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Trends and opportunities in the logistics sector in India | Case of Delhi-NCR

ASCELA has been closely studying NCR region and monitoring key recent and ongoing developments. Our first-hand experience of working in Delhi-NCR has helped us develop an understanding of the business potential in the logistics and warehousing sector in the region.

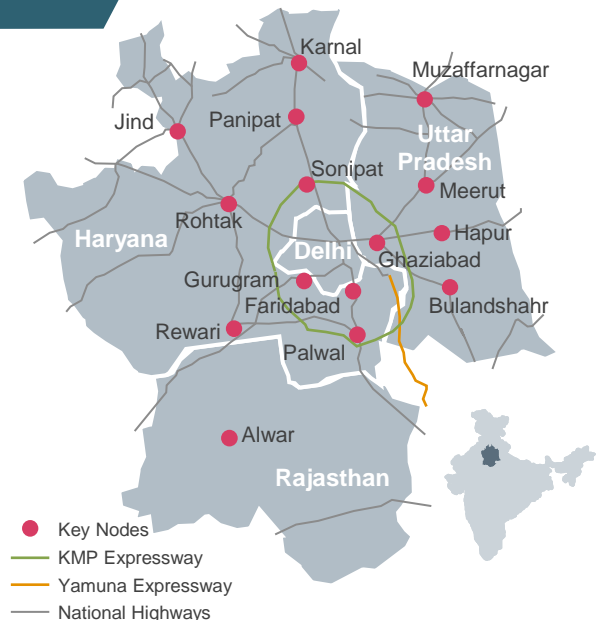


Industry Outlook

Logistics/ supply chain plays a critical role in connecting production centers to consumption nodes/ markets. Logistics sector can be broadly classified into three areas – transportation, distribution, and storage. Logistics infrastructure in India at present is not very efficient, leading to losses and pilferage during transportation and distribution.

As per the Food and Agriculture Organization (FAO), currently, India loses around 40% of agricultural production to wastage in the supply chain, while many developing countries experience losses of up to 25%.

National Capital Region (NCR) is the country's largest urban agglomeration and serves as the gateway to northern India. NCR is one of the largest manufacturing hubs in the country and accounts for the majority of production activity in north India. Food processing, which includes dairies, rice mills, sugar mills, confectionaries, and alcoholic and non-alcoholic beverages, among others, has the largest share in the output in NCR. This is followed by the auto and auto-ancillary, and metals industries.



Map of NCR highlighting key regions

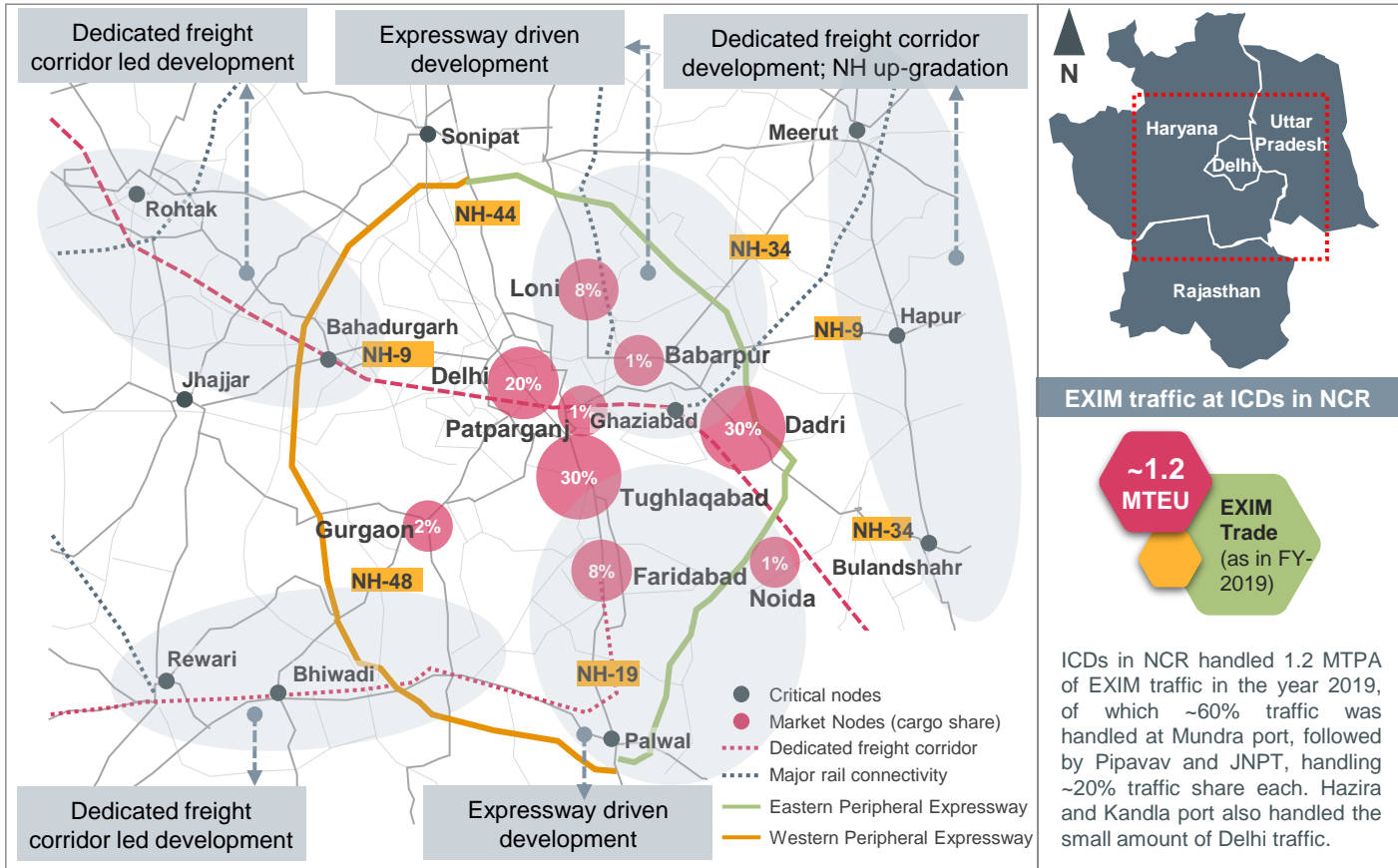
Supply-chain network

This paper focuses on Delhi-NCR as a case and highlights its key challenges related to its logistics and supply chain network. Delhi-NCR is a huge production and consumption hub, comprising of various markets, mandis, dairies, and warehouses. This paper attempts to briefly analyze the positioning of these hubs and associated key challenges.

Length of NHs in NCR
885 KM

Length of SHs in NCR
3,264 KM

Road density
4.14 KM /100 SQKM



1. Transportation network connectivity

With multiple transport infrastructure projects taking shape, Delhi-NCR is well positioned in terms of connectivity.

- Inter-state industrial corridors, such as the ambitious Delhi-Mumbai Industrial Corridor (DMIC), and Western and Eastern Dedicated Freight Corridors, are gaining renewed focus by accelerating the logistics sector through reduced cost and time factors.
- As per Airport Authority of India (AAI), Indira Gandhi International Airport handled ~0.7 MTPA of international freight traffic and ~0.4 MTPA of domestic freight traffic in FY2019. Opening up of Jewar International Airport in Noida is likely to facilitate larger air freight movement.
- Eastern Peripheral Expressway and Western Peripheral Expressway (or KMP expressway) are already diverting a large number of vehicles from Delhi roads by bypassing the city.
- Under construction, Regional Rapid Transit System (RRTS) is envisaged to handle cargo volumes in non-peak hours of passenger transportation. This is likely to facilitate the movement of perishable goods between Delhi and adjacent areas in NCR.

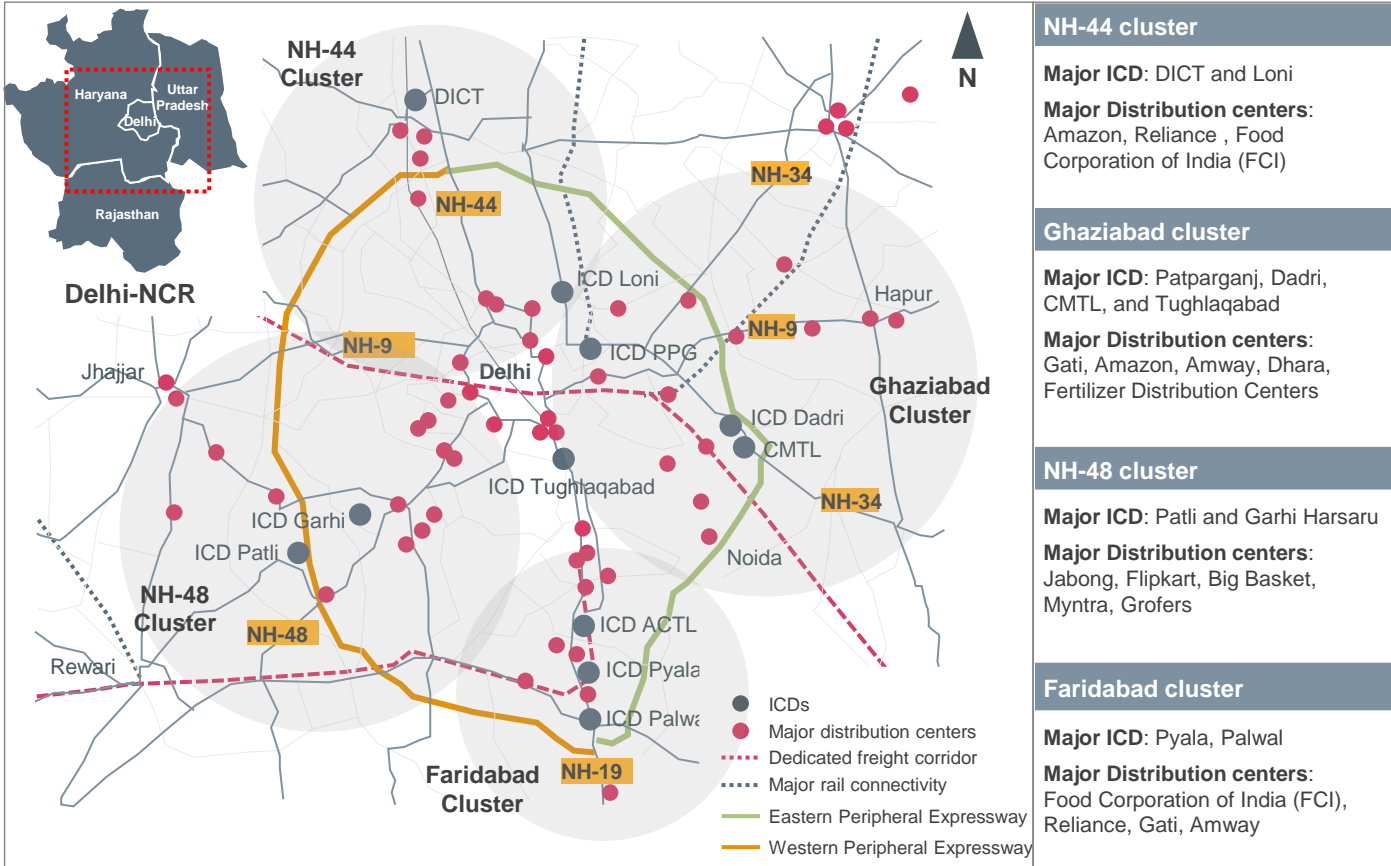
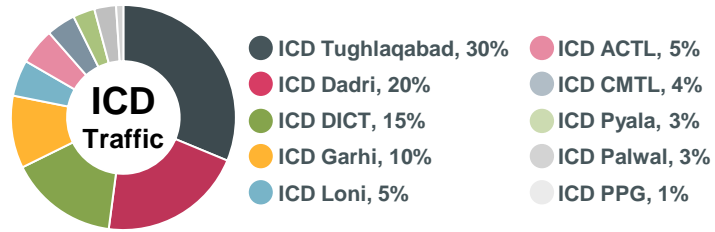
RRTS has identified 8 routes to accommodate freight traffic (especially perishable commodities during the off-peak hours of passenger services) and thus leverage the RRTS corridor. The service is likely to enhance supply chain operations in the catchment area.

Key concerns

- Manufacturing activities are concentrated largely in the southern and north-eastern parts of NCR. Northern regions, including Delhi, and areas along NH-44 and NH-9 going towards Rohtak have a considerably low share in NCR's total production output.
- Internal roads in Ghaziabad region lack proper road width and efficient infrastructure compared to the national highways. This restricts opening up of new land parcels for warehousing activities in the region.
- The rapid urbanization of areas around Gurgaon, Delhi and Noida have lead to increased land rates, making them unviable for warehouse development. Also, these regions suffer traffic congestion due to the dense urban population.

2. ICD and CFS infrastructure

Inland Container Depots / Container Freight Stations (ICD / CFS) act as hubs in the complete logistics chain. Delhi NCR has 11 operational ICDs/CFSs. ICD Tughlaqabad, the largest ICD in the country, is spread over 44 Ha of land and with 30% market share handled ~0.34 MTEU traffic in FY2019.



3. Logistics models

Organized logistics segment has been witnessing a gradual transition. A plethora of factors are driving this wave of change, such as requirement from quality consistency assurance, economies of scale being achieved through larger warehouses, safety and security of goods, efficiency in operations, quicker turnarounds, need for efficient warehousing designs and the advent of e-commerce.

Outsourcing of logistics activity has become the next logical stage of evolution for most sectors. The supply-chain industry is likely to undergo a major evolutionary leap in the coming decade, where design, compliance, costs and value-added services may dictate survival and growth. Recent policy initiatives are likely to create demand for more and more organized players.

Prevailing logistics models

1 Shared economy logistics is highly cost-effective as it saves considerable expenditure on ownership of resources and assets. PepsiCo and Nestle share warehousing, co-packing and outbound distribution to retail stores of their respective fresh and frozen products.

2 Omnichannel logistics integrates physical shopping and virtual shopping experiences for providing a well-informed, hassle-free, on-door shopping experience. IKEA has converted its warehouses into showrooms, and final orders are placed online.

3 Hyperlocal model enables on-demand delivery, where logistics players team up with local retailers such that their inventories are integrated with online platforms. Amazon Prime and Big Basket use a similar model for quick deliveries, within hours.

4 Cold-chain technology, where temperature-controlled environments are created end-to-end for perishable goods, right from transportation to storage to delivery. This protects the products from any damage and keeps them fresh and intact until the last mile.

Warehousing scenario

Majority of the warehousing activities in India are largely undertaken by unorganized segment. However, there has been a rapid growth in transactions by organized players in the recent past. Also, several large e-commerce companies and big-box retailers are now looking for opportunities to build warehouses around major consumption centers.

Export volumes handled by ICDs

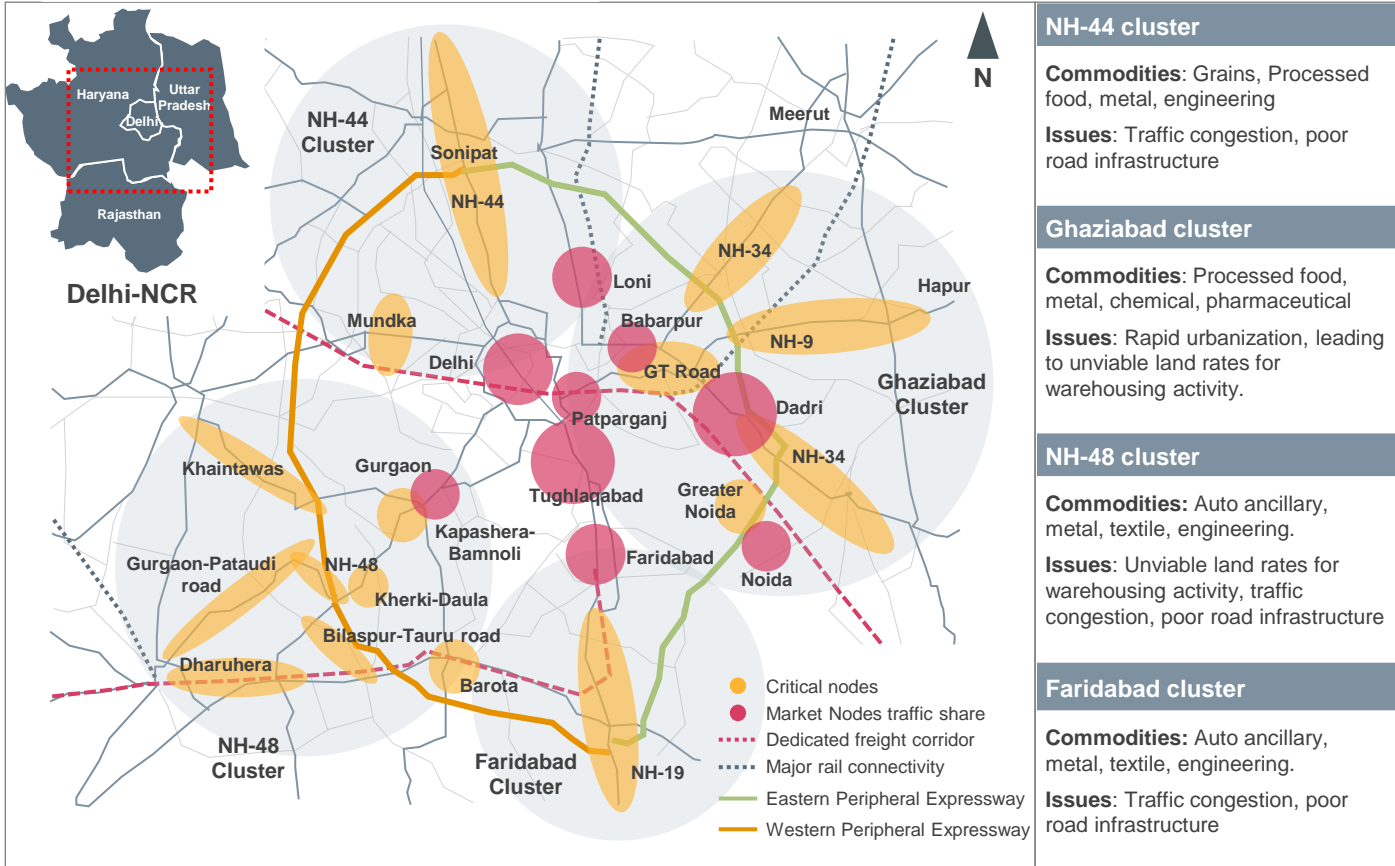
~0.4 MTEU

Import volume handled by ICDs

~0.8 MTEU

Cold storage capacity in Delhi

0.13 MTPA



Historically, warehousing activities in NCR have been concentrated in the peripheral areas of New Delhi, such as Alipur, GT Road, Kapashera, Bamnoli, Dhulsiras and Okhla, with godown-type structures dominating the landscape. As land prices became unviable for such activities, they slowly started shifting outside the Delhi border.

In the southern region, markets such as Kherki Daula and Manesar on NH-48 started attracting warehousing activities, while Kundli and Sonipat on NH-44 in the northern region developed as alternative markets. Similarly, NH-9 and NH-34 near Ghaziabad became attractive for warehousing activities as land prices on GT Road became unviable.

Warehousing opportunities

1 NH-34 and NH-9 have proximity to densely populated consumption hubs of Ghaziabad, Delhi, Noida and Greater Noida. These hubs together account for 95% of the total retail spending in NCR. They are also in proximity to the manufacturing hubs of Ghaziabad, Faridabad and Sonipat.

2 E-commerce has leveraged a renewed traction in logistics sector in NCR, leading to significant increase in the need for warehousing space. In the current scenario, share of E-retail is expected to rise steadily in the coming years, and demand for warehouses would likely increase proportionately as well.

3 3PL (third-party logistics players) is emerging in NCR with the trend of leasing a warehouse rather than owning. With Goods and Service Tax (GST) in place, the need for captive warehouses has reduced. This is likely to create additional demand for leasable warehousing space in NCR in coming years.

4 COVID-19 pandemic is already leading in the rise in on-door consumer demand for fresh and online commodities. This trend may likely result in the rise of the logistics sector, offering on-time supply, by developing greater flexibility with proximity to key urban centers and better supply chains, insulated from market disruptions.

Current trends

Changing dynamics of the retail industry has resulted in increased dependency of a retailer on a smooth and efficient supply chain network. Consumer's increasing expectations for speed and convenience is forcing many retailers to revamp their obsolete supply chains.

1 Block-chain: Block-chain technology has the potential to address complications in areas such as procurement, transportation management, order tracking, and customs collaboration. It identifies areas of friction in the supply chain and is also experiencing widespread adoption around the globe.

2 Artificial Intelligence (AI): AI enables logistics players to automate their supply chain and collate insights related to tracking, backend operations, and inbound and outbound functions. It also helps increasing visibility of operations, decreasing turn-around time, increasing throughput, and eliminating bottlenecks by automating and streamlining processes.

3 Low-to-no-asset network: Within the supply chain, the commodity is handled at various stakeholder levels, including transporters, warehouses, and several last mile operators. This tech-driven approach integrates functions at various levels, providing visibility to operations tending to cost-effective and time-efficient supply chain network.

4 Digital tracking: High-value cargo comes with greater risk. Digitalization using Radio-frequency Interface Detection (RFID) technology, Internet of Things (IoT), and augmented reality help in developing safer network, reducing delays in transfers and boosting operational efficiency for the logistics sector.

Impact of COVID-19

COVID-19 is a global pandemic, affecting countries and businesses worldwide. The retail industry has certainly seen its share of uncertainty, where manufacturing operations have been restricted. The supply chain is likely to continue to see a negative impact as manufacturing and transportation would witness potential shortages.

However, with the continued growth of the e-commerce sector would likely serve as a huge comeback. Once the crisis is over, economies would likely bounce back and businesses will get back on track. Furthermore, the post-pandemic world will see digital technologies playing a definitive role in enabling improvements across businesses, including more robust supply chains, enhanced user-experiences, and intelligent optimized processes to deliver results.

Policy support

- › Government of India had notified 'National Manufacturing Policy' in year 2011 with the objective of increasing the share of manufacturing in the GDP to 25%.
- › 'Make in India', the government's national initiative, places great importance on building best-in-class manufacturing infrastructure.
- › 'National Logistics Policy' is to be released by the Government of India, aiming integrated development of the logistic sector, including optimization of the modal mix, standardization of warehouses, promoting logistics e-marketplace, single-window clearance, etc.
- › NABARD loan for Cold Storage and Warehouse (2013-14) facilitates loan for a tenure of 7 or more years for up to 75% of the total project cost.
- › Private Entrepreneurs Guarantee (PEG) Scheme for construction of warehouses is applicable for construction of storage warehouses in PPP mode through private entrepreneurs, Central Warehousing Corporation (CWC) and State Warehousing Corporations (SWCs) to overcome storage constraints and ensure safe stocking of food grains across the country.
- › NABARD envisages Warehousing Infrastructure Fund (WIF) for extension of loans to Public and Private sectors for construction of warehouses, silos, cold storages and other cold chain infrastructure.
- › Under Private Warehousing Scheme scheme, godowns are hired by FCI from private parties on lease + services basis through open tender enquiry minimum for a period of two years extendable by maximum another one year.

Future growth opportunities

- › Technology-led business models will emerge as more important than ever and will play an essential role in defining strategy as we reimagine the global supply chains
- › Businesses can create robust supply chains in the post-COVID world by reducing dependency on physical labour across transportation, logistics and warehousing.
- › Safety will also be a major factor and supplier risk management will be at the core of all planning initiatives.
- › Also, digitalization will enhance the efficiency as well as performance in freight management and increased investment in infrastructure, last-mile connectivity, and emerging technologies will help in streamlining the logistics panorama in India.



The logistics industry in India is largely unorganized. However, unlike other real estate assets, logistics assets can be built in a relatively shorter period. With all the policy reforms that are being undertaken, there is a paradigm shift in the industry structure, where it is becoming favorable for organized players. Risks in greenfield investments are lower and their funding risks have reduced further. Amidst the increasing demand induced by reforms in the sector, investor's are shifting their interests towards logistics and warehousing sector, participating in both, greenfield and brownfield logistics development opportunities.

01

Cold-chain logistics

Cold-chain logistics is at a very nascent stage in India. While cold chain storage and transportation is already a global norm, innovative cold-chain logistics practices are soon catching up. Smart packaging solutions that report and control oxygen, humidity and pressure, besides temperature, allow the use of standard transport networks and last-mile delivery services instead of the expensive climate-controlled trucks and containers.

02

Warehouse consolidation

Post GST, with the removal of interstate checkpoints, reduction in cargo movement time and replacement of multiple state and central level taxes, there is a strong case for consolidation of warehouses. Warehouse consolidation results in averaging out of variability in individual demand and turn-around time, resulting in a lowering of risk of aggregate demand variability. Warehouse consolidation cases have witnessed up to 30% reduction in inventory levels leading to over 40% increase in inventory turnover thereby leading to increased profitability.

03

Decentralization of larger industrial clusters

Commercial hubs in India are usually operated in large clusters, serving lakhs of people within a large parcel of land, for example, Azadpur Mandi, where almost 90% of the market space is controlled by unorganized players with limited mechanization. Amidst connectivity improvements, enhanced mechanisation, and automation-driven-technologies in use, large markets may convert in fragmented multiple mini-hubs, serving specific regions.

04

E-retail network

With the Indian e-commerce sector rapidly increasing its sales, shrinking delivery timelines of major online marketplaces highlight the need to have more distribution centers and storage facilities closer to consumption hubs. In the post COVID-19 scenario, the share of E-retail is expected to rise in the coming years, tending to a proportionate increase in supply-chain networks and warehouses with modern infrastructure.

05

Farm to market logistics

Efficient agriculture supply-chain can be developed through effective inter-linkages of businesses activities, including various forward and backward linkages that come together to progressively create value, resulting in a collective competitive advantage. Through this, an integrated platform can be developed to bring together several organized and unorganized sectors, including farmers, traders, retailers, big food companies, and consumers, and develop a system aiming enhanced profitability and productivity with the support of IT and Artificial Intelligence.

06

Institutional investor participation

Recent policy and regulatory reforms have accentuated the entry of international institutional players in the Indian warehousing space. With such participation of globally renowned investors and developers, the benchmark for the standard of warehouse developments in the country may improve. Moreover, this participation would also shift competitive market landscape of warehousing industry.

Contact us –

Nivesh Chaudhary

Director, Transport and Logistics, ASCELA
nivesh.chaudhary@ascelaadvisors.com

Shikha Kosta

Consultant, Transport and Logistics, ASCELA
shikha.kosta@ascelaadvisors.com



About ASCELA

ASCELA is a Management Consulting firm established to provide independent strategic insights to organizations and individuals in Infrastructure development space. We assist our clients in anticipating, innovating, and creating sustainable solutions.

ASCELA was established with a vision to provide independent strategic insights in Infrastructure and build environment. ASCELA's founder members have rich multi-sectorial experience, including skill sets in sectors comprising Infrastructure, transportation, management, economics, and design and build solutions. Our combined knowledge assists clients in providing a holistic perspective and comprehensive business solution.

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ASCELA's Infrastructure Advisory practice helps clients develop and leverage core competencies to deliver sustainable and tangible returns. We define strategies that help clients in gaining market share, enter new markets, regions, and products, improve bottom-line and reconfigure organizational/ operational structures. ASCELA is well placed to provide accurate and strategic inputs and analysis for assessing potential development opportunities in Infrastructure design and development space. Our in-depth knowledge of our focus transportation sectors, backed by intensive research and rigorous analysis into our clients' specific contexts, helps define superior strategies, framework, and implementable action plans. ASCELA formulates a strategy that is strategically structured to achieve the right project outcomes.

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