



2025

Investability Index

Exploring Indian Logistics Investability

ASCELA, actively engaged in the development of key logistics infrastructure projects in India and globally, has been closely monitoring emerging investment opportunities. The Index aims to assess the investability of various logistics subsectors in India.

ASCELA Insights | Edition 19 | January 2025



ASCELA

India | Singapore | UAE

Foreword



I am delighted to pen down this foreword not only because I have known Nivesh Chaudhary well for a few years but also because I believe strongly in the transformation in the Indian Logistics Sector over the past decades. I also believe that with growing interest both from the Government of India and Indian Inc. in various Sectors, as shared in this Investability Index, will unlock many opportunities.

This Index covers a deep sectoral study of all aspects of the Logistics Landscape. A comprehensive assessment of Port & Shipping, Aviation, Railways, Inland Waterways and Warehousing Sectors has enriched the content and depth of knowledge. It is remarkable to see how this effort seamlessly ties data insights with investment strategies, creating a resource that bridges policy vision and industry requirements. The emphasis on emerging trends and future-ready infrastructure solutions adds immense value to this work, making it a vital tool for stakeholders across the board.

I hope and expect that this Index will provide an effective guide as a knowledge paper and reference resource for all valuable information, leading to optimal investment plans.

I wish all the best to the ASCELA Team!

Vanish Ahluwalia

Group Vice President

Seahorse Ship Agencies Private Limited



“

The logistics sector in India has witnessed transformative changes in the previous few years. The potential for private investment in this domain has never been more significant, particularly as India stands on the brink of becoming a global logistics hub in the coming years. With its strategic location, growing trade volumes, and government initiatives like the National Logistics Policy, India presents immense opportunities for growth, innovation, and value creation.

The sector in India, encompassing ports, highways, warehousing, and last-mile connectivity, has long been a critical pillar of the country's economic development. However, it continues to face infrastructure, efficiency, and sustainability challenges. As the demand for goods transportation increases, the need for modernisation and capacity expansion is paramount. This is where private investment can play a pivotal role, driving technological advancements, improving operational efficiency, and fostering a competitive environment.

The Indian government has been actively focusing on creating a conducive policy framework to unlock the sector's potential. Initiatives like the National Infrastructure Pipeline, the Bharatmala Pariyojana, and the National Logistics Policy aim to streamline logistics processes, reduce costs, and enhance efficiency across supply chains. Additionally, sustainability is becoming a key priority for the government, with investments in green logistics, clean energy solutions, and carbon reduction targets to ensure that the sector grows in an environmentally responsible manner. These progressive policies are expected to catalyse private sector participation and drive long-term growth.

I commend ASCELA for the thorough research and valuable perspectives shared in this paper. Their continuous efforts in analysing the logistics ecosystem and uncovering the underlying opportunities are truly commendable. This paper will undoubtedly serve as an invaluable resource for investors, policymakers, and industry stakeholders looking to navigate the future of logistics in India.

Congratulations to the team for this outstanding contribution to the sector!

”

Sunil Bhatia

Director

Theme Logistics and Management Pvt. Ltd.

Contributors



Nivesh Chaudhary

Head, Strategic Advisor- Mobility and Supply Chain

Infrastructure professional with around two decades of experience across multiple transportation sub-sectors, including Ports and Shipping, Logistics, and Supply Chain.



Shikha Kosta

Manager, Strategic Advisory

Around 5 years of experience in conducting feasibility studies – market and financial analysis, due diligence, business planning, and transaction advisory services.



Nishtha Saha

Senior Consultant, Strategic Advisory

Infrastructure consultant practicing in Transportation, Logistics, and Supply Chain. Her work revolves around urban transportation systems planning, logistics and warehouse operations, and feasibility studies.



Mahima Varu

Senior Consultant, Strategic Advisory

Infrastructure consultant practicing in Transportation, Logistics, and Supply Chain. Her work revolves around urban transportation systems planning.



Ayushi Gupta

Consultant, Strategic Advisory

Infrastructure consultant practicing in Transportation, Logistics, and Supply Chain. She has a strong demonstrated interest in urban transportation systems planning, logistics and warehouse operations.



Preface



As we progress into an era defined by rapid urbanisation, technological advancements, and sustainability imperatives, cities across the globe are under the spotlight, not only as economic engines but also as hubs of opportunity, innovation, and resilience. The “ASCELA Insight Paper: Investability Index 2025” is our dedicated effort to decipher the layers of investability within India’s logistics sector, focusing on regions with transformative potential for investors, policymakers, and industry leaders.

The year 2024 marked a watershed moment for India’s logistics landscape, characterised by significant advancements across key transportation sub-sectors such as ports and shipping, air cargo, railways, warehousing, and inland waterways. These advancements were shaped by robust policy initiatives, like the National Logistics Policy, alongside strategic public and private investments to modernise infrastructure and embed sustainability within operations. As these initiatives gather momentum, we see 2025 as a defining year for India’s alignment with global standards in efficiency, sustainability, and technological integration.

This report evaluates the key sectors shaping India’s logistics ecosystem, offering a lens through which stakeholders can assess investment readiness. The Investability Index 2025 distills complex dynamics into an actionable framework, empowering stakeholders to identify opportunities, anticipate barriers, and align their strategies with emerging trends. By exploring areas such as automation, green logistics, and digital transformation, we bring into focus the sectors poised for growth.

At ASCELA, we understand that successful investments require foresight, strategy, and partnership. Through this paper, our aim is to provide clarity in a complex ecosystem, connecting the dots between transformative policies, emerging markets, and the global imperative for sustainable development.

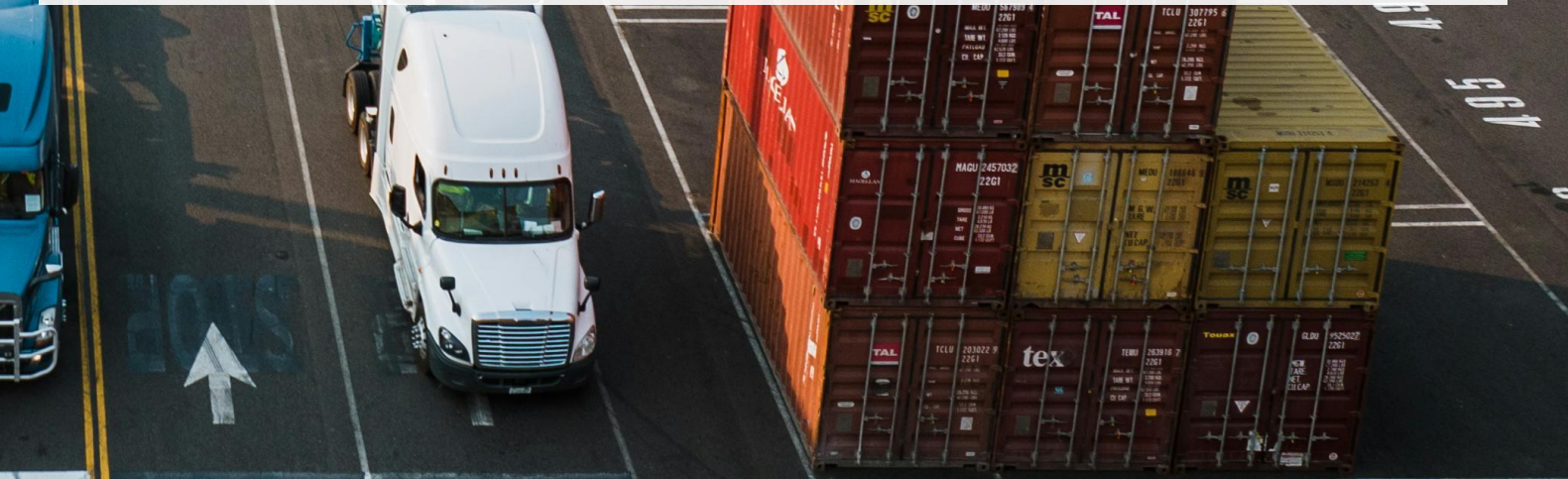
We extend our gratitude to our team, collaborators, and stakeholders who have contributed to shaping this analysis. I firmly believe that this paper will serve as a vital tool for those looking to navigate and leverage the opportunities inherent in India’s logistics sector in 2025 and beyond.



Nivesh Chaudhary

Co-Founder and Managing Director

Head, Strategic Advisory - Mobility and Supply Chain, ASCELA





CONTENTS

01

**AN OVERVIEW:
INDIA'S LOGISTICS
SECTOR**

04

**INLAND
WATERWAYS
SECTOR**

05

**WAREHOUSING
SECTOR**



02

**PORTS AND
SHIPPING
SECTOR**

03

**RAILWAY
SECTOR**

06

**AIR CARGO
SECTOR**

07

**INVESTOR
OPPORTUNITIES
ASCELA's Viewpoint**

ASCELA



Setting New Standards in Trade, Technology, and Sustainability

01 A Deep Dive into India's Logistics Sector

The Present Landscape

2024: A Landmark Year for India's Logistics Sector

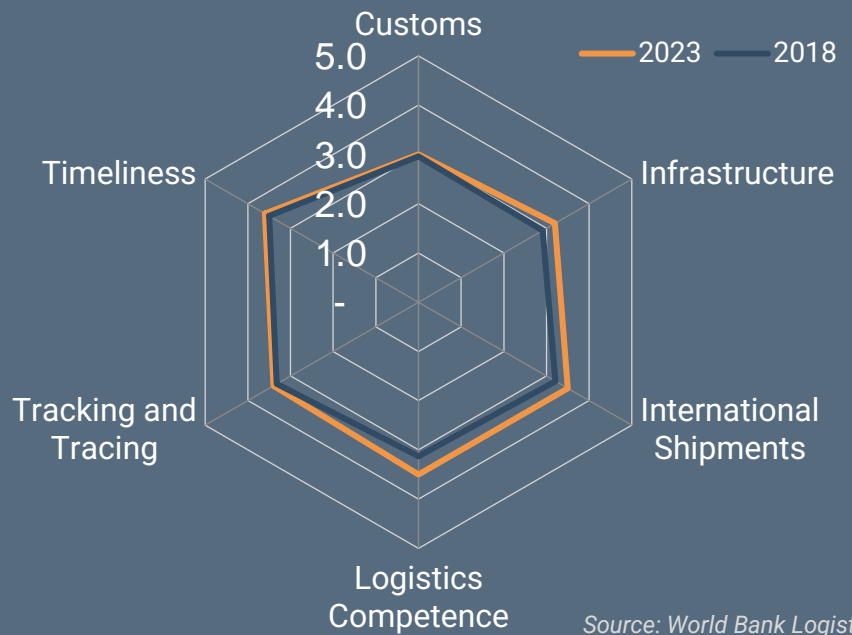
Where do India stand today ?

2024 marked a transformative period for India's logistics sector, with significant advancements reinforcing its position as a critical driver of economic growth and global trade competitiveness.

Key initiatives such as enhanced support for integrated logistics parks, expansion of multimodal transportation networks, and advancements in digital freight platforms have bolstered efficiency and reduced logistics costs. Strategic developments, including the progress under the PM GatiShakti National Master Plan and investments in green logistics infrastructure, have further streamlined supply chains, improved connectivity, and encouraged sustainable growth.

These milestones underscore India's commitment to modernising its logistics capabilities and fostering robust economic linkages.

India's LPI: 2023 vs 2018



Source: World Bank Logistics Performance Indicator

Economic Overview

Asia's economic growth is projected to decline from 5.7% in 2023 to 5.0% by 2025, according to the IMF's World Economic Outlook 2024. The growth forecasts for two of its largest economies—India and China- reflect this slowdown.

While still robust, India's GDP growth rate is expected to moderate from 8.2% in 2023 to 7.0% in 2024 and further to 6.5% in 2025. This gradual deceleration underscores a shift to more measured economic expansion in the region.

Economic Development

3.2%
Global growth is projected to be 3.2% in the year 2024
▲
In 2025

6.5%
Real GDP growth Rate in India (Forecasted)
▲
In 2025

Foreign Investment

70.95
USD billion
▼
Highest ever FDI Inflow in India, rising from USD 74.39 billion in 2019-20
In 2023-24

69%*
Increase in FDI Inflow in Manufacturing Sectors
▲
2014-2024

Merchandise Exports

437.1
USD billion
▼
Merchandise export value in India
In 2023-24

778.2
USD billion
▲
India's overall export Value in 2023-24
In 2023-24

Source – IMF, World Economic Outlook, October 2024

* FDI equity inflows into the manufacturing sector over the past decade (2014-24) reached USD 165.1 billion, marking a 69% increase compared to the previous decade (2004 -14), which saw inflows of USD 97.7 billion.



Key Focus Sectors



Ports and Shipping Sector



Ports and Terminals



Maritime Shipping



Shipbuilding and Ship Repair

Air Cargo Sector



Air Cargo Operations

Railways Sector



Rail Freight Operations



High Speed Rail Connectivity

Inland Waterways Sector

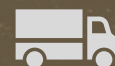


Inland Waterways Operations

Warehousing Sector



Warehousing



Urban Logistics



Supply Chain Network

Key Focus Parameters



Policy Push



Technological Advancements



Sustainable Solutions



Entry Barriers



Green Logistics

02 Ports and Shipping Sector



Themes

Highlights

Details

Investment Opportunities Within

01 Policy/Regulatory framework

Ministry of Ports, Shipping & Waterways introduced Merchant Shipping Bill

Contributing towards the Viksit Bharat 2047, the Ministry introduced the Merchant Shipping Bill to promote growth and enhance compliance with International Standards.

- Shipbuilding and Vessel Registration
- Automation, smart ports, cargo management systems and other modern port infrastructure
- Maritime training institutes
- Vessel management systems
- Insurance services and financial security services for vessel operators

Approval towards 3 pilot projects in the steel sector under the National Green Hydron Mission

In Oct 2024, the union government sanctioned three pilot projects for the use of hydrogen in steel production. This will likely result in a boost in infrastructural development in Paradip Port, Kandla Port and Tuticorin Port as they are identified as hubs for energy carriers.

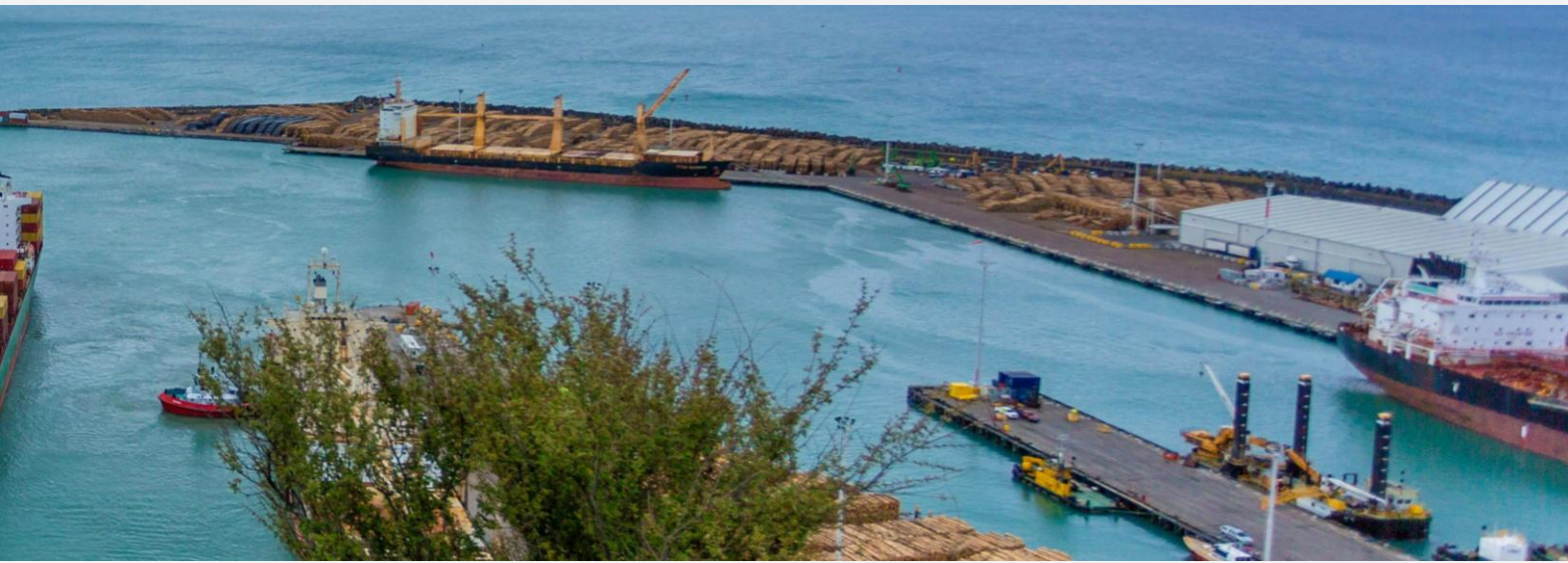
- Hydrogen production, supply and transport infrastructure.
- Hydrogen storage and distribution systems for steel factories in and around Odisha, Gujarat and Tamil Nadu.
- Required integration in steel manufacturing processes.
- Port infrastructure development.

Indian Flag Ships Exempt from Trading License Requirement; New Bill Mandates License for Foreign Ships in Coastal Shipping

Indian-flag ships are no longer required to secure a general trading license for operating along India's coast, as per a new bill passed by the Union Cabinet. However, foreign-flagged ships chartered by Indian entities will now need a license to operate in coastal shipping.

This is likely to push a higher number of vessels for trade by Indian entities.

- Domestic shipping fleet expansion
- Maritime compliance and licensing solutions
- Maritime security systems
- Shipping technology solutions (AIS, VTS, etc.)



Themes	Highlights	Details	Investment Opportunities Within
Policy/Regulatory framework	DG Shipping Mandates Verification of P&I Insurance for Vessels Calling Indian Ports, ensuring greater compliance and safety in maritime operations.	The Directorate General of Shipping requires Indian port authorities to implement a thorough process for verifying the authenticity and validity of Protection and Indemnity (P&I) insurance certificates, including confirming premium payments, for all vessels arriving at Indian ports.	<ul style="list-style-type: none"> • Maritime compliance and verification solutions • Insurance technology and verification systems • Port management and inspection systems • P&I insurance providers and brokers
	Shipping Ministry Announces ₹5,000 Cr Scheme for Inland Vessels and Port Townships	The Ministry of Shipping unveils plans for port townships using vacant land and a ₹5,000 crore scheme for inland vessel development. Future plans include supporting sea-bound vessels and cruise ships.	<ul style="list-style-type: none"> • Development of infrastructure for port townships and related facilities. • Manufacturing of inland vessels and related components. • Expansion into the production of sea-bound vessels, including cruise ships. • Construction of supporting industries around ports and shipyards. • Logistics and supply chain solutions for the inland waterways sector.

Positive Outlook
 Neutral Outlook
 Negative Outlook

ASCELA's View

The ports and shipping sector has witnessed significant advancements in policy and regulatory frameworks, driven by the Ministry of Ports, Shipping & Waterways, the Union Cabinet, and other allied ministries. These changes reflect a forward-looking approach and a commitment to high-impact development in the sector. Notably, the evolving regulatory landscape is also fostering the adoption of cutting-edge technologies, positioning the Indian ports and shipping industry for greater efficiency, competitiveness, and global integration.

02 Ports and Shipping Sector (Contd.)

Merchant Shipping Bill, 2024

What does the bill focus on?

01

Development of Indian Shipping

- ✓ Streamlining vessel registration
- ✓ Robust regulatory framework
- ✓ Compliance with international standards
- ✓ Streamlined governance and regulatory oversight



02

Maritime Safety and Security

- ✓ Enhanced incident reporting
- ✓ Compliance with international safety conventions
- ✓ Maritime search and rescue services
- ✓ Obligations to assist persons/vessel in distress at sea
- ✓ Certification and Seaworthiness



03

Environmental Protection

- ✓ Controlling marine pollution: prevent emissions or discharge of harmful
- ✓ Provisions for prevention, containment, and response mechanisms
- ✓ Compliance with International Standards
- ✓ Equipment compliance, structural standards, and certification for Indian vessels



04

Maritime Education and Training

- ✓ Certificate of competency and proficiency
- ✓ Examination for grant of certificates
- ✓ Obligations of certain certificate holders to serve on Indian vessels



05

Digitalization

- ✓ Use and maintenance of digital records for better transparency, traceability, and accessibility
- ✓ Issuance and recognition of electronic certificates for vessels
- ✓ Electronic monitoring of vessels to ensure compliance with safety, security, and environmental standards
- ✓ Implementing systems for online reporting of marine incidents, accidents, and compliance



06

Other Focus Areas

- ✓ Seafarers' welfare
- ✓ Maritime administration
- ✓ Maritime offences and enforcement of regulations
- ✓ Adherence to global maritime conventions
- ✓ Policies to safeguard national maritime interests



Themes	Highlights	Details	Investment Opportunities Within
02 Privatisation/ Private Investment	Strong Retail Interest in Cochin Shipyard's 5% Stake Sale, Government Divests 2.5%	Towards the end of 2024, Cochin Shipyard Limited (CSL) successfully conducted an Offer for Sale (OFS), attracting strong demand from retail investors. The government divested 2.5% of its stake in CSL, with an additional 2.5% available through a green shoe option.	<ul style="list-style-type: none"> Development of Shipyard facilities across the country
	Vadhvan Port Construction to begin in 2025, Operations Set for 2029 with ₹76,220 Crore Investment	Vadhvan Port, a major port project developed by a joint venture between JNPA and the Maharashtra Maritime Board, is set to begin construction in 2025 and is expected to start operations by 2029. The project, with a total investment of ₹76,220 crores, will be built in two phases under the landlord model.	<ul style="list-style-type: none"> Development of port infrastructure Port construction services Development of connectivity around the port Equipment and machinery supply Port automation and technology integration
03 Technology Advancement	V.O. Chidambaranar Port implements Virtual Aids to Navigation (AtoN) buoys through its Vessel Traffic Management System.	The electronic navigational aids exist in a virtual environment, displaying markings on electronic charts via AIS. They enhance maritime safety by guiding vessels, marking hazards, and providing positional information.	<ul style="list-style-type: none"> Developing smart port technologies and AIS integration services Further developing virtual navigation system Infrastructure upgrades Enhanced port management system Personnel training

 Positive Outlook

 Neutral Outlook

 Negative Outlook

ASCELA's View

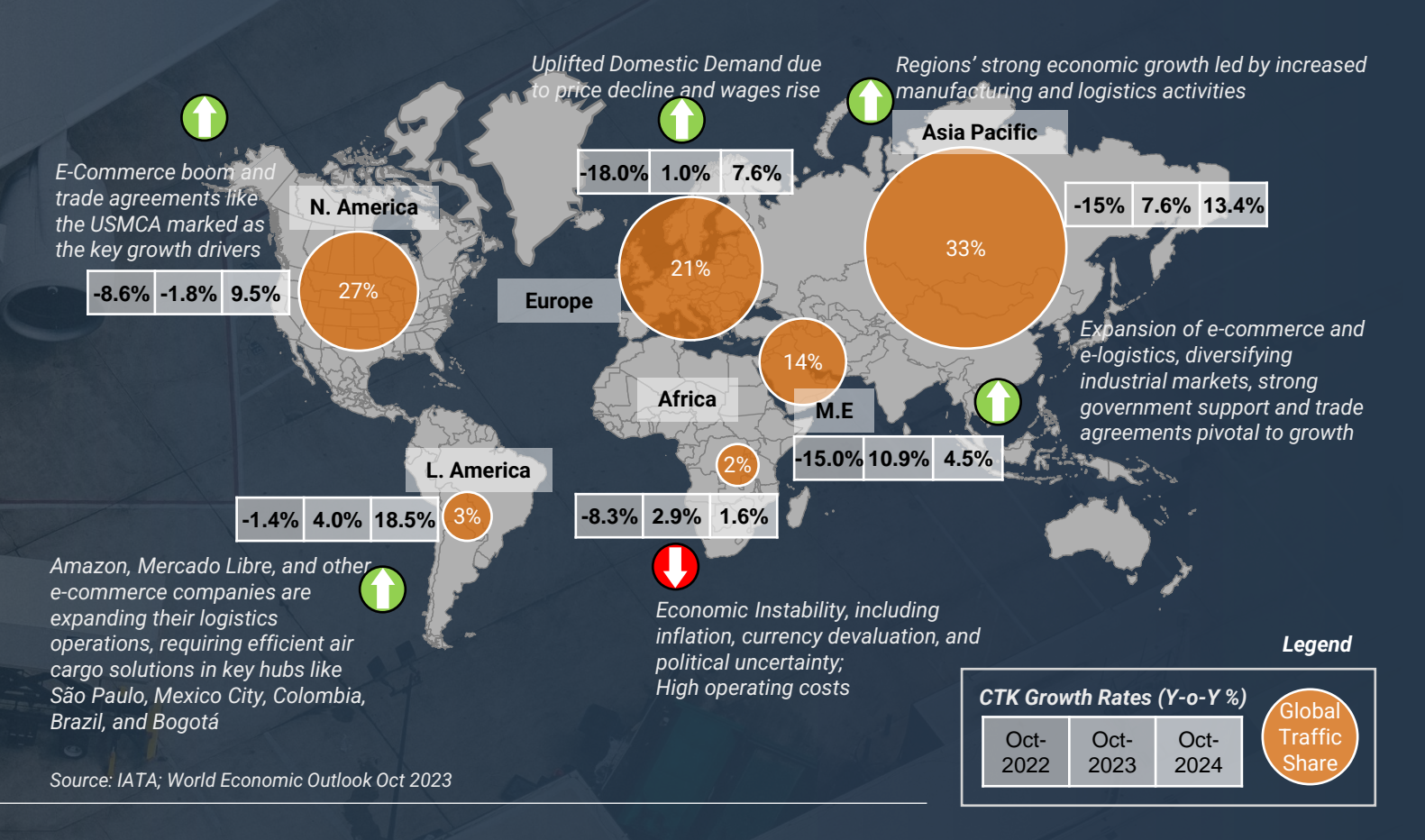
ASCELA views the recent advancements in the ports and shipping sector as pivotal milestones in India's journey toward modernisation and growth. Key initiatives, such as the successful initiation of divestment of Cochin Shipyard Limited and the upcoming Vadhvan Port project, demonstrate a strong commitment to enhancing infrastructure and operational efficiency. These developments not only open up substantial investment opportunities but also solidify India's position as a prominent player in the global maritime landscape.

Furthermore, the integration of advanced technologies, including electronic navigational aids, underscores a forward-thinking approach that prioritizes safety, efficiency, and sustainable development, setting the stage for long-term success in the sector.

03 Air Cargo Sector

Indian Air Cargo Market soaring amid Capacity Expansions

Themes	Highlights	Details	Investment Opportunities Within
01 Policy/Regulatory framework	Airport Infrastructure in Tier-II and Tier-III cities	In November 2024, AAI earmarked 150 small airports and airstrips to modernise	<ul style="list-style-type: none"> Likely growth in additional air cargo capacity
	Liberalisation of Open Sky Policy in 2024	Operations of foreign and non-scheduled freighter charters allowed at all International Airports for 3 years	<ul style="list-style-type: none"> Likely growth in perishable trades Likely exports from Non-Metro International Airports
02 Privatisation/ Private Investment	Tata Group to acquire another 100 aircrafts	In December 2024, Tata Group ordered 100 aircrafts, in addition to existing orders of 470 aircrafts. Targets 3X increase in its cargo handling capacity by 2027-28.	<ul style="list-style-type: none"> Aircraft fleet expansion Logistics hubs Dedicated air cargo terminals and freighter aircraft Regional connectivity
	Privatisation of airports	Gol is planning to privatise another 25 airports in 2025	
03 Merger & Acquisition	Merger of Air India and Vistara	The merger, aimed at strengthening the global aviation network, is expected to see an increase in cargo and passenger traffic	<ul style="list-style-type: none"> A gateway to strengthen the global value chain Air freight terminals Cold-chain warehousing infrastructure
	Operational Enhancements in Indian Airports	Thai Airways has joined hands with Globe Air Cargo India to strengthen operations in Bangalore and Cochin	<ul style="list-style-type: none"> Expanding operational capabilities Enhance the efficiency of Indian air operators



Themes	Highlights	Details	Investment Opportunities Within
04 Entry Barriers	High transshipment carriage times	Currently, transshipment carriage times in India are ~2 to 2.5 days, which is ~6-8 hours in Global hubs, with 3-6 hours for high priority cargo.	<ul style="list-style-type: none"> Predictable shipping schedules management Automation in cargo handling processes
05 Technology Advancement	Air India's iCargo Solution	Air India is in process of implementing IBS's iCargo solution to digitise end-to-end cargo management into a single platform	<ul style="list-style-type: none"> AI and ML opportunities in air cargo supply chain management Inventory management and optimisation
	Feedstock availability for Sustainable Aviation Fuel (SAF)	Amid growing global demand, India's abundant feedstock for SAF and significant exposure to Aviation Turbine Fuel (ATF) exports is an opportunity	<ul style="list-style-type: none"> Capitalisation potential in SAF and ATF exports Developing eco-friendly aviation technologies

■ Positive Outlook
 ■ Neutral Outlook
 ■ Negative Outlook

ASCELA's View

The Indian air cargo market is witnessing remarkable growth, fueled by the rapid expansion of e-commerce, rising export demands, and a thriving manufacturing sector. With a strategic emphasis on improving infrastructure, advancing digitalisation, and enhancing logistics efficiency, India is solidifying its position as a key player in global supply chains. The government's proactive approach, including initiatives like the National Logistics Policy and the development of modern cargo hubs, is set to further optimise operations and strengthen India's competitive edge in the air freight sector.

04 Railways Sector

Snapshot of the Dedicated Freight Corridors

DFC – Current Status

80% of traffic shifted from parallel railway corridor to E-DFC, compared to a target of 70%. However, in W-DFC, this shift is below 60%.

2024 Achievements

DFC carried ~10% of Indian Railways freight load in July 2024, which increased to 13% in October 2024, implying steady shift of traffic.

What to expect in 2025?

Upon completion of W-DFC by the end of 2025, DFCCIL is expecting a total shift of 20% of Indian Railways' freight load to DFC.

Privatisation Potential in 2025

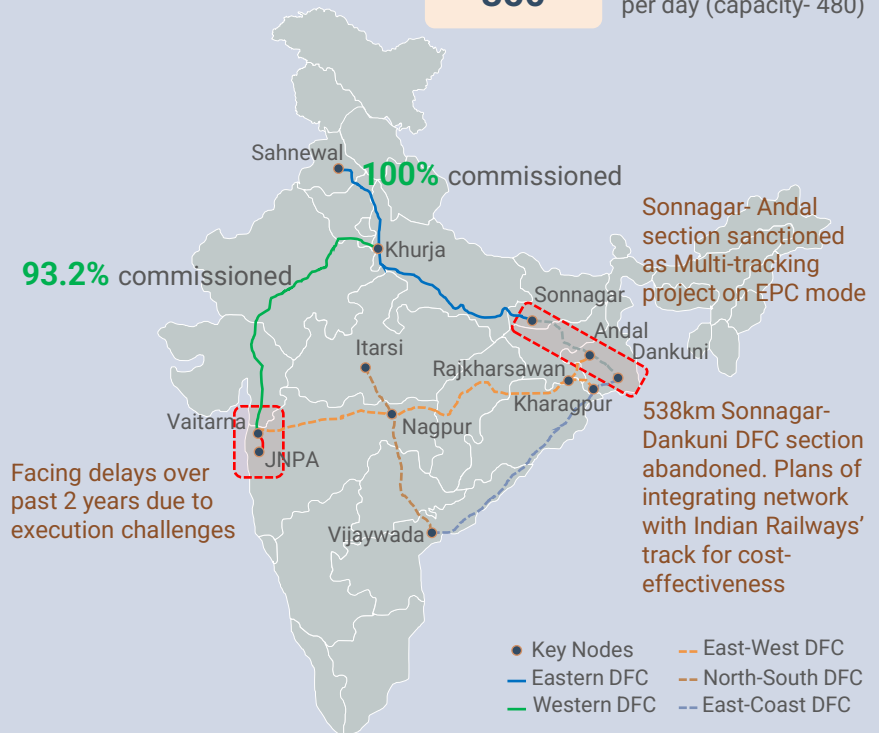
To optimise DFC operations, 22 dedicated GCTs are planned along the network to be developed in PPP mode

96.4%

Overall DFC Network Commissioned

350

Rolling stocks running per day (capacity- 480)



Themes

Highlights

Details

Investment Opportunities Within

01	Policy/ Regulatory Framework	National Rail Plan Vision-2030	Increase share of rail freight from existing 31% to 44% by 2051	<ul style="list-style-type: none"> • Developments and operations of GCTs and MMLPs
		Major expansion projects worth INR 79.3 billion approved by Union Cabinet in November 2024	These projects are aimed at improving rail freight share by enhancing Port connectivity and interlinking DFC with Indian Railways	<ul style="list-style-type: none"> • Developing warehousing facilities • Last-mile connectivity services to augment the efficiency of rail freight operations.
		Strengthening of Central and South-Central Railways	Central Railways and South-Central Railways are conducting assessments to enhance shift of traffic to rail	<ul style="list-style-type: none"> • Construction, expansion, or modernisation of the terminal infrastructure
02	Privatisation/ Private Investment	Privatisation of GCTs by DFCCIL	DFCCIL has planned 22 dedicated GCTs along DFC network to be developed in PPP mode	<ul style="list-style-type: none"> • Operations of Cargo terminals • Establishing manufacturing and industrial hubs
		Privatisation of GCTs and MMLPs by Central and South-Central Railways	Railway Zones are in process of identifying potential locations for GCTs and MMLPs to be developed in PPP mode	<ul style="list-style-type: none"> • Solutions for inventory management • Slower rate of privatisation
03	Merger & Acquisition	CONCOR privatisation put on hold	CONCOR privatisation may not likely be realised anytime soon due to opposition from railways and petroleum ministries	<ul style="list-style-type: none"> • Delay in privatisation is limiting the optimum competitiveness

Charting Progress: Paving Way for Freight Growth



Themes

Highlights

Details

Investment Opportunities Within

04 Entry Barriers

Bottlenecks at Indian Railways-DFC exchange points

DFC supports double-stacked container trains, but many Indian Railways' stretches have overhead electric wires very low

- Without these upgrades, DFCs' advantages remain partially unrealised

05 Technology Advancement

MoU with Switzerland's DETEC

Indian Railways signed MoU with Switzerland's DETEC to Enhance its technological Collaboration, Track Maintenance, and Infrastructure Modernisation

- Automation and predictive maintenance for freight operations (Along the corridors)
- Operational optimisation of rail freight

Vande Cargo Trains

Indian Railways Unveiled Vande Cargo Trains in 2024 which can hold up to 6 tonnes of cargo in the lower deck along with 46 passengers in upper deck.

- Distribution centres
- Manufacturing units leveraging freight connectivity

■ Positive Outlook

■ Neutral Outlook

■ Negative Outlook

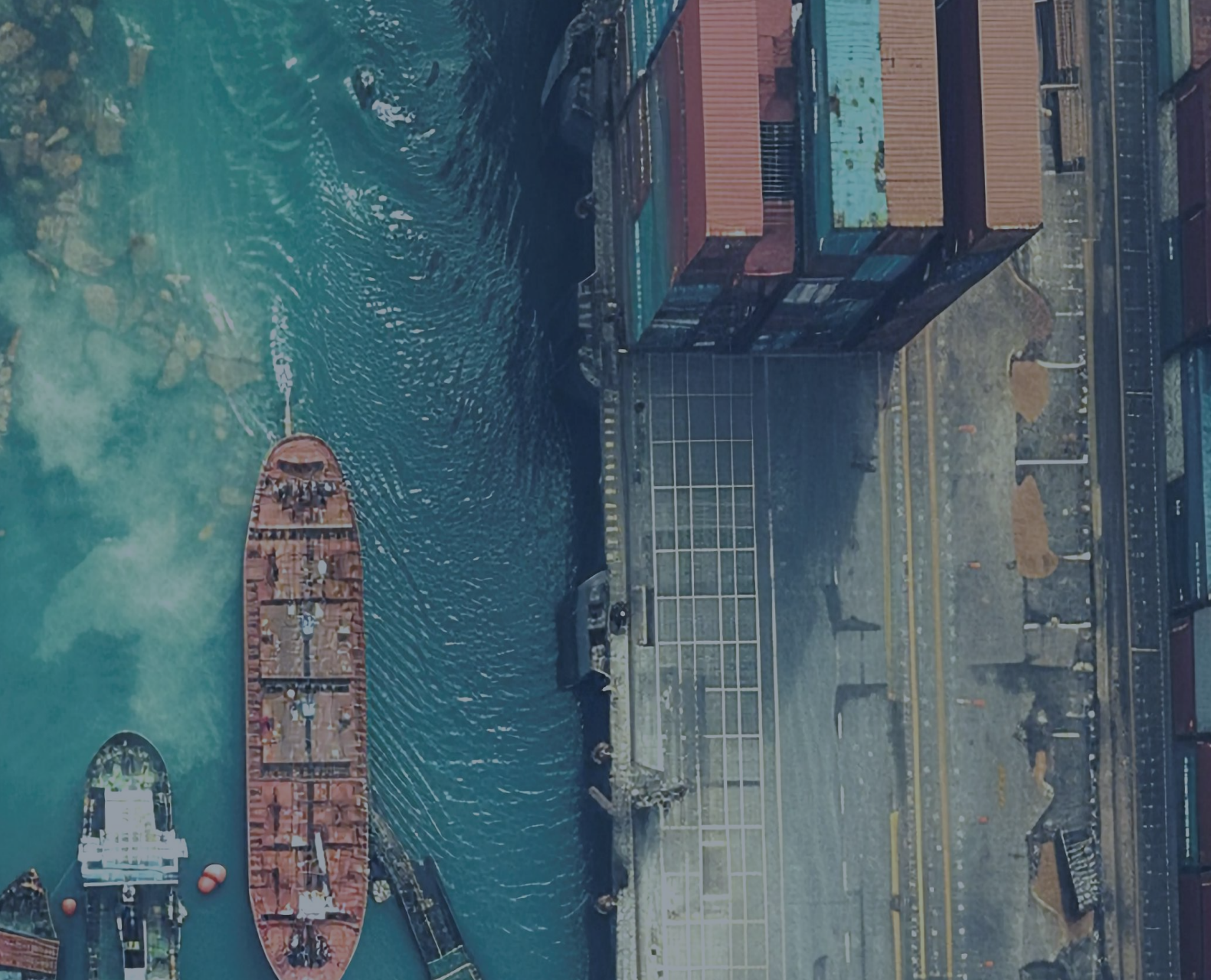
ASCELA's View

India's rail freight sector presents significant growth opportunities driven by increasing demand for efficient logistics and government initiatives like Dedicated Freight Corridors. However, roadblocks such as infrastructure limitations, slow modernization, and slower rate of privatisation may likely impede the sector's full potential. With continued investment in infrastructure and policy reforms, the sector has the potential to transform into a key driver of nation's economic growth.

05 Inland Waterways Sector

Themes	Highlights	Details	Investment Opportunities Within
01 Policy/Regulatory framework	Amrit Kaal Vision 2047 has estimated ₹35,000 Crore Investment to promote IWT Sector in India	Key developments include construction of terminals along the Ganga and Brahmaputra rivers and the implementation of the Indo-Bangladesh Protocol (IBP) route	<ul style="list-style-type: none"> Expansion of IWT terminal/ jetty infrastructure in key clusters and connectivity in the region Development of warehouses, ICDs and support infrastructure Development of Multimodal Logistics Parks around the clusters
	₹100 Cr scheme introduced by India's Shipping Ministry for cargo movement in NW-1, NW-2 and NW-16	The scheme aims to incentivise Inland Waterways Transport (IWT) by offering a 35% incentive to promote greater utilization and achieve a higher modal shift towards IWT.	<ul style="list-style-type: none"> Development of Cargo terminals along Inland waterways NW-1, NW-2 and NW-16 Acquiring Vessels such as barges Development of navigation systems along the routes Developing distribution centers near river ports for sorting and storing goods before further transportation
02 Privatisation/ Private Investment	Harit Nauka - Green Transition Guidelines for Inland Vessels	Government envisions complete transition to Green Vessels by 2047, by enabling financial assistance for development of Green Vessels and related ecosystem	<ul style="list-style-type: none"> Sustainable and Green Maritime Technologies Environmental consulting for IWT operations Infrastructure development and upgradation to support sustainable IWT operations
03 Entry Barriers	Lack of navigational efficiency along the National waterways	India faces challenges in the Inland Waterways sector due to low navigational efficiency along National Waterways, resulting in limited privatisation opportunities.	<ul style="list-style-type: none"> NA

■ Positive Outlook
 ■ Neutral Outlook
 ■ Negative Outlook



“

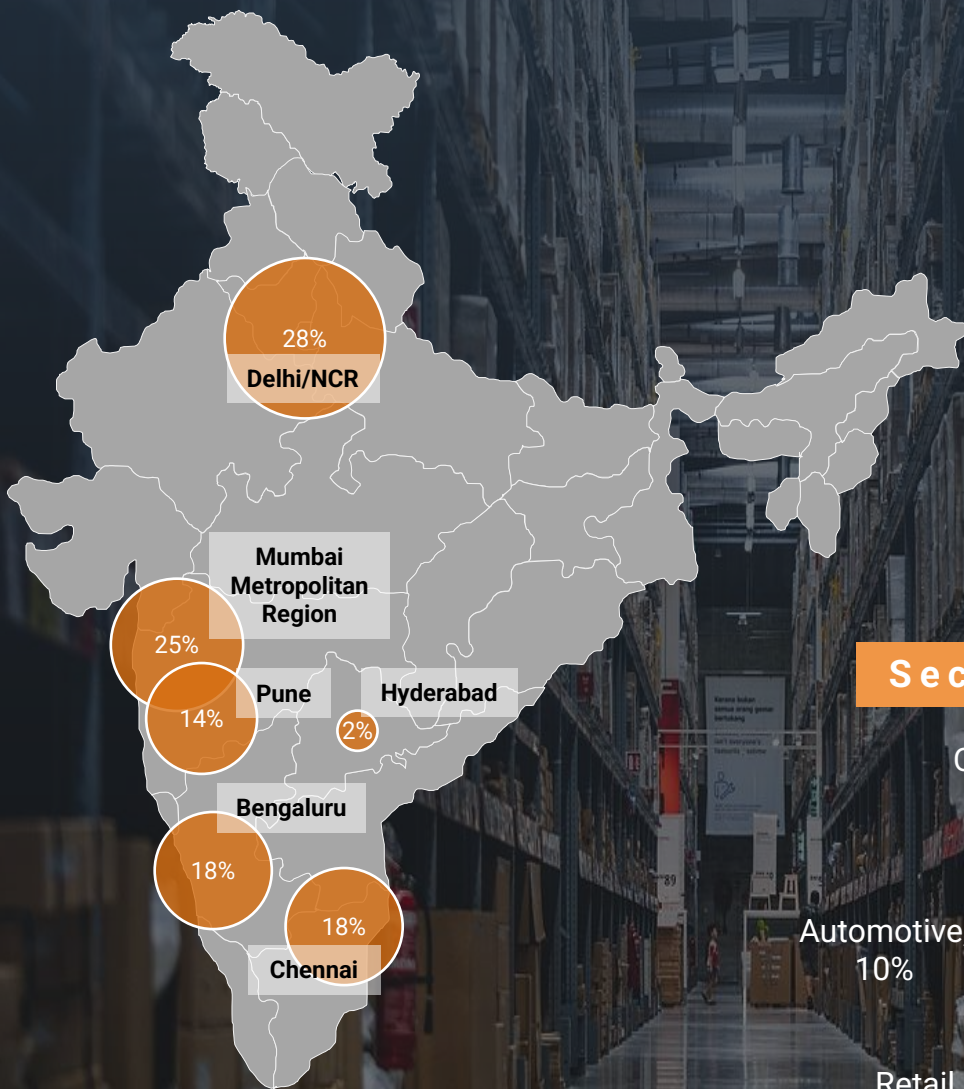
ASCELA sees the potential for significant growth in India's Inland Waterways sector, highlighted by the Amrit Kaal Vision 2047 and the 35% incentive scheme aimed at boosting utilisation and achieving a higher modal shift. The partnership between the Indian Register of Shipping and SeaTech to develop green tugs and harbour crafts underscores a commitment to sustainable practices and global standards. However, challenges remain, particularly regarding navigational efficiency along National Waterways, which need to be addressed to unlock full privatisation potential and enhance overall sector performance.

06 Warehousing Sector

Automation and Technology Integration is Fueling Unprecedented Growth in Indian Warehousing Market

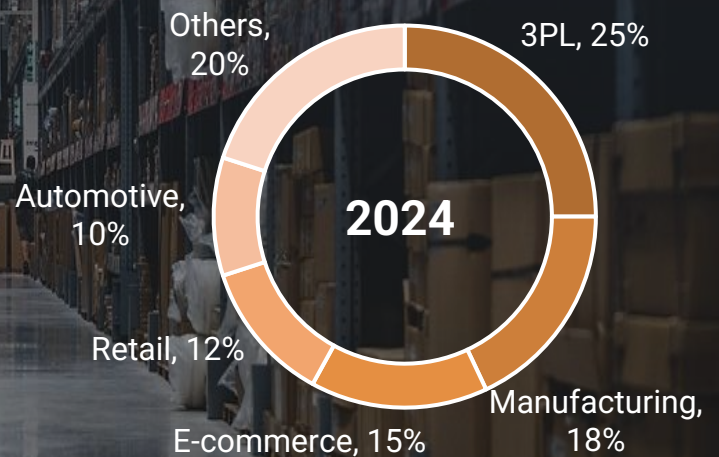


India's Grade-A Warehousing expected to increase to 300 million sqft by 2025



Share of Grade-A warehouses available across India

Sector-wise Occupancy



Source: CREDAI, Warehousing Association of India

	Themes	Highlights	Details	Investment Opportunities Within
01	Policy/Regulatory framework	China+1 Strategy	Many global industrial and logistics players are adopting 'China+1' strategy to diversify away from China to growing economies	<ul style="list-style-type: none"> Potential for growth of 3PL, e-Commerce, FMCG, and Engineering sectors
		Monetisation by FCI and CWC	FCI and CWC are planning to monetize warehouses to meet growing warehousing demand, aiming at ~2 MTPA capability of warehouses in 100+ cities	<ul style="list-style-type: none"> Emergence of new warehousing locations Potential for privatisation of operations
02	Privatisation/ Private Investment	Opportunities at JNPA SEZ	Welspun One is developing a Grade-A Warehouse and Industrial Park across 55 acres in JNPA SEZ, expected to complete by end of 2025.	<ul style="list-style-type: none"> Integration of Port ecosystem and inland logistics Value-added logistics services
		Strategic Partnership of Zepto and NX Logistics India	Zepto and Nippon Express' NX Logistics have joined hands to develop Bengaluru's largest Grade-A+ warehousing hub spanning 1.8 lac sqft, at Sumadhura Logistics Park.	<ul style="list-style-type: none"> Reduces logistics cost/ time Facilitate integration and coordination of various infrastructure projects Urban logistics, Omni-channel retailing, multi-story warehousing likely to cater the changing needs of businesses
03	Merger & Acquisition	Acquisition of Warehousing assets by Blackstone Group	Blackstone Group has acquired LOGOS India's warehousing assets, following the merger of the latter with real estate developer ESR Group	
		MMLP development on a modest track	Land acquisition is a major issue for large land blocks. DBFOT model requires hefty capital investment by private players.	<ul style="list-style-type: none"> Need for reforms in policy and project restructuring
04	Entry Barriers			
05	Technology Advancement	Advancements by Godrej and Boyce	Godrej & Boyce, through a JV with Koerber (Godrej Koerber), have invested in Material Handling Solutions, Storage Solutions, and Intralogistics Solutions, contributing 12-14% of the revenue.	<ul style="list-style-type: none"> Robotic storage Conveyor systems for inventory flow Robotics and AGVs for order fulfilment WMS for inventory management IoT Sensors for real-time monitoring

■ Positive Outlook
 ■ Neutral Outlook
 ■ Negative Outlook

ASCELA's View

Indian warehouse and logistics market is experiencing rapid growth, with key regions such as Delhi/NCR, Mumbai, Bengaluru, and Pune driving the expansion due to booming e-commerce, thriving manufacturing hubs, and rising industrial demand. Additionally, tier-2 and tier-3 cities are emerging as pivotal growth areas, supported by significant infrastructure developments. With the government prioritising logistics efficiency and ease of doing business, these regions are evolving into critical hubs for warehousing, last-mile delivery, and integrated supply chain solutions.

07 Investment Opportunities

ASCELA's Viewpoint

Investment opportunities have been explored under the following headings:

Policy/Regulatory Framework	Focuses on regulatory framework and identifying policy enhancements or incentives
Privatisation/Private Investment	Highlights opportunities for private sector participation
Mergers and Acquisition	Pinpoints potential acquisition opportunities
Entry Barriers	Examining factors hindering entry into specific sectors and analyzing challenges faced
Technology Advancement	Emphasizes the adoption of cutting-edge technologies to drive efficiency and innovation

ASCELA's View

Private sector involvement in India's logistics sector offers promising opportunities for enhanced efficiency, innovation, and infrastructure development. However, key challenges persist, including regulatory complexities, infrastructure gaps, high logistics costs, and the necessity for mergers and acquisitions to support capital-intensive projects. With the influx of foreign investments, the logistics ecosystem holds significant potential for modernization and achieving global competitiveness.

Further, the average of these indexes is then taken as the investability index for the sector. Sector scoring is depicted in the scoring chart below.

Sectors		Investability Heatmap (for Private Participation)	
Ports and Shipping Sector	Ports and Terminals	High Potential	
	Maritime Shipping	High Potential	
	Shipbuilding and Ship Recycling	Fairly High Potential	
Air Cargo Sector	Air Cargo Operations	High Potential	
Railways Sector	Rail Freight Operations	Fairly Low Potential	
	High Speed Rail Connectivity	Moderate Potential	
Inland Waterways Sector	Inland Waterways Operations	Moderate Potential	
Warehousing Sector	Warehousing	High Potential	
	Urban Logistics	Fairly High Potential	
	Supply Chain Network	Fairly High Potential	

Investability Heatmap

Guiding on Opportunities in Transport and Logistics Sector

Scoring (Out of 5)

Policy/ Regulatory Framework	Privatisation/ Private Investment	Mergers and Acquisitions	Entry Barriers	Technology Advancement
5	5	4	4	5
5	5	4	4	5
5	4	2	1	3
5	5	4	3	5
3	2	1	1	3
4	3	3	3	4
5	3	3	2	3
5	5	5	4	5
5	4	3	3	4
5	4	4	4	5



Exploring Opportunities in Transport and Logistics Investments for 2025

07 Investment Opportunities (Contd.)

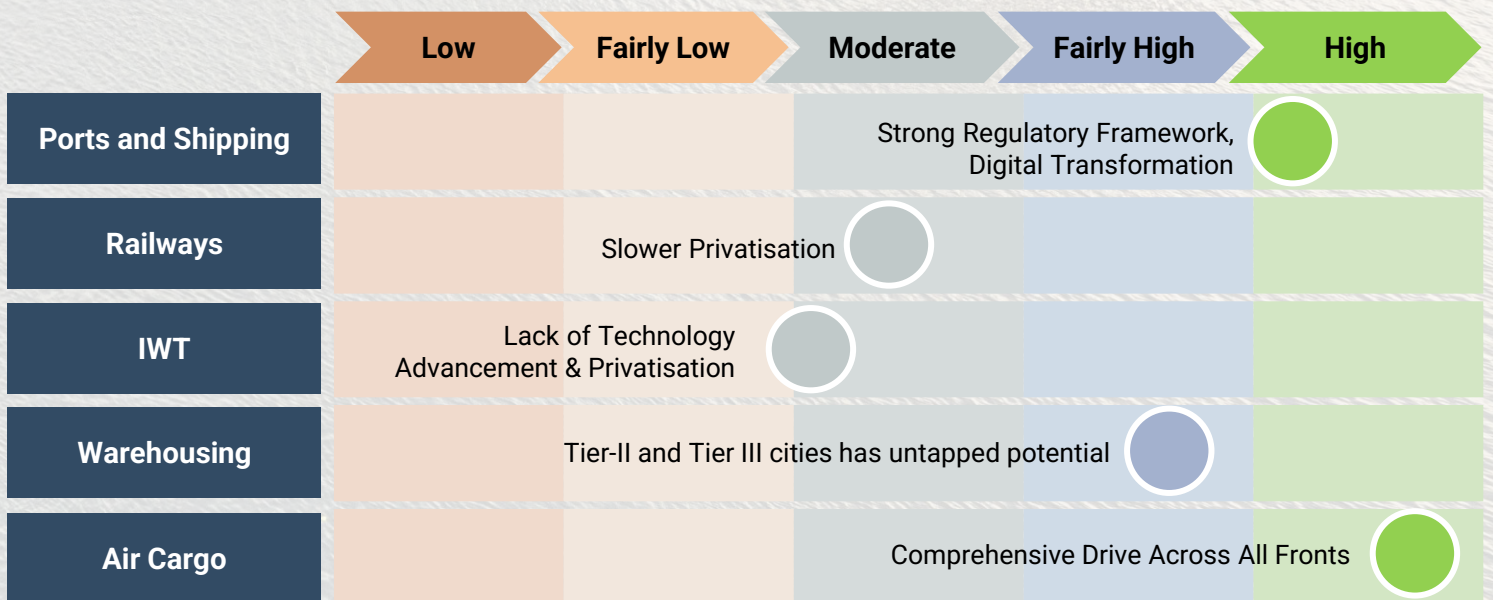
ASCELA's Viewpoint

Indian Logistics Investability Index 2025: Sector Scoring

	Policy/ Regulatory Framework	Privatisation/ Private Investment	Mergers and Acquisitions	Entry Barriers	Technology Advancement	Investability
Ports and Shipping	High	High	Low	Low	High	High
Railways	High	Fairly High	Moderate	Moderate	High	Moderate
IWT	High	Fairly Low	Fairly High	Low	Low	Moderate
Warehousing	High	Fairly High	Fairly High	Fairly Low	High	Fairly High
Air Cargo	High	High	High	Moderate	High	High

■ Low
 ■ Fairly Low
 ■ Moderate
 ■ Fairly High
 ■ High

Investability Index in India – Year 2024



ASCELA's View

Positive Outlook

Following an in-depth evaluation of five key sectors within the Indian logistics ecosystem, ASCELA's analysis identifies significant growth opportunities in the Ports & Shipping and Air Cargo sectors. While the policy and regulatory frameworks across all sectors remain robust, the Inland Water Transport (IWT) sector lags in digitisation, highlighting a critical area for advancement.

About ASCELA

ASCELA is a professional service company providing advisory services to organisations to help them enhance efficiency by analysing market potential, competitive landscape, and operational, financial, economic, technical, and strategic challenges into Infrastructure and build environments.

About ASCELA Strategic Advisory – Mobility and Supply Chain

ASCELA's Strategic Advisory – Mobility and Supply Chain practice helps clients develop and leverage core competencies to deliver sustainable and tangible returns. We define strategies that help clients gain market share, enter new markets, regions, and products, improve the bottom line and reconfigure organisational/operational structures.

ASCELA is well placed to provide 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 analysis of our client's specific contexts, helps define superior strategies, frameworks, and implementable action plans.

United Arab Emirates

ASCELA MANAGEMENT CONSULTANCIES L.L.C

Office 19, MSH Business Center, 18th floor, One by OMNIYAT, Business Bay (P.O. Box- 251756), **Dubai**, UAE
(Professional Licence No – 1000645)

India

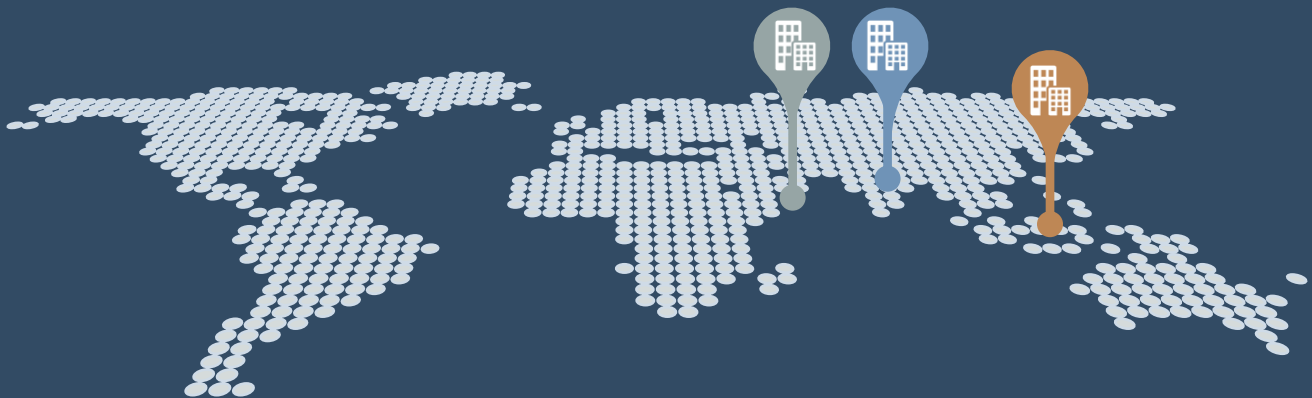
ASCELA ADVISORS PRIVATE LIMITED

2nd Floor, Eros City Square, Sector 49, **Gurgaon** – 122018, Haryana, India
(CIN- U74999HR2018PTC072828)

Singapore

ASCELA ADVISORS PTE. LIMITED

#09-01, 20 Collyer Quay, Singapore (049319)
(UEN- 202422543H)



© 2025 ASCELA

ASCELA is registered as ASCELA Advisors Private Limited in India,
ASCELA Management Consultancies L.L.C in UAE, and
ASCELA Advisors PTE. LTD. in Singapore.