling etc.) but only for domestic cargo
Re-export to other foreign countries more efficient way	Re-exports not allowed
Cargo consolidation and re-distribution in the supply chain of global trading activities	Cargo consolidation and re-distribution in domestic supply chain

FTWZ Vs. Custom Bonded Facility

	FTWZ	Custom Bonded Facility
Long Term Storage Provision with Duty and Tax Deferment (up to 5 years)	☒	☐
Provision for Value Added Services (VAS), such as sampling, mixing, sorting, cleaning, repacking, labelling, testing, branding, exhibition, etc.	☒	☐
Partial Sell after Break Bulking	☒	☐
CKD Assembly	☒	☐
Short term storage at lower cost with duty deferment	☐	☒
Provision for products exposition/ demonstration giving exposure to latest product developments	☒	☐

Source: JLL

monitoring and movement. FTWZ space is typically used for the same specification. Enlisted are few key pointers which make FTWZ and warehouses different from each other.

However, the near real comparison of FTWZ would be custom bonded warehouses, as both handles EXIM cargo.

Inclusive Development

FTWZs are truly being supported by the government's ambitious plans. Schemes like Make in India, PLI and other investment promotion benefits have a major impact on potential FTWZ demand. It is unlikely to establish independent production process without intervention of any foreign cargo for any manufacturing unit planning to come under these schemes. It is obvious that some spares, components, and/or semi-finished material are to be imported from different foreign suppliers. To establish a new supply chain model for manufacturing unit in India requires space with efficient and hassle free EXIM cargo han-

dling area. FTWZs are believed to be the only solution for providing this infrastructure and services in India. The government's infrastructure initiatives such as Bharatmala under which the government is planning logistics parks at 35 locations and Sagarmala which aims to develop and modernise Indian ports are also expected to boost the expansion of the logistics sector. At the same time, latest technological advancements are being introduced, such as automation and robotics to improve efficiency across the supply chain. The industry is also also witnessing a gradual shift from unorganised to organised players in the warehousing sector. Experts expect all these factors will contribute towards achieving growth and a seamless supply chain in the coming years.

Leading Indian airline SpiceJet has also launched India's first-ever FTWZ at an airport—at GMR Aerospace & Industrial Park in Hyderabad's Rajiv Gandhi International Airport (RGIA—which is expected to transform the India's phar-

ma capital into an air transshipment hub like Singapore, Malaysia or Dubai. The Indian airline had signed an agreement to lease with GMR Hyderabad Aviation SEZ (GHASL), a 100 per cent subsidiary of GMR Hyderabad International Airport (GHIAL), in March 2020 by which the airport constructed a 33,000 sq ft facility for the airline to carry out the warehousing, distribution and trading activity. The FTWZ is similar to the facilities and boast infrastructural capabilities like Singapore Changi Airport and Al Maktoum International Airport in Jebel Ali, Dubai. Any foreign customers who have not registered in India can easily come in and keep their cargo in this space without getting into the taxes of India and without paying any duties. With the e-commerce and cross border boom, there is a lot of cargo moving through the air. And the facility is expected to help industry stakeholders.

SpiceJet is in negotiations with different metro airports in the country to set up similar FTWZs. [CC](#)

India's logistics industry is one of the most rapidly evolving industries, with an increasing customer demand for integrated offerings. As demand continues to grow, the industry will continue to experience technological upgradation, and fast adoption of digital solutions. Tapping the growing industry demand, **V-Trans (India)** is upscaling its warehousing facilities. The company believes in transforming operations and driving reliability, efficiency, and cost-effectiveness through the deployment of digital technologies and is adopting a similar strategy at its warehouses. **Rajesh Shah**, the company's **Executive Director (Special Incharge, V-Logis)** says that the warehousing sector in India is at the cusp of transformation. The significant requirement for Grade A warehousing and the infusion of technology will push the sector towards better growth. To aid the development of rapid infrastructure development, warehousing and logistics sector has to grow at an even faster rate, supported by efficiency in their management, modernisation and enhancing availability with service automation. In an interaction with Ritika Arora Bhola, he informed that V-Trans is continuously expanding its presence, either by opening up new spaces or expanding the existing ones.



Sustainability and Digitisation holds the future for warehousing in India

How efficiently are you handling the pressure during these times of emergency? Conversely, what do you see as the biggest untapped opportunities in the warehousing sector?

A pandemic outbreak of this magnitude caught entire companies and industries off guard, with a ripple effect that ripped apart supply chains and businesses. From a consumer point of view, many companies still do not have a clear demand signal as the outbreak completely changed buying behaviour and patterns.

The COVID-19 pandemic once again highlighted that logistics is the lifeblood of the economy. Logistics operations, from transportation, warehousing, and distribution to delivery, kept domes-

tic as well as cross-border flows of medical supplies, food, and other essential goods smooth when most of the world was locked up.

Logistics is a field full of opportunities and therefore promising for entrepreneurial initiatives. The set of operations that make up this segment is well-defined and so it is possible to identify it among the rest of operations, even isolate and extract it to manage independently.

The pandemic period went mixed way. Initial months of lockdown were extremely tough and then slowly things picked up. Warehousing played a crucial role during the pandemic crisis, with having the group resources; we worked as a complete solutions provider for many of our clients who were

directly in the essentials segment. While keeping the safety of our people at top priority and abiding by the state and centre's regulations, we managed to carry forward our operations quite well.

The untapped opportunities in warehousing are certainly to get the A grade status. Warehousing and creating niche offerings within the segment. Like the one we have come up with for Chemical Industry for storage of key hazardous chemicals - Chem Store, is certainly setting a benchmark for the sector.

The Indian warehousing sector is at an inflection point and is expected to grow at a CAGR of more

than 20 per cent. It means that the demand for institutional-grade warehousing is almost outstripping the supply at the moment. Could you brief us more in this regard?

The warehousing sector in India is at the cusp of transformation. The significant requirement for Grade A warehousing and the infusion of technology will push the sector towards better growth. This is further fuelled by government policy making and framework of initiatives like GST and Digital India. Launch of programmes like 'Atmanirbhar Bharat' considering the impact of COVID-19 on capital markets and support local manufactur-

ing, are certainly going to favour the warehousing sector going forward.

According to latest predictions, the sector is expected to grow above 20 per cent CAGR in the coming years, and is currently attracting good investments from Indian and global private equity (PE) majors and overseas investors. Since the launch of GST, the warehousing sector has seen investment flow of over US\$3.6 billion. Q2 of 2021 has been the best second quarter in the last 4-5 years from an investment point of view.

In the fourth quarter of the year, Indian commercial real-estate sector saw investment worth US\$1.36 billion (over ₹10,000 cr) of which warehousing accounted for over 55 per cent.

However, a lot of potential gaps exist between storage infra and the level of technology within the sector. Grade A warehouses are still very less and the current warehousing stock per capita is less than .01 sq ft, which make the sector very attractive for large investors with long-term capital commitment.

Apart from conventional storing services, warehouses are now equipped to provide value-added services like consolidation and breaking up of cargo, packaging, labelling, bar-coding, reverse logistics, kitting, etc. Don't you see this as the perfect foundation for the sector to chart its growth trajectory?

The management of the store is part of the logistics process within which the warehouse operator is responsible for receiving, storing, and moving within the space materials and goods to the point of consumption. The operator is also in charge of the information and the treatment of all the

data generated by the process.

The goal of warehouse management is to optimise a functional area for supply and distribution. At a general level, the objective is based on guaranteeing a timely and continuous supply of the means of production and materials that are needed, in order to ensure uninterrupted services. Managing stocks, processing orders, and distributing them is also part of warehouse management. The operator's responsibility arises when the units are received at the facility and their continued maintenance during the period of stay within the facility until subsequent treatment. The process ends when the units become orders and responsibility shifts towards their distribution and management.

While infrastructure is the lever that would deliver economic growth, warehousing and logistics is the backbone that all infrastructural growth hinges on. To aid the development of rapid infrastructure development, warehousing and logistics sector has to grow at an even faster rate, supported by efficiency in their management, modernisation and enhancing availability with service automation.

How crucial is the role of technology for growth of warehousing and transportation segment in India?

Automation is essential for organisations that hope to remain competitive. Large companies have used software to obtain reports and complete orders with great efficiency. Through technology and remote access, they are able to follow in real-time the execution of operations in the warehouses. The availability of information has helped managers to make decisions. With access to in-

ternet and data bank, the latest generation systems help warehouses to reduce damage, avoid errors and optimise processes within the supply chain.

What's interesting to see and understand is that the technology sector does not stop growing. Professionals have to be prepared and must have the support of logistics systems to help them in that transition. With the use of

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specific software and being connected to market news, managers can study strategies to increase productivity.

How do you foresee the future of warehousing in India? What are the key megatrends transforming the scenarios even as we talk?

Sustainability and Digitisation holds the future for warehousing in India. Automation and robotics will be more essential in the logistics industry. The digital transformation of warehouses depends on automation. The association between technology and people, empowered by wearables is an important

aspect of a modern warehouse. There are immense benefits associated with imaging, cloud integration, voice/face recognition, and voice assistants. Advantage of such technologies is that they offer real-time information, regardless of the environment and location.

Could you inform us of your near-term plans or any projects in pipeline?

We are continuously expanding our presence, either by opening up new spaces or expanding the existing ones. Our focus for now is on Chem Store—our super special chemical warehouse at Bhiwandi, Mumbai. 



"Things in India have changed quite a lot in the last couple of years. With the implementation of GST, companies are consolidating their warehouses. Usually, on the outskirts of a metropolitan city, you will find dedicated warehousing zones with big boxes warehouses built there. And the increased demand and a greater need to consolidate is driving the business," expresses **Sandeep Chadha, Co-founder and CEO, Sameera Warehousing.** Warehouses in this age and time acts more than just a storage house and enables the business in the overall value proposition, he says, and looking at the dynamic market situation, Sameera Warehousing is ready to expand both organically and via acquisitions and coming up with projects in Bangalore, Chennai, and Madurai. Having set a clear growth path and thinking smart into the future, Chadha says they have decided the course and is set to be the foremost industrial developer in India in the next three years. Excerpts from his interaction with Ritika Arora Bhola.

We are in an age and time where 'change is not only constant but frequent'

Take us through Sameera Warehousing's business operations in the last few years. Where do you see your warehousing and value-added service solutions well-fitting amongst what other players are offering?

As a diversified business conglomerate, Sameera Group has created a credible niche for itself in a range of domains, over a time span of four decades. With continuous and consistent delivery as its hallmark, it has evolved in a range of industries including real estate, hospitality, education, transport, food processing, and insurance. Our warehousing and transport services business are tailor-made, customised,

and thoroughly envisioned. We are way ahead of the competition having delivered some marquee projects. It has allowed us to remain focussed and emboldened us to push the envelope. Overall, we have most of our basis covered and we are well-poised to execute several Greenfield warehousing projects within our portfolio.

Which recent innovations and developments do you consider the most ground-breaking for your company? How have you aligned them around customer-centric strategies? We have launched warehousing parks across Bangalore, Chennai, and Madurai

and these are our priority locations at the moment. These are our Greenfield projects spreading over 200 acres with a development potential of 5 million sq ft. Customer-centricity is at the heart of everything we do. We have tailor-made and customised these projects as per the investment appetite of our clients. The kind of response we have garnered so far is encouraging.

Any efficient and innovative marketing strategy and value proposition approach Sameera Warehousing has adopted to move forward in the cur-

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rent recovery period?

Client interest is our topmost priority. Our cutting-edge value proposition revolves around a better client experience with superior returns. All our offerings are state-of-the-art and well-aligned with the market's expecta-

tions. We have created a realm with transparency and superior execution wherein customer-centricity holds the centre stage. Our clients grow with us and we gain momentum likewise.

Going forward, how will emerging trends, structural changes, and new markets redefine your business and company as a whole?

We are in an age and time where 'change is not only constant but frequent'. Businesses will keep getting impacted on the back of a technology onslaught. The companies that are agile and quick with regards to the environment they operate in will have an edge over the rest. While the execution of

by both private and public sectors in this regard?

Today, the increased demand and a greater need to consolidate is driving the business. Also, consolidating the warehousing segment is cost-effective and it enables efficiency. So keeping all that in mind, a warehouse in this age and time acts more than just a storage house and enables the business in the overall value proposition.

The new-age warehouses, globally are Grade A and cutting-edge. The incumbents in this domain are aware of the changing customer expectations and they devise the deliverables accordingly. Optimum inventory and enhanced throughput keep guiding the construction and delivery of

mand realm will continue to drive growth.

It's now up to the various stakeholders and industry players to leverage it and structure products accordingly. Things are poised at the macro level and it's only going to go up from there in the medium to long-term. The unique scenario is that demand is robust and from a range of sectors. E-commerce is leading the pack, at the same time, retail, pharmaceuticals, FMCG/FMCD are not far behind either. The key in leveraging the opportunities to soar higher lies in devising the products and services that are in sync with the market and compatible with the ever-changing technological paradigm.

With organised ware-



Our warehousing and transport services business are tailormade, customised, and thoroughly envisioned. We are way ahead of the competition having delivered some marquee projects. It has allowed us to remain focussed and emboldened us to push the envelope. Overall, we have most of our basis covered and we are well-poised to execute several Greenfield warehousing projects within our portfolio.

We, at Sameera, are always on alert in terms of adopting cutting-edge technology and value time-test business practices. Newer markets and a bit of uncertainty intrigue us and we pursue the same with zeal and with prudence.

will bring down the logistics lost with increased efficiency.

Lastly, would you want to reveal on your expansion plans or projects in the pipeline?

Yes, we are ready to expand. Having said that, our current pipeline is robust and keeping us busy for now. Within Southern India, we are coming up with projects in Bangalore, Chennai, and Madurai. A total land parcel of 200 acres with the development potential of 5 million sq ft is currently being executed at our end. Again, we are open to expanding both organically and via acquisitions wherever see the potential. We have plans to be the foremost industrial developer in India in the next three years. We are evaluating various proposals for now and will soon announce expansion plans. 



business will be redefined as per the emerging trends, basic fundamentals will still guide the larger vision. We, at Sameera, are always on alert in terms of adopting cutting-edge technology and value time-test business practices. Newer markets and a bit of uncertainty intrigue us and we pursue the same with zeal and with prudence. In the face of emerging trends and newer markets; we are open, we are patient and we are prompt as well.

Could you provide us an overview on the new-age warehouses in India and the investments done

present proof and future-ready warehouses. The positive fall out here is that investments keeps getting poured in the wake of increased demand. The twin paradigm of efficient and effective boxes serves as a guiding principle for warehouse developers. Both the private and the public sectors are mindful of the warehousing requirement in the new-age and the deliverables are being constantly enhanced.

How will stakeholders and the industries alike leverage the emerging opportunities to soar higher?

I would say an increased de-

housing still nascent compared to the unorganised, it offers a sea of opportunities for the incumbents. With a structured approach and holistic vision, the incumbents need to devise the propositions more suitable to a particular industry, region, or market. The key megatrends, I foresee, are the proliferation of Big Box Grade A warehouses on the outskirts of major metros. Retailers are adapting omnichannel retail experience that should help medium-sized warehouses to grow within the city. Overnight delivery will create the need for warehouses within the city limit. Relay trucking

We continue to realise our ambitions across the full extent of the business

Delhi-based full-service supply chain management company, **Om Logistics** recently acquired Transafe Services Ltd, a JV of Miniratna PSU Balmer Lawrie, in a move that would allow the 3PL to build on its existing strength in the industry and offer its wide array of services to untapped markets, complemented by a new service proposition to provide customised and flexible containerised storage solutions. With this incorporation, along with various other strategic developments, Om Logistics is striving to become a holistic destination of diversified services for all its international and domestic customers. While exclusively speaking to Smiti Suri, **Akash Bansal**, who takes into the top-level role as **Country Head** of the company, highlighted how their growth goals are intertwined with Transafe acquisition and will help the company achieve the position of being the strongest player in the integrated transportation scenario.

Could you explain the acquisition of Transafe Services as a significant development, considering it's only into the business of manufacturing and leasing containers for inter-modal shipping? Could you enlighten us on more on the company's portfolio of service offerings?

Well, had been looking forward to acquire Transafe since quite long, but with a more structured approach from 2017 when the term DFC was becoming a buzzword for the entire industry. During that time, we thought of 'why not be a CTO?' In 2018 when Transafe went into NCLT, we stepped

up as one of the bidders. The reason behind was importantly to diversify our portfolio of services from logistics and add a different business line of manufacturing and leasing containers. As an industry, container manufacturing and leasing has strengthened its foothold even in India and the bottom line potential of this business is only going to grow. All in all, logistics will always be our prime forte and we continue to up the game.

Coming to manufacturing, Transafe has three plants operational, one each in Coimbatore, Dharuhera, and Kharagpur. The company caters to diverse verticals



with specialised and custom-made containers – reefer containers, tank containers, bunk houses, E-houses, standard ISO DVC's - 20/40 – and the three plants serve as key nodes to different geographic zones. In terms of leasing, Transafe has the capacity to provide 'per day per container' lease model looking and customers can use up till the time they want. Customers have the flexibility for an OpEx spending model which is simpler, more flexible, and potentially more economical. More importantly, Transafe offers reefer containers on lease, which is an added-value for customers and value proposition for us – as you may know, reefer containers comes with upright investments.

The demand, especially at present has boomed. We have a huge inventory of approx. 6000 containers as of now available for lease. However, because of NCLT pleas against Transafe, it will take us around six months to get everything into place and start afresh. Because of some fund issues, repairing and leasing of containers by Transafe was put on hold, something that adds significant recurring monthly revenues to the business. Now since we have taken over, we are seeing through the fundamentals and will successfully scale the business. Once we sum up the targets within repairing and re-manufacturing, we will move forward with production of new containers for both sale and lease purposes. The existing containers are old and basis customer requirements are customised and leased out, and the demand at present is more for bunk houses, E-houses, and ISO series containers.

Transafe claims to run a large fleet of refrigerated trucks and trailers in India along with a number of cold rooms/warehouses through its subsidiary Glacio Cold Chain Logistics? How active is Glacio in the Indian market? Also, does that mean with this acquisition you are all set to foray into the cold chain space?

There was a time when Transafe was instrumental in terms of operating cold chain trailers and trucks. But, the business did not perform well for them, or in other words, I would say the business did not evolve the way it should have. So, that model of business in no more functional for Transafe. Even, we at Om Logistics are not targeting the cold chain space and not ready to be part of the sector at this moment. Cold chain operations are out of the box for us in the current scenario.

But, as I mentioned earlier, there's substantial availability of reefer containers at our disposal which will soon be made available for customers. We will build on Transafe's expertise to develop industry-best containers and customised to the extent that they fit within the requirements of customers.

All in all, what about your aspirations towards achieving swift growth across standard 3PL transport and warehouse operations? How much will the overall revenue mix make up for OM Logistics in the short to long-term?

We have been achieving great growth across standard 3PL solutions and warehouse operations and we continue to realise our ambitions across the full extent of the business. As a strategy, the acquisition of Transafe is also intertwined with our growth prospects. We wanted to be in this space of container manufacturing and leasing which integrally is a part of logistics activity, and that was what we had been thinking and talking about across the board for quite some time and finally worked upon. The acquisition is a feather in our cap; we now have the capacity to be a dominant player in this business domain and this will give us the edge to operate containers even on the railways mode. We are dedicatedly thinking about being a container train operator in the times to come. With DFCs opening up, we will look to undergo the regulatory ap-

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As a prominent name in the container manufacturing space, we will have an edge to make containers ready and available at any given point of time as we evolve into a CTO operator. This has indeed opened up a new horizon for us within the logistics and integrated transportation segment.

E-commerce had definitely been a challenge for us. I think it's a challenge for almost every traditional 'profit-making' company in the sector. There are some gaps that exist and professionally managed companies like Om can definitely fill that

I can very well see the country's logistics sector set on a rigorous growth path with the introduction of wide express highways and freight corridors giving the desired boost. Today, every player has the opportunity to reduce upfront costs, improve competitiveness and the option to deliver value to the end customer.

proval process to bag the license and see how we operate freight trains. So, this acquisition was basically planned to support our aspiration to engage fully in container train transportation in India with self-owned containers for the service. We have developed a good understanding considering we have been leasing containers to trains operators since long. There is always a push back for players in terms of availability of containers. And as a prominent name in the container manufacturing space, we will have an edge to make containers ready and available at any given point of time as we evolve into a CTO. This has indeed opened up a new horizon for us within the logistics and integrated transportation segment. Additionally, the number of rail operators within the sector is relatively low and the true potential of rail freight is yet to be exploited within the domestic logistics space.

Well, it will take some time for us to stabilise the diversification model via the Transafe acquisition. But, in terms of the top line of the

business, there will be a substantial upshot as the company will now operate under the brand name of Om Logistics and we will add the business as one of our verticals. We are hopeful of achieving good growth in this segment by the next financial year.

Urban logistics is growing significantly to cater to the last-mile delivery network, particularly by of online commerce firms. Don't you see this is an area untapped by bigger and traditional players like Om and that it has the potential to diversify offerings utilising the assets at your disposal?

E-commerce had definitely been a challenge for us. I think it's a challenge for almost every traditional 'profit-making' company in the sector. There are some gaps that exist and professionally managed companies like Om can definitely fill that, but it's because of cost pressures and smaller sector specific players that are becoming more and more integral to that model are making it difficult for organised players to have a piece of the pie in the business. Our sales model does not match up to the revenue designs of how e-commerce

firms go about to pay and generate on a per day basis.

That said, we are doing long-haul for many e-commerce firms. But, the last-mile is what always proves to be a challenge for us and cater to, which is only and only because of cost. Service is not an issue for us, but it's the cost which put us on the back foot. However, we will look forward and wait for the opportunity to be part of the last leg in the supply chain and further serve the business.

So, how do you view the overall industry structure? How will the future pan out for the industry?

Government today is doing its best and supporting the growth momentum. And, logistics being a dynamic industry and not volatile, was active and running full swing as the one sector that has to run the show, while everyone else were at a standstill. Om itself was moving pharmaceuticals and FMCG. As such, we had been doing our part and delivering on our commitment to total customer focus and providing efficient and timely solutions. I can very well see the country's logistics sector set on a rigorous growth path with the introduction of wide express highways and freight corridors giving the desired boost. Today, every player has the opportunity to reduce upfront costs, improve competitiveness and the option to deliver value to the end customer. For instance, reaching Mumbai in 18-19 hours will definitely prove beneficial for companies once DFCs are entirely operational – a cost-reduction exercise for everyone. It will drive the shift from road to rail and contribute to reduction of both logistics costs and potential CO₂ emissions. CC



Outlook 2022

Logistics Professionals
initiative with
CARGOCONNECT in January
2022 edition

This is one of the most anticipated and highly read stories that **CARGOCONNECT** publishes at the start of the year.

As the world aligns to new set of rules, challenges and amazing opportunities, this year also like every passing year, CARGOCONNECT will collaborate with global leaders for crafting a unified outlook the industry expects to realise and shape up through the year. This is an elaborate and the biggest story titled 'OUTLOOK for 2022' within the purview of global supply chain logistics.

We work on throughput efficiency a lot



We've seen many instances of pharma companies quickly retooling manufacturing to start producing products that are in high demand. This ability to repurpose capacity provides a model for business agility going forward. End-to-end visibility across production and supply is essential. This includes real-time production monitoring systems and advanced planning and scheduling tools in manufacturing, as well as the ability to track and trace product – from materials to final product – as it passes along the supply chain. This requires an enterprise platform that connects the company with its suppliers, customers and partners to enable the real-time flow of information and transactions to create flexibility and robustness. However, accelerating product innovation and manufacturing requires more than identifying capacity; it also requires engineering, design, production, and distribution of resources. Overall, it is vital for patients to receive the medications they need without having to deal with stress or roadblocks along the way. Although the pharmaceutical supply chain face various challenges, companies like Mankind Pharma are taking the necessary steps to ensure a smooth process from manufacturing of products to delivery to patients. Excerpts from a recent interaction of Upamanyu Borah with Bharat Bhushan Rathi, Head of Logistics at one of India's leading pharma company.

Genesis and Market Position

Mankind is the fastest growing pharmaceutical company from more than a decade and listed among top pharma companies in the Indian Formulation Market. In its 26 years of journey, since its inception, promoters (Juneja Brothers—R C Juneja and Rajeev Juneja) attached themselves to the market and customers, critically realising the need to provide solutions—filling the vacuum—by offering good quality pharma and medicinal products at affordable rates in a developing market like India, which is now the world's third largest. The company's approach reflects in its mission statement which states “to be able to provide cost-effective, innovation based on superior quality pharmaceutical products across the globe that improves the lives of the patients.”

Racing towards a turnover of US\$1 Billion, Mankind's success is attributed to the out-of-box thinking capabilities and strategies of its experienced management team and field force.

COVID-19 and The Supply Chain

This one-of-a-kind crisis that takes over countries and economies once in a century is so unanticipated. No one is aware or can prepare themselves for such a disruption. But, a company's strength can be rightly judged in such abnormal situations when the need to evaluate market position and resiliency of operations is being adequately put to test.

Mankind Pharma stands rock solid with the character of “Go Getter”—striving to diminish the gap between demand and supply in a volatile

market. Our organisational behaviour to serve Mankind speaks volumes about our tireless commitment to quality that has earned the trust of our valued customers.

Adaptability and Flexibility

With each day passing, we are improving our system. It's an on-going process. During and after the pandemic, we implemented the CONTROL TOWER system—a decentralised mechanism for each critical process objective to debottleneck show stopper processes. We implemented and embedded enhanced capability into the ERP system to make it robust, reliable, and efficient and help meet increased demand for personalisation and improve a broad range of business processes. There was also a focus on making systems ON LINE (i.e. minimum human intervention). To challenge current supply chain processes, we designed a WEB so that any vibration in the network can be cached immediately and action is taken with no time lag.

Strategic Initiatives for Better Supply of Products

We completely revamped our processes. In fact, process upgradation programmes are still going. Generally, in the case of pharma companies, there is a unidirectional feeding flow {Production > Depot > POS (CFA)}. But, since the pandemic have no demand pattern and we have peaks in different time across different regions, we developed a system where product can be moved from nearby POS (CFAs) if there is any non-catered demand. Significantly, this solution helped us in Linear Distribution of Inventory. During the pandemic, when companies were struggling to distribute their products in the market, we were in a

We are improving our system. It's an on-going process. During and after the pandemic, we implemented the CONTROL TOWER system—a decentralised mechanism for each critical process objective to debottleneck show stopper processes.

comfortable situation, ensuring availability of our products even in remote areas.

Mapping and Integrating Value

We are not 100 per cent done with improvements but certainly we come a long way in last 2 years. We are using so many IT solutions — almost in each function which is not only enabling us to achieve desirable results but also decreasing human efforts in doing repetitive/non-value added works. I believe, these are the footsteps towards creating a RESILIENT and FUTURISTIC supply chain.

Establishing Coordination

At present, we are connected with an ERP systems solution designed internally. Disruptions like the COVID pandemic didn't affect much because we have integrated system which not only depends on the manpower but on processes that converge at one platform making it easy for us to control operations and not exhibit holistic decision making to achieve the desired result.

Meeting the sense of Supply and Demand

We work on throughput efficiency a lot (i.e. when there is a sudden jump in demand, we can cater without lag/delay/backlog). This is most importantly because we have designed the system on Theory of Constraints (TOC)—the scientific approach to improvement that helps us to identify the limiting factor (i.e., constraint) that stands in the way of achieving a goal and then systematically improving that constraint until it is no longer the limiting factor).

Logistics—Essential to Strategy

There is no question on whether logistics (Storing and Distribution) is the backbone of any company. There is no question on whether logistics (Storing and Distribution) is the backbone of any company or not as it is. Motivated and skilled sales teams must be backed by robust distribution operations to capture market. Planning, Distribution, Transportation and Warehousing are all part of logistics operations and they need to be in sync to maintain efficiency at all steps. I believe all decision-based work controlled by a company and all transactional (repeated) must be



As a useful rule of thumb, we keep a back up of and for everything and anything required to support the continuity of logistics and delivery of products. Yes, it comes with cost but for all critical operations we have this policy.

outsourced to experts to support value-focussed thinking for improving business and operations.

Quantifying Logistics Services

Whenever we are finalising any LSP, apart from commercials, we validate his capabilities (i.e. how his strengths can be useful for the company) and not only that, we also see and review testimonials of the service provider's present customers (in some cases, we also discuss and consult with them).

However, as a useful rule of thumb, we keep a back up of and for everything and anything required to support the continuity of logistics and delivery of products. Yes, it comes with cost but for all critical operations we have this policy.

Guiding Backend Performance

We are driving activities on Indicators (I mean KPIs) and their online monitoring (not post facto after a month), any deviation is corrected immediately. Not only that, we also have authority matrix which makes this even more agile, because decisions are taken

quickly and enable fast execution.

Trends that are Reshaping the Future

Going forward, I believe Direct to Customer (D2C) will be a buzzword (i.e. anything and everything at doorsteps or Direct Selling which makes even the entire logistics network more complex).

Direct-to-consumer marketing puts the control of the buying process back into the hands of the manufacturers. The company is responsible for creating a superior product, marketing it to their target audience, delivering the product or service to their customers and establishing a relationship with them.

The end customer is probably not aware of the steps their product takes on its journey from warehouse to delivery. Now that next-day delivery is arguably the standard in retail as a whole, customers may not even realise how much D2C has disrupted the landscape.

Additionally, success factor of a company depends on BIG DATA usage (i.e. how companies can use AI to predict demand in a region). To make this happen, fast information flow (real-time) and expedited decision making is required at each step of the supply chain.

Most critically, any sector, regardless of Pharma, although it's a highly governed/regulated market, will have to strengthen its customer feedback mechanism.

Lastly, at the moment, there is high deficiency of skilled manpower in the industry so we need to work on it. 

India's logistics industry sees formation of first-ever dedicated Warehouse Association

In a historic move, India's logistics industry witnessed the formation of a dedicated warehousing association for the first time.

"The Association's charter was signed on Saturday at New Delhi. The Chief Guest at the occasion was Pawan Agarwal, IAS, Special Secretary Logistics, Department of Logistics, Ministry of Commerce," stated an official release.

"The Warehouse Association of India will be the ecosystem of and for all stakeholders of the Warehousing Industry in India. Along with charter and managing committee members, Warehouse Association of India pledge to further the interest of the warehousing sector in India," the statement read.

Reportedly, Manu Raj Bhalla, Director & Global Head- Contract Logistics &

Supply Chain, Freight Systems (India) has been appointed as the President of the Association and will be at the helm of affairs.

The forum specially acknowledged Smriti Sharma, Sunil Tyagi, Rajesh Lal, Mohan S A, Arif Siddiqui, Parag Warerkar, Sunil Nair, Parmeet Bhalla, Anish Kumar, Venkat Nott for their contributions and for being part of the noble initiative.

Centre launches Krishi Udan 2.0 Scheme to boost transport of agri products



The Ministry of Civil Aviation recently launched Krishi Udan 2.0 scheme under which cargo-related infrastructure will be built in airports of north-east, hilly and tribal regions to assist

farmers in transporting agriculture products.

The Centre, under Krishi Udan 2.0, has stated that full waiver of airport charges would be granted at select airports even if the agricultural cargo is less than 50 per cent of the total chargeable weight carried.

The Centre said it will facilitate the development of hub and spoke model in India and create cargo terminals at the airports in a phase-wise manner.

Moreover, under Krishi Udan 2.0, the government

would also encourage states to reduce sales tax to one per cent on aviation turbine fuel that is used in freighter aircraft and passenger aircraft that are being used to just transport cargo.

Various government departments and regulatory bodies, under the newly launched scheme, will collaborate with the civil aviation ministry to provide freight forwarders, airlines and other stakeholders with incentives and concessions to carry more agriculture products.

Bhogapuram to soon boast top cargo facility

Chairman of the Parliamentary Standing Committee on Commerce and YSRC Rajya Sabha MP V Vijay Sai Reddy said that the upcoming Bhogapuram International Airport will have the best-in-class infrastructure and a dedicated cargo facility.

Addressing a recent webinar on 'Air Cargoing Andhra

Pradesh' organised jointly by FICCI and Vizag Industrial Scan, he said there is no need for exporters of AP to go to Hyderabad or Bengaluru for air cargo operations. He urged exporters to utilize the existing air cargo facilities in the state.

Vijaysai Reddy also ex-



plained the 'Act East' policy and said Union Minister of Commerce Piyush Goyal has announced that India will soon have free trade agreements with UK and Australia.

Shiprocket launches AI-powered platform Engage



India's leading tech-enabled logistics and fulfilment platform Shiprocket has now launched Shiprocket Engage—a dedicated post-purchase order processing platform built to allow sellers to scale their e-commerce business through automated workflows and AI-based order analysis for risk scoring. Shiprocket Engage provides a robust customer experience that minimises the RTO (Return To Origin) rate efficiently and increases profitability for online sellers. Shiprocket Engage powers the entire post-purchase journey over WhatsApp, enabling sellers to confirm orders, verify and correct addresses, increase prepaid orders, send tracking notifications, and manage NDR flows to collect delivery re-attempt preferences from customers automatically. This leads to sellers' reduced inbound (tracking-related) and outbound calls (NDR – rescheduling deliveries).

COGOS adds 30 new towns, augments fleet with 1,000 vehicles

Bangalore-based logistics Benterprise, COGOS has ramped up its fleet by more than 1000 vehicles to meet the festive demand. This new addition of fleet will address the surge in demand during the festive season. With the additional fleet, COGOS also expands to 30 new towns and improves reach. According to reports, this festive season has seen a 100% spike in demand from tier II and III markets. COGOS has seen a huge hike in demand for e-commerce and FMCG retail. However, this year segments like pantry products, beverage and pharma have also seen an uptick. There is an increase in demand observed for mini trucks of 1 tonne and 2 tonne and medium trucks above 4 tonne.

DP World to develop logistics infrastructure in Jammu & Kashmir

DP World plans to develop logistics infrastructure in the state of Jammu & Kashmir.

An MoU was signed last month between the Government of Dubai and the State Government of Jammu & Kashmir in the presence of Piyush Goyal, Minister of Commerce & Industry, Consumer Affairs & Food & Public Distribution and Textiles, Government of India, Manoj Sinha, Honourable Lieutenant Governor, Jammu & Kashmir,



and Sultan Ahmed Bin Sulayem, Group Chairman and CEO of the leading global provider of end-to-end logistics solutions.

As one of the largest logistics players in India, DP World

handles a quarter of the country's total container trade volumes. The company has invested over US\$2 billion in development of ports and logistics infrastructure in the country.



DHL's largest express airside facility to handle throughput capacity of 17 dedicated international freighters

DHL Express has announced the opening of the largest airside express courier and logistics facility in Bengaluru, India. Located within the Kempegowda International Airport, this newly expanded Bengaluru Gateway by spans over 112,000 sq ft, over four times larger than the previous facility, and will see investments amounting to INR 200

crore (EUR22 million) over the next 10 years.

When operating at full capacity, this new and expanded facility can handle over 90,000 tonnes of shipment per year. The additional capacity at the expanded Bengaluru Gateway enables DHL Express to offer 12 to 24 hours faster connection and delivery of imported goods across India, and reduce daily cut-off time for shipment

pick-up by up to 60 minutes.

Using 11 DHL-operated intercontinental freighters on a weekly basis, the Bengaluru Gateway at present connects both South and West India to over 220 countries and territories. An additional six dedicated intercontinental freighters joins the current fleet, bringing the total number of aircraft operating through Bengaluru to 17.

FedEx Express study reveals India exemplifies a dynamic, experimental, sustainable future

FedEx Express announced the findings of its 'Future is Now' study that offers insights into India's readiness to embrace the future.

According to the study, which surveyed more than 4,000 respondents in 18 cities, 79% stated that India was prioritising technology like AI, IoT, and Blockchain to deliver

a future-ready world. Approximately 83% believed technology they'd seen in science fiction movies is either already a part of their daily lives, or likely to be in the next few years. The study focussed on three main views: being dynamic, how India is open to experimentation and innovation, and to what degree the country is

sustainability conscious.

With the trend of technology-led change likely to continue, specific industries were identified as major drivers in shaping the cities of the future, with healthcare (35%), infrastructure and logistics (21%), and banking and finance (18%) believed to be leading the change.

SEROS Logistics acquires a Supra Max vessel to its diversified sea logistics fleet

SEROS Logistics has added a Supra Max vessel "MV Amarnath" to its diversified fleet, taking the total count up to over 40. The company will operate the vessel to carry breakbulk cargo and has invested approximately US\$7 million in the acquisition. With one of the largest coastal fleets in India, SEROS boasts of vessels including mini-bulk carriers, offshore accommodation barges, a diverse fleet of tugs, floating cranes, propelled and non-propelled barges. Ashish Agarwal, CEO, SEROS Logistics said, "We at SEROS have the potential to offer end-to-end sea logistics services. By adding MV Amarnath to our maritime fleet, we have further strengthened our core competencies. This acquisition not only will help us in achieving our goals, but also demonstrate our capability in allocating capital and resources at the right time."

UPS begins first direct flight from India to Europe



A UPS 747 flight is now connecting India directly to Europe and connecting UPS customers to North and Latin American markets five days per week. That doubles the company's previous capacity to and from India for small and medium-sized business customers looking to grow their revenue base. UPS's first direct flight from India will connect Delhi to its largest international hub at Cologne, Germany. With this, UPS brings to the table more capacity with the Boeing 747 (payload of 307,000 pounds), which translates to lower cost for customers and lower emissions with fewer flights needed.

Lufthansa Cargo, DB Schenker join forces for weekly Frankfurt-Shanghai CO₂-neutral flights



DB Schenker and Lufthansa Cargo have extended their weekly CO₂-free freighter flights

between Frankfurt and Shanghai, with Nokia signing up for the initiative. Every week, the global telecommunication network provider will avoid greenhouse gas emissions by using the world's only freighter flight 100 per cent covered by SAF, produced from renewable waste such as used cooking oils.

The fuel requirement for the flight rotation from Frankfurt (FRA) to Shanghai

(PVG) and back is covered entirely by SAF. This saves around 174 tons of conventional kerosene every week. During the summer flight schedule 2021, the initiative successfully achieved a net reduction of 20,250 tons of greenhouse gases (CO₂e). In the upcoming winter flight schedule, from the end of October 2021 until the end of March 2022, another 14,175 tons are expected.

Maersk to set up first integrated logistics park at Jeddah Islamic Port



AP Moller – Maersk signed an agreement with Saudi Ports Authority 'Mawani' committing to an investment of US\$136 million (510 million Saudi Riyals) over a period of 25 years to set up an integrated logistics park at the Jeddah Islamic Port in Saudi Arabia.

The Greenfield project

spread over an area of 205,000 sq mt will be the first of its kind at the Jeddah Islamic Port offering an array of solutions with an aim to connect and simplify the supply chains of importers and exporters in the Kingdom. Maersk will also be investing heavily in renewable energy to power this facility and eventually achieve carbon-

neutrality. The project is expected to create more than 2,500 direct and indirect jobs in Saudi Arabia.

The bonded and non-bonded warehousing & distribution (W&D) facility will cover more than 70% of the total area while the remaining part will act as a hub for transshipment, air freight and LCL cargo.

DACHSER, DB Schenker, duisport, Rhenus forms Open Logistics Foundation

Dachser, DB Schenker, duisport and Rhenus has established an 'Open Logistics Foundation' in Berlin. The purpose of the non-profit foundation is to build a European open-source community aiming to promote digitalisation in logistics and supply chain management based on open source and standardise logistics processes through de facto standards.

The core of the founda-

tion's work is the operation of the so-called Open Logistics Repository, a technical platform on which software and hardware interfaces reference implementations and components available as open source under a free license (permissive license). All tools and components will be free of charge without restriction for commercial applications to promote broad acceptance within the logistics sector. Companies

may use them, for example, to expand their platforms or to set up new products and business models faster.

The main tasks of the foundation also include identifying collaborative projects to be included in the repository. It monitors the quality of the open-source software and guarantees neutrality in its development. Furthermore, it offers training for companies on how to work with the platform.

ATC Aviation Services adopts CargoBooking solution powered by Awery

General Sales and Services Agent (GSSA) ATC Aviation Service is adopting a new online booking solution called CargoBooking, which automates processes and provides instant quotes.

The online solution, powered by Awery Aviation Software, allows ATC customers to book Airway Bills (AWBs) and benefit from an end-to-end track-and-trace facility. CargoBooking can connect to any airline, integrating with operating and accounting systems using an Application Programming Interface (API), or clients can book with their own AWB number.

Confirmed bookings are automatically entered into an airline's software, avoiding the need for double keying, and reducing booking times to seconds rather than minutes.

DSV consolidates Gauteng operations in South Africa



DSV has inaugurated DSV Park Gauteng—its new HQ located in Gauteng, South Africa.

With this centralised facility which is also said to be Africa's largest integrated logistics centre, the global specialist will be able to provide more seamless service to customers which are an integral part of creating a strengthened and more efficient logistics network in South Africa. The logistics centre consists of approximately 130,000 sq mt of buildings and covers supply chain solutions from first to last mile controlled and managed under one roof, by DSV.

It is situated near O R Tambo International Airport between Johannesburg and Pretoria and with easy access to the East and West Rand.



Qatar Airways first carrier to join IATA CO2NNECT platform



In partnership with the International Air Transport Association (IATA), Qatar Airways Cargo will become the first cargo carrier to join the IATA CO2NNECT plat-

form and offer a customised environmental solution for its clients.

Kuehne+Nagel will be the launch customer for the platform, in line with their com-

mitment to sustainability.

To mark this partnership, on November 01, Qatar Airways Cargo operated the first carbon-neutral air freight shipments from Doha to Frankfurt, Zaragoza, Liège and Paris.

The pilot project was launched on 4 routes, with plans to extend to the rest of its cargo network of over 60 freighter destinations and more than 140 passenger destinations worldwide.

The pilot uses an IATA industry best practice for calculating CO₂ emissions per freight kg.

Air Canada's API solution is now live for the freight industry

Air Canada Cargo customers can now connect directly and more conveniently with the carrier through its new Application Programming Interface (API) solution. This API solution will improve efficiency for customers by streamlining manual interactions such as quoting, booking, scheduling, and track and trace requests. It will also improve connectivity and collaboration, as well as the overall customer experience by connecting different systems and processes to offer an enhanced booking flow. By being directly integrated with Air Canada Cargo, customers will be able to reduce the amount of time taken to complete a booking or AWB, resulting in improved efficiency.

PROFILE

Gandhi Automations launches latest range of Dock Levellers and Sectional Overhead Doors

Gandhi Automations is back with a wide range of highly efficient dock levellers, overhead doors, and dock houses. The new Dock Levellers offered by the company ensure loading and unloading with lesser effort and minimal cost, thereby making it possible to load and unload products in a safe way and obtain remarkable energy savings. The Sectional Overhead Doors are used when the vehicle is positioned, brakes are applied and engine is shut off. This eliminates the exit of hot air and intake of cold air.

Following are the four types of Dock Levellers:

• **Radius Lip Dock Levellers:** These are available in multiple size and capacities. It allows the dock to connect with the truck bed, thus making it convenient to drive directly on and off with forklift trucks etc. Also, the Self-Cleaning Lip - Hinge System does not retain

dust and dirt which allows a smooth operation.

• **Telescopic Lip Dock Levellers:** These are ideal for connecting vehicles unable to drive near dock i.e. sea containers, side loading railway wagons, etc.

• **Edge-of-Dock Levellers:** It is developed in compliance with the latest European safety standard. It has a capacity of 6000kg and is suitable for use with all types of material handling equipments.

• **Forklift Roll-Off Barrier Lip Dock Levellers:** The newly introduced product add a run-off protection which prevents accidental forklift roll-off when the Overhead door is open and no trailer is stationed at the dock. These dock levellers are designed and build to provide all the benefits of the hydraulic dock leveler along with the additional benefit of providing a formidable barrier.

Gandhi Automations also offers Porto and Max Vista - Automatic Sectional Overhead



Doors - the ideal solution for all industrial and commercial needs.

Porto Sectional Overhead Doors are ideal for all industrial and logistics needs. The design and different solutions offered ensure the door to be aesthetically pleasing and perfectly suited to any architectural environment - from modern and traditional industrial buildings to fine commercial buildings. Porto doors are built to ensure the highest ease and flexibility of use which, in turn ensures a quick, hassle-free and accurate replacement of old doors. Their compact size

ensures more available space both inside and outside the premises. Depending on the structure of the building and the requirement, a choice can be made from a standard lift, vertical lift, horizontal lift, low headroom or inclined lift.

Ideal for industrial and commercial buildings, Max Vista Sectional Overhead Doors are made with a combination of aluminium panels and transparent acrylic, gridded or meshed windows giving it a distinctive look. Max Vista Doors allow natural light to pass through the large clear areas. CC



CSafe Global picks pharma sales and marketing expert Ravindra Rao to lead its India Life Science team

CSafe Global, the innovation leader in temperature-controlled container solutions for the transport of life-enhancing pharmaceuticals, announced that Ravindra Rao has officially joined the company as Director of Life Science Sales for its India business. Rao comes to CSAFE from Cytiva [formerly GE-Life Sciences] where he served as the Commercial General Manager for South Asia managing busi-

ness from India, Sri Lanka, Bangladesh, Nepal, Bhutan and Maldives. Prior to his 12 years with Cytiva, he held varying sales roles at companies such as Toshvin Analytical and Bio-Rad Laboratories India.

Stefan Paul to assume the role of CEO at Kuehne + Nagel next summer



The Board of Directors of Kuehne + Nagel International AG recently initiated two top management changes. The company announced its plan to promote its current top road

logistics executive and chief of sales to the highest office.

Effective August 01, 2022, Stefan Paul will ascend to the top leadership to assume the position of CEO of Kuehne + Nagel International AG. At the same time, the current CEO Dr Detlef Trefzger will step down "for private reasons" after nine years to join the company's Board of Directors.

Ex-BW LPG Chief Martin Ackermann joins expanded Synergy Group in CCO role



Martin Ackermann, previously CEO of BW LPG is joining Singapore-headquartered ship manager Synergy Group as CCO where he will be responsible for finance,

commercial, strategy and transformation intervention. Most recently CEO of Oslo-listed BW LPG, Ackermann was previously CEO of Evergas, Managing Director of Eitzen Gas, Managing Director of B-Gas and a board member of the World LPG Association.

The role at BW LPG saw Ackermann working closely with Synergy. Ackermann has been a strategic advisor to Synergy since the beginning of the year and as of 1 September took up the role of the group's CCO based in its Copenhagen office.

Chris Robeson to lead EFL's supply chain and logistics operations across the Asian region



EFL Global has appointed Chris Robeson as Chief Operating Officer for the entire Asian region. As COO for Asia, Chris is expected to play a critical role in

overseeing operations and identifying opportunities to improve and utilise EFL Global's business network for customers. Chris boasts over 30 years of experience across the logistics and transportation sectors. Prior to joining the EFL Global team, Chris served as the Vice President, International Logistics of MAST Global, overseeing all international product flow and identifying growth opportunities.

Christian Dornhaus to lead PayCargo's business growth ambitions across EMEA region



Freight payments platform PayCargo has appointed Christian Dornhaus as Managing Director for Europe, the Middle East, India, and Asia (EMEA) as the cargo payment

platform rides on rapid global growth. Dornhaus will be based in Madrid, Spain, from where he will lead a team dedicated to delivering PayCargo solutions across EMEA. Dornhaus brings over two decades of experience in the logistics and freight industries, most recently as vice president of sales Europe at UPS company Coyote, as well as having held previous senior roles at FedEx, Panalpina, Bolloré, and Dachser.

Crane Worldwide appoints Robert Gulyas to bolster its Automotive and Industrial vertical



Crane Worldwide Logistics has named former Jas Forwarding Global Account Director for EMEA Robert Gulyas as its new Global Vice-President for Automotive and

Industrial.

Gulyas has over 20 years of experience in the transportation and logistics industry. He has held various commercial positions supporting multinational clients' growth across a broad spectrum of industry sectors. While specialising in the Automotive and Industrial sectors in recent years, Gulyas has built award-winning teams receiving client acclaim for driving solutions and excellence.

dnata appoints Charles Galloway as Regional CEO for Asia Pacific



dnata has announced the appointment of Charles Galloway as its Regional Chief Executive Officer for the Asia Pacific region. In his new role, Charles will be

based in Singapore to oversee dnata's operations at 13 airports in four countries, including Australia, Singapore, the Philippines and Indonesia, managing 4,800 aviation professionals. Charles has over 20 years of experience in the global aviation, travel and logistics industries. He has been with dnata for over three years.

Andres Diez joins Swissport as Director Global Commercial



Andres Diez has joined Swissport as the new Director Global Commercial, effective September 2021. He will drive the commercial function to deliver highly customer

focussed commercial solutions.

With Andres Diez appointment Swissport completes its global management team and new organizational setup. Andres has over 20 years of management experience in business development and in financial planning for major logistics businesses such as DHL, and most recently, GXO Logistics.

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GUILLAUME HALLEUX

Chief Officer– Cargo, Qatar Airways

Journey so far... My journey has been an exciting learning curve since day one and it still continues to. I firmly believe in being humble enough to understand 'you don't know everything' and that 'you can learn from everything and everyone around you'.

What I have seen over the past 10 years is that the industry has entered into a no-return path of modernisation and inclusion. What I mean by this is that finally the cargo industry is gearing up towards the digital world, removing inefficiencies, becoming more agile and dynamic, adapting to the new technologies and caring about being more sustainable. Also, on the other side, there's an improvement in the number of women being part of the cargo family. However, there's still a lot of work to do with inclusion and digitalisation. Today, we're very much dependent on paper and lengthy processes that need to continue to be streamlined and push for more inter-agency connections and collaboration.

Witness to the Evolution

One major challenge was to face the COVID-19 pandemic. The situation put all of us in a critical situation where we had to quickly adapt and move on. Immediately, we were all working from home and doing internet video calls for business and to catch up with family and friends, had to continue delivering and supporting the global supply chain to ensure essential goods reached their destination promptly and safely. Maybe the future is a hybrid model where you can combine both home

and office work to ensure a better life/work balance to get the best out of every individual.

Open-endedness

Be constant, persistent, resilient and patient. You don't need to shout out what you do or how you do, let the results of it speak by themselves. In this ever changing environment, the biggest challenge is to stay focussed and not to lose sight of the prime objectives.

Hobbies and Interests

I am passionate about languages. Since early stages in my life, I have been learning different languages. I am originally from Ibiza Island in the Eastern coast of Spain. Ibiza has two official languages – Spanish and Catalan. As such, I have been exposed to multiculturalism and I developed a passion to be able to communicate with everyone. Travelling is my other passion. I love to go to places I have never been, discover the local culture, gastronomy, people and hidden treasures. One of the latest places I discovered was Cyprus, where I had to figure out how to drive on the left side of the road.

Values that you live by...

To understand attitudes or reactions to issues, it is very important to be respectful and to have enough empathy and emotional intelligence to understand the situations

or challenges other people may be going through. I believe in karma and the law of attraction – If you do good, it will come to you and the other way around.

Weekend Gateway, Favourite Cuisine

My passion for travel takes me to go places over the weekend. Being in Doha, I have several nice destinations at less than 3 or 4 hours reach. If not travelling, I like to wake up early and start the day doing exercise and preparing a nice breakfast. I would also spend some time at the beach or the swimming pool. I enjoy cooking while playing some good chill out or lounge music and having a glass of wine with my guests. The point is to unwind and recharge the batteries for the upcoming busy week. If I have to choose, I would say Mediterranean. I could be completely biased and say only Spanish, but it would not be entirely true. Medi-

whether it's Spanish, Italian or Greek is really rich in fresh vegetables, fish and meat. But not to forget, they all have olive oil!

Golden Words

Keep doing what you do if it fulfils you, makes you happy, and allows you to have a good work/life balance. Be mindful with the environment and do your part in preserving it. 



If you do good, it will come to you and the other way around

terran-
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As told to RITIKA ARORA BHOLA



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