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Cold Storage Warehouse Market Trends and Insights for India

Recent COVID-19 surge has created a demand for cold chain infrastructure to be updated globally. Government policies have helped catalyze the investments in the Indian cold chain sector. Increasing cross-border trade and growing organised retail industry is driving the Indian cold chain logistics market.

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Demand for multi-purpose cold storage, third party temperature-controlled distribution, regional growth and expansion, surge in ambient warehousing revenue will drive the future of cold chain in India.

The market is expected to witness a transition from traditional cold storages to fully integrated cold chain projects which would bring about efficiency and increased productivity of cold chain companies.

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Market Overview

The India cold chain logistics market is expected to grow at a CAGR of more than 14% during the forecast period of 2020-2025. The demand for cold chain is due to the growth in sectors like organized retail, processed food, pharmaceuticals, growing shift towards horticulture, etc.

Indian cold chain sector poses a compelling future albeit with challenges, and is considered as unorganized, predominantly by the traditional cold storage facilities. A recent market research said that surge in ambient warehousing revenue will drive the future of Indian cold chain sector.

India cold chain logistics market is anticipated to grow, owing to increase in demand for processed food and healthcare industry. Cold chains impart storage and distribution services for products that have to be maintained at a given temperature. India is currently the world's largest producer of milk, second largest producer of fruits and vegetables and has a substantial production of marine, meat and poultry products. Most of these products are temperature sensitive and require specific temperature ranges to be stored and transported. This has resulted in the establishment of a very large cold chain infrastructure in the country.

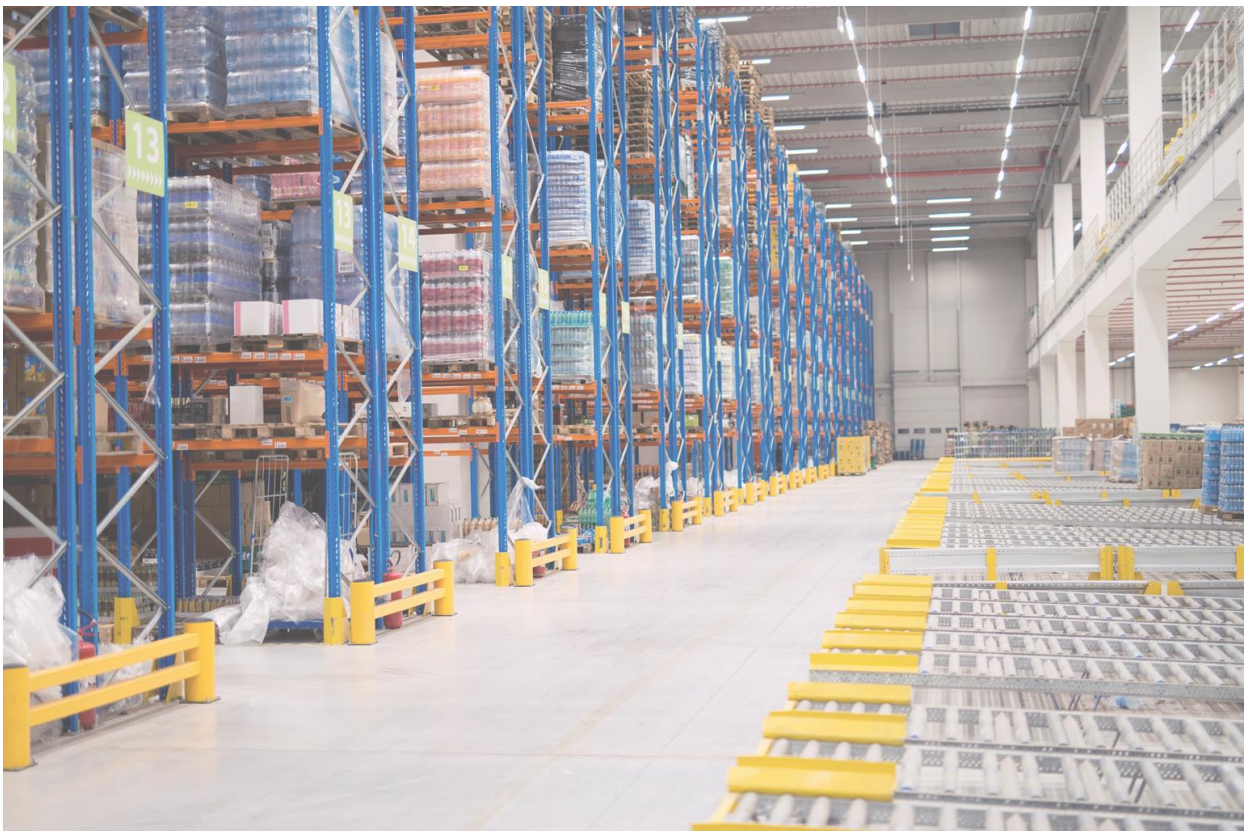
State-wise cold storage infrastructure requirement

Source: NCCD report All India Cold-chain Infrastructure Capacity
(Assessment of Status & Gap)

Sr. No.	Name of State	Total Capacity – CS Hub + CS Bulk (MT)
1	Uttar Pradesh	1,06,75,137
2	Bihar	51,23,982
3	Gujarat	22,39,476
4	MP	18,67,179
5	Punjab	16,93,408
6	J&K	9,07,842
7	Andhra Pradesh	5,30,925
8	Chhattisgarh	5,13,830
9	HP	3,06,147
10	Odisha	3,05,500
11	Telangana	2,77,129
12	Haryana	2,40,395
13	Karnataka	2,10,313
14	Tamil Nadu	1,94,640
15	Maharashtra	1,57,709
16	Assam	71,996
17	Rajasthan	53,395
18	Kerala	45,874
19	Delhi	40,122
20	Jharkhand	24,951
21	Meghalaya	18,704
22	Mizoram	8,920
23	Nagaland	8,675
24	Tripura	8,554
25	Arunachal	7,508
26	Manipur	5,062
27	Sikkim	2,621
28	Goa	2,271

Government Support

- The Government of India launched several schemes to support the development of cold chain. For instance, Pradhan Mantri Kisan Sampada Yojana (PMKSY) aims to create modern infrastructure with efficient supply chain management, starting from farm gate to retail outlet. The key purpose of PMKSY is not only to provide big boost to the growth of the food processing sector in the country, but also to provide better returns to the farmers.
- The Ministry of Food Processing Industries (MFPI) has been implementing the Scheme for Integrated Cold Chain and Value Addition Infrastructure as one of the components of PMKSY, with the objective of arresting post-harvest losses of horticultural and non-horticultural produce.
- The Government of India has set up the National Center for Cold Chain Development (NCCD), which has been helping in establishing building standards through international benchmarking, in order to promote research and development activity in the cold chain sector.
- The state governments launched several initiatives to support the cold chain sector. As per the statistics, the distribution of cold storages has been highly uneven, with majority of the cold spaces are located in Uttar Pradesh, Gujarat, Punjab, Maharashtra, and West Bengal.
- Rail freight forms a key part of the government's plan to raise incomes in the food sector by developing a national supply chain for the refrigerated delivery of perishables, including milk, meat, and fish.
- A refrigerated parcel van, with a capacity of 17 metric ton, has already been developed by the Rail Coach Factory Kapurthala, with nine vehicles now available for booking on a round-trip basis at 1-5 times the cost of standard freight.
- Presently, temperature-controlled perishable cargo centers have been commissioned at Ghazipur Ghat (Uttar Pradesh), New Azadpur (Adarsh Nagar, Delhi), and Raja ka Talab (Uttar Pradesh), as a pilot project under the Kisan Vision Project by CONCOR, under the CSR initiative. Another project has been under construction at Lasalgaon, Nasik (Maharashtra). Approval has been granted to the Central Railside Warehousing Corporation (CRWC) to develop temperature-controlled storages at Fatuha and Mancheswar.
- Foreign Direct Investment (FDI) is allowed under automatic route in cold storage. External Commercial Borrowing (ECB) can be raised for creation of cold storages, cold room including farm level pre-cooling for preservation or storage of agriculture/horticulture produce.



Challenges for the cold storage industry

- **Intermittent Power Supply and Overhead Cost:** Cold storages require steady power supply to maintain temperature. As large parts of India face regular power supply cuts, the operations of Temperature Controlled Warehousing players get impacted. Power cost contributes to more than 50% of total cost of operating cold storages.
- **Availability of Skilled Manpower:** The cold chain industry is currently affected by limited availability of trained personnel in cold chain management such as warehouse supervisors/ managers, skilled labour etc. which affects the quality of the end product. This is mainly due to the lack of vocational or other training institutes focused on cold chain logistics in India.
- **Inefficient handling of Perishables:** Quality of temperature-sensitive products deteriorates, if not handled well. Therefore, greater awareness on this aspect is required. In addition, appropriate skill building needs to be done on appropriate handling of perishables.
- **Standards and Protocols:** Lack of adequate standards and protocols including procedures for handling a wide array of raw produce and finished products in cold chain space.
- **Inadequate farm-gate and mobile infrastructure:** Farm-gate infrastructure including packhouses, pre-coolers and value adding units, cold chain distribution hubs and mobile infrastructure (including transport units, infrastructure at point of sale etc.)
- **Technology Availability:** There is limited availability in development of wide range of indigenous refrigeration and temperature control systems. Currently majority of the modern equipment's and technology are imported from foreign countries/suppliers.
- **Supply Constraint:** Currently very limited OEM Manufacturers are supplying fully built refrigerated vehicles.
- **Monitoring and Traceability:** Currently there are very limited initiatives in monitoring of reefer parameters in vehicles and traceability in cold chain. This results in spoilage in the value chain. There are no incentives for optimizing operational control in Cold storage and reefer vehicles.
- **Financing Options:** Higher initial capital investments in cold storages and transport infrastructure acts as hindrance to investments in the sector. In addition, the higher payback period and the variability in profitability of the cold chain operators based on location, competition and prices of agriculture produce are few factors which has resulting in limited interest amongst the Banks for financing cold chain projects. Of late however, there has been renewed interest level amongst the banks and private equity ventures due to initiatives from the Govt. in terms of grant and other fiscal incentives to the sector.



Key opportunities and recent developments

The warehousing and logistics sector in India is projected to attract an investment amount of nearly INR 691 billion over the next 4-5 years, after the implementation of the Goods & Services Act and the attainment of its infrastructure status. The warehousing sector in the country has witnessed extensive participation from developers, as well as institutional investors, who have invested more than INR 470 billion since 2014 till May 2019, with an average investment of INR 19 billion per deal.

The growth in the warehousing market in India is also largely being driven by the rise in international business. Entry of numerous foreign as well as domestic industries in the country and establishment of manufacturing plants have generated greater export opportunities, which in turn has fueled the demand for warehousing spaces across the country

Impact of COVID-19

The pandemic has caused great disruption in the supply chain. Although warehousing services are covered under the ambit of essentials, erratic flow of materials took the warehouses through a tough time in capacity management.

Cold Chain industry of India holds a huge responsibility to deal with this situation. They are shouldering the responsibilities of storing, preserving and delivering the essential commodities. States have incurred many losses during the lockdown. But with the government's measures to ease the situation, the industry has witnessed some improvement.

The concern of preventing the consumables like F&B and pharma essentials from any infections has increased dependency on such facilities. It is important to take additional safety and precautionary measures followed by intense temperature monitoring to ensure the quality of food, beverages and drugs is not compromised as any discrepancy may lead to quality deterioration and wastage of the consumable. Transport data loggers are used during the handling and transit of critical materials like blood and plasma. These data monitoring systems are installed in blood banks to ensure optimal environmental conditions.

The safe delivery of vaccines for mass immunisation against Covid-19 is a massive challenge and India is preparing to significantly ramp up its cold chain facilities. At present, Indian regulators are considering three vaccines for emergency use authorisation, including those from Pfizer Inc, AstraZeneca and Bharat Biotech. But Pfizer's limited stockpiles and its extreme storage condition requirements at minus 70 degrees Celsius or below, would likely limit its use in India.

Some vaccine frontrunners are in advanced stages of trial and could hit the market by early next year, making the task of securing "last mile connectivity" and ensuring that nothing goes wrong before the shot is administered more urgent.

The central government has started preparations to set up a cold storage chain for the COVID-19 vaccine that is likely to be approved soon in the country. It is also working on transportation of the vaccine with leading airlines. The government has started working on setting up cold storage chain at the point of disembarkation and embarkation. The aviation ministry held talks with multiple airlines on transportation logistics.



ASCELA recently completed a warehouse fit-out project for **DB SCHENKER** in **Badli (Haryana)** spreading across an area of 12,000 sqft. The scope of work included a customized storage room for a chocolate manufacturing brand tailored to suit its ambient requirements. A separate office was setup to accommodate the management and control team within the warehouse.

Our team of experts provided customized end-to-end solutions for the spaces based on the specifications provided by the client. The entire project was delivered in a limited time frame of just 28 days.



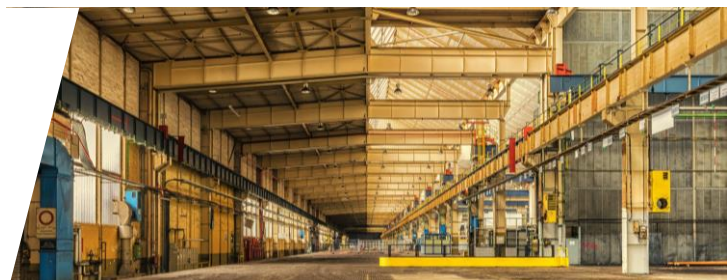
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About ASCELA

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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About ASCELA Design & Build

ASCELA is a professional service company that offers general contracting and interior fit out services through its Design & Build practice, and is specialised in retail, hospitality, commercial, government, corporate multifamily, and restaurant fitouts. Our team comprising of Architects/ interior designers/ site engineers help customize design & build solutions depending on client's needs and requirements. Our quest for excellence is achieved by its innovative engineering and quality execution of the projects, on time, within budget, by its high-performance team which is adaptable to each project.

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