



CII Institute
of Logistics



Confederation of Indian Industry

BUILDING EAST COAST LOGISTICS CAPITALS

V I S A K H A P A T N A M



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FOREWORD FROM CII

Amidst today's dynamic global landscape, the fusion of strategic urban development, efficient cargo movement, and sustainable economic growth holds critical importance. Regions like Visakhapatnam in Andhra Pradesh play a pivotal role.

Andhra Pradesh's commitment to a business-friendly environment is underscored by its top Ease of Doing Business ranking. This showcases the state's dedication to fostering innovation, attracting investments, and driving economic prosperity.

Drawing from global metropolises, Andhra Pradesh exemplifies informed urban planning grounded in best practices. At the core is the Master Plan for Visakhapatnam Metropolitan Region (VMR), which extends beyond local boundaries.

The focal point is transforming Visakhapatnam into an East Coast Logistics Capital. Rising traffic complexities, coupled with a thriving industrial landscape and port infrastructure, require a multi-faceted approach. Short, medium, and long-term strategies encompass traffic management, logistics capacity enhancement, infrastructure expansion, and sustainable transport integration.

Confident that this vision, fortified by meticulous planning and collaboration, will lead to Visakhapatnam's transformation into a thriving economic nucleus. This document is a testament to foresight, innovation, and strategic partnerships, charting a course for the region's potential as a catalyst for growth within India's East Coast economic landscape.



EXECUTIVE SUMMARY

PM GatiShakti National Master Plan is an integrated plan that will address the gaps to ensure the seamless movement of people, goods, and services. It aims to enhance ease of living, and ease of doing business, minimize disruptions, and expedite completion of works with cost efficiencies. Synergies may be realized through PM GatiShakti National Master Plan which aims to create Next Generation Infrastructure by learning from the past about the flow of goods and passengers in Cities.

This document attempts to present the magnitude of future cargo traffic and potential bottlenecks that may be addressed through PM GatiShakti National Master Plan. It attempts to highlight Andhra Pradesh's strategic vision for economic growth, efficient cargo movement, and sustainable urban development, with a focus on Visakhapatnam's pivotal role.

Enhancements to rail and road connectivity at Visakhapatnam demonstrate the state's commitment to efficient cargo movement. While comprehensive rail and road connectivity handles substantial traffic, future-proofing the NH-16 section passing through the city limits is a critical area to focus.

Three industrial corridors, centered on Vishakhapatnam, are set to significantly boost industrial output. With robust logistics including ports, warehousing, logistics parks, last-mile, and first-mile transportation, and distribution networks, the state plays a major role in cargo traffic.

Vishakhapatnam is emerging as a dynamic urban hub, projected to house 8.5 million by 2051. With a clean city ranking and thriving industrial ecosystem, it hosts public sector undertakings and numerous industrial units. The Vishakhapatnam Port Authority and Gangavaram port drive cargo handling, aiding economic growth.

The Growing cargo movement continues to pose challenges, necessitating a multifaceted approach and priorities to future-proof supply chain flows.

SHORT-TERM

Priorities include stakeholder consultations, lane discipline enforcement, logistics capacity development, and truck parking facilities.

MEDIUM-TERM

Actions involve expanding NH 16, dedicated freight lanes, and multi-modal logistics parks.

LONG-TERM

Strategies encompass enhanced cargo handling capacity, sustainable transport planning, elevated corridors, and real-time cargo movement metrics.

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ANDHRA PRADESH'S ECONOMIC LANDSCAPE, INDUSTRIES, AND THE VISAKHAPATNAM CITY

Andhra Pradesh's robust economy, led by services, agriculture, and industry, is buoyed by its top Ease of Doing Business rank.

Strategic sectors like agro-processing and biotech drive substantial investments and job commitments.

Vishakhapatnam's growth as an urban hub, powered by pivotal ports, fuels the state's economic dynamism.



Andhra Pradesh's Business-Friendly Environment

Andhra Pradesh secured the top rank in the Ease of Doing Business assessment according to BRAP 2020ⁱ. This achievement was a result of addressing 301 reform points across 15 business regulatory domains, including Single Window System, Labour, and Environmental regulations.



Economic Dynamics and Industrial Strength

Andhra Pradesh's economy thrives on three core sectors: services (40.45%), agriculture (36.19%), and industry (23.36%). It stands as a significant contributor to India's exports, excelling in marine products, textiles, pharmaceuticals, chemicals, and petroleum goods.



Strategic Industrial Focus and Policy

Andhra Pradesh's Industrial policy strategically promotes sectors such as agro and food processing, biotechnology, pharmaceuticals, IT, textiles, and automotive manufacturing. The 2023 Global Investor's Summit in Vishakhapatnam drew participants from 25 countries and 30 prominent corporations, culminating in 378 MoUs. These agreements signify a massive investment commitment of Rs. 13.42 lakh crore and the creation of 6 lakh jobs across 16 sectors.



Driving Industrial Growth through Corridors

Andhra Pradesh's focus extends to propelling high-impact nodes along three industrial corridors: Chennai-Bangalore, Hyderabad-Bangalore, and Vishakhapatnam-Chennai. The latter is projected to amplify industrial output, from an estimated USD 14 billion to USD 117 billion by 2046. Vishakhapatnam is a core node in this development, contributing nearly half of the entire corridor's manufacturing outputⁱⁱ.



Strong Logistics Infrastructure

Andhra Pradesh has a robust logistics infrastructure with extensive warehousing and cold storage capacities. It houses multiple container depots, freight stations, and air cargo terminals, contributing to its ranking as the third-largest state in terms of cargo traffic¹.

¹ Logistics Policy, Andhra Pradesh, 2022-27

The 2022-27 logistics policy aims to integrate various transport modes for efficient goods movement.



29.53 Lakh MT²
Warehousing capacity



15.67 Lakh MT
Cold storage capacity



03
Inland container depots



12
Container freight stations



05
Air cargo terminals



283
Railroad goods shed



16
Logistics training centres



04
Agri export zones



25
Special economic zones



70
Export-oriented units

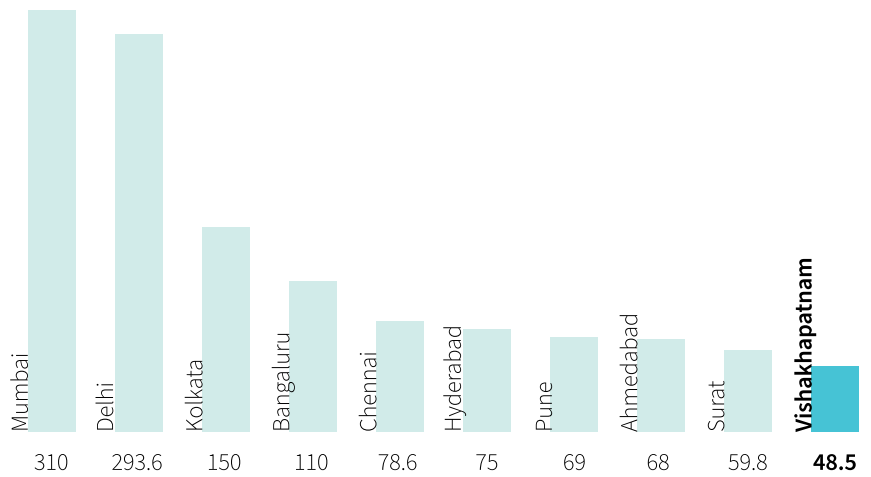
²Source - Rajya Sabha Session - 258 Unstarred Question No. 393. Data Figures are in LMT (Lakh Metric Ton) and Ministry of Consumer Affairs, Food and Public distribution, Aug 2023, [Access here](#). CWC is the process of adding 18 Lakhs MT by 2025



Vishakhapatnam: An Emerging Powerhouse

Vishakhapatnam, situated on the east coast is a leading city in Andhra Pradesh. Its population is anticipated to surge, reaching 8.5 million by 2051ⁱⁱⁱ. The city has been recognized as the fourth cleanest in India^{iv}. It is the 10th major city in the country with a GDP of USD 48.5 billion^v It has and currently provides 7 public sector undertakings and 136 medium-to-large industrial units, fostering a vibrant industrial ecosystem^{vi}. The region has 7,316 manufacturing units (including MSME and Large units), 23 industrial parks, 15 SEZs with a total investment of INR 71,000 crores, 2.3 lakhs employment which is estimated to reach 4 million by 2051^{vii}.

GDP in billions
U.S. dollars



Visakhapatnam - Promising port city

Key infrastructure behind the growth of this industrial city is the major port

7 PSUs, 136 medium and large-scale industrial units, **7316 manufacturing units, 23 industrial parks, 15 SEZs**

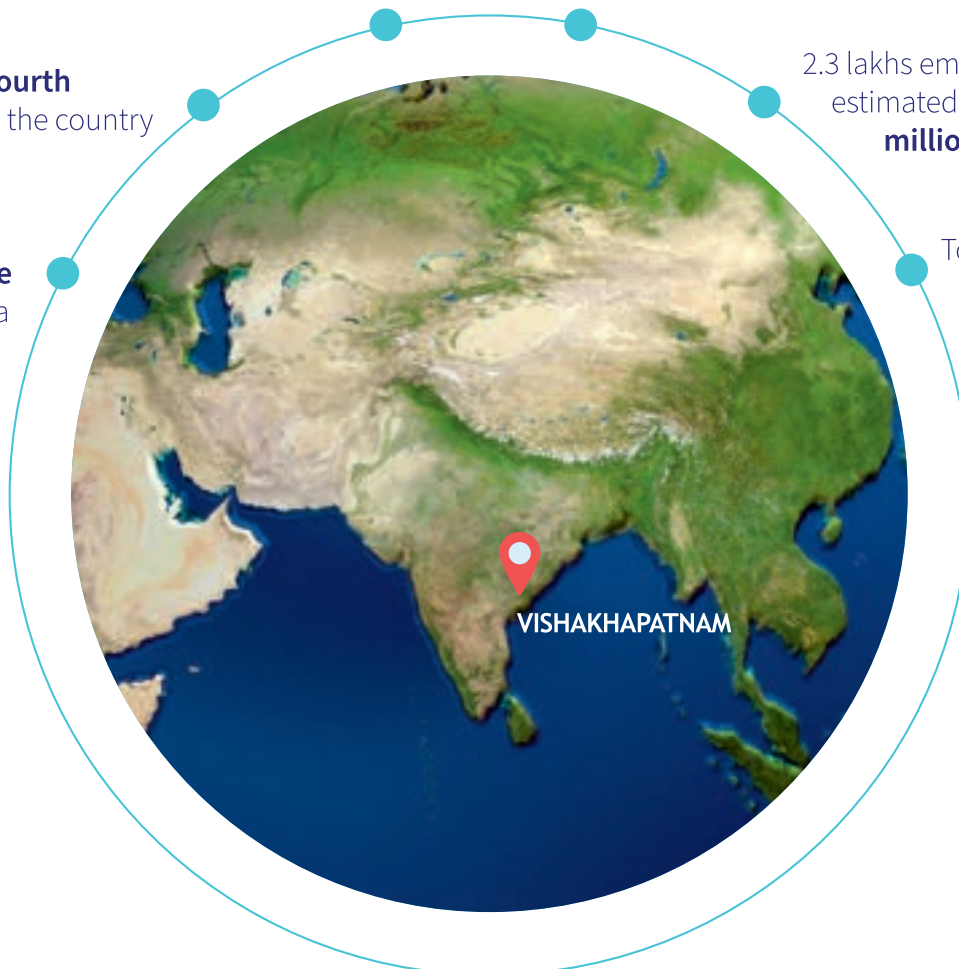
Urban population is expected to cross **2.5 million by 2027** and **3 million by 2035** and reach **8.5 million by 2051**

Ranked as the **fourth cleanest city** in the country

2.3 lakhs employment, estimated to reach **4 million by 2051**

Visakhapatnam is first **among the five top cities** in Andhra Pradesh

Total investments of **INR 71,000 crores**

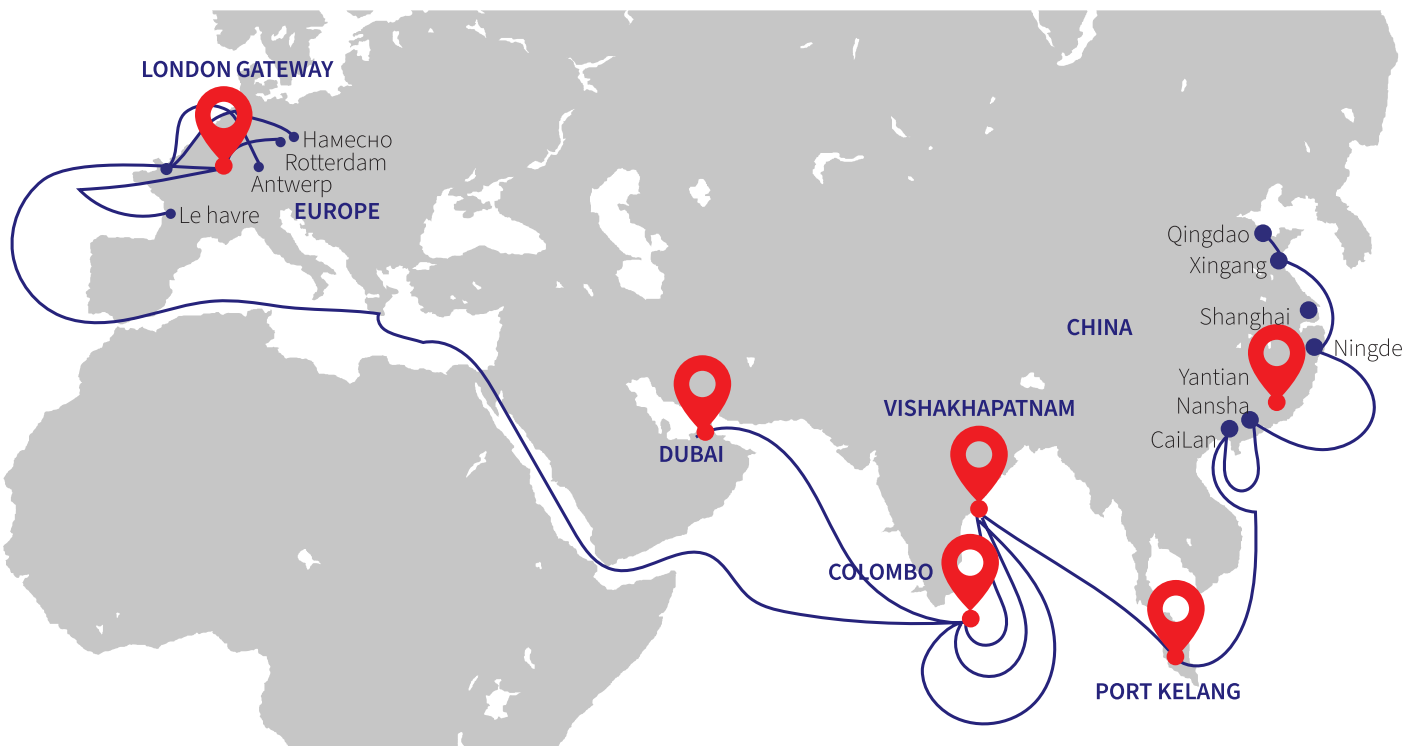




Pivotal Ports

The Vishakhapatnam Port Authority has evolved significantly since its inception, expanding to handle a cargo of 73.73 million tonnes. It is poised to achieve a capacity of 125 million tonnes^{viii}. Additionally, the Gangavaram port, established in 2009, further bolsters cargo handling, with plans for commissioning a new container terminal by the end of 2023. Combined, these ports manage a wide array of cargoes, including chemicals, steel, coal, and petroleum products.

Main shipping line service from Visakhapatnam



Port of Visakhapatnam



- From 3 berths after the first world war, has grown to **20 berths in inner harbor and 7 berths in outer harbor**
- **Average occupancy in year: 56%**
- Vessels: **Panamax (82,000 DWT) and Super Cape (180,000 DWT)**
- Poised to achieve a capacity to handle total cargo from today's **73 million tons to 125 million tonnes by 2025**
- **10 container freight stations**
- Annual container handling capacity: **1.3 mn TEU**
- T1 and T2 Quay length: **845 meters**

Adani Gangavaram Port



- 9 berth multi-purpose port started in 2009, has master **plan to expand upto 31 berths**
- Annual handling capacity: **64 MMT**
- Plan to increase annual **handling capacity to 250 MMT**
- Vessels: **Super Cape (200,000 DWT)**
- **Container terminal to be ready by end of 2023**
- **3 STS cranes and 9 E-RTGs** have already arrived at the port during May 2022



Every 400-meter vessel creates a demand for 7000 trucks & trippers and 50 wagons, 48 hours before and after the ship arrives



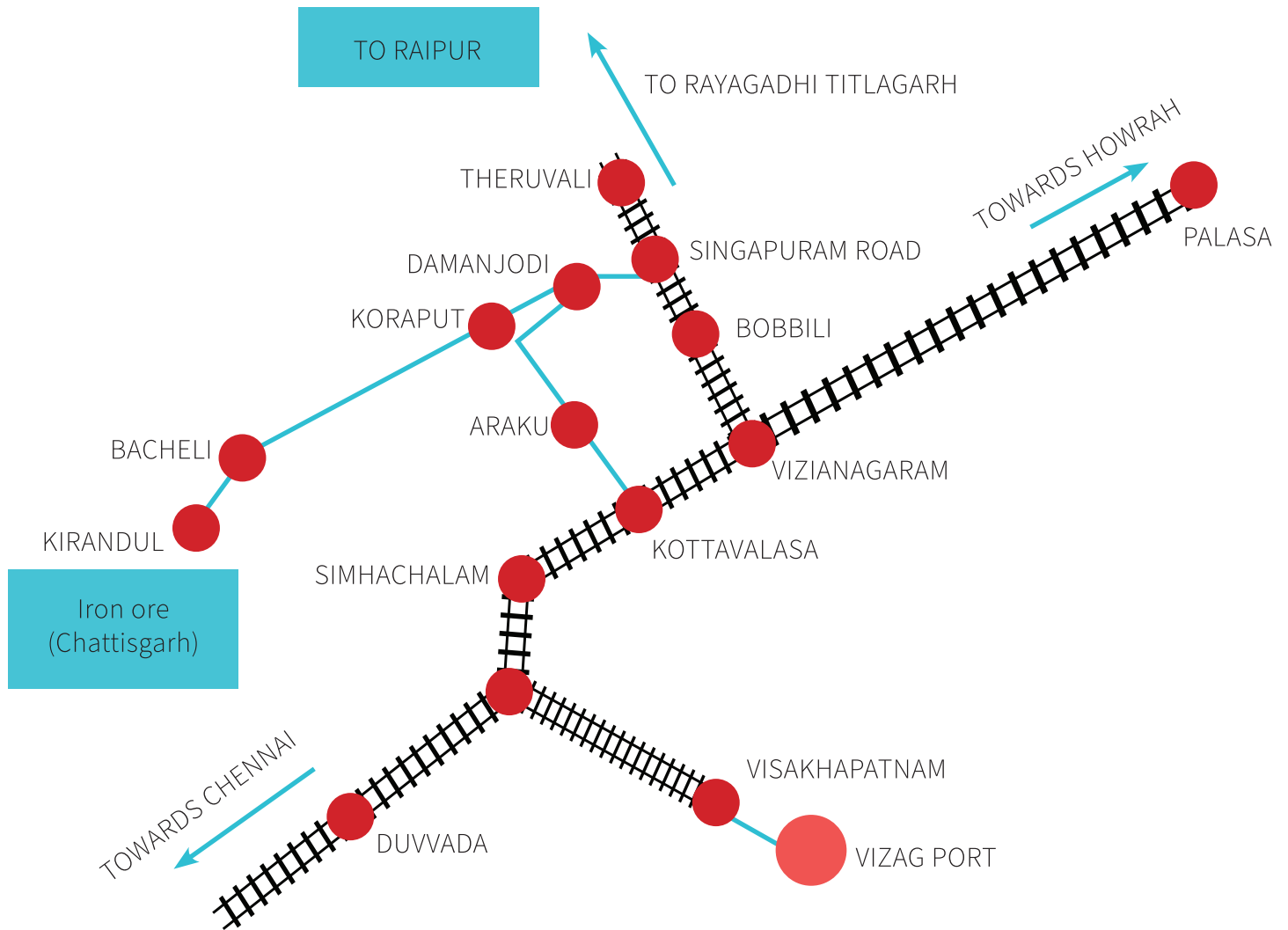
The invisible problem
Estimated average 1500 trailers and 3000 trucks / tippers per day in 2023 would cross 2000 trailers per day with active additional berths in 2024-25



ENHANCING CARGO MOVEMENT: RAIL AND ROAD CONNECTIVITY AT VISAKHAPATNAM PORTS

The Port of Visakhapatnam has a robust rail network and efficient cargo movement, handling 11,000 rakes by rail and 63,256 TEUs container throughput in June 2023. The region addresses road congestion with traffic management initiatives and plans for truck terminals. Multi-Modal Logistics Parks and innovative warehousing solutions demonstrate Visakhapatnam's strategic commitment to optimizing its logistics infrastructure amidst surges in trade.

Robust Rail Network at Visakhapatnam



The Port of Visakhapatnam has the largest railway network among Indian ports, spanning over 200 km in length and featuring more than 30 sidings, with a rail coefficient of approximately 60%. This extensive rail infrastructure is closely linked with the Waltair Division of East Coast Railways, enabling efficient transportation of EXIM cargo across the nation^{ix}.

The ports excel in both rail and road cargo movement connectivity. In the fiscal year 2022-23, the Visakhapatnam Port Authority (VPA) handled around 11,000 rakes by rail, while the Gangavaram port managed 6,238 rakes. Each rake has the capacity to carry between 2,600 MT to 3,800 MT of cargo.

Road Cargo Movement and Growing Challenges

In the port area, an average of over 1,500 trucks are involved in bulk cargo movement. Notably, Visakhapatnam Port set a new record with 63,256 TEUs container throughput in June 2023^x. This significant traffic growth necessitates efficient road infrastructure and management.

Problems due to inadequate road infrastructure bottleneck

Time and Traffic

- Waiting time to enter and exit from ports
- Unauthorized parking of vehicles on roads
- Heavy trucks and other vehicles on same road leading to traffic issues



Cost

- Additional charges for delay in container movement from port / release of trucks
- Opportunity loss



Productivity and safety

- Restrictions on truck movement due to safety concerns
- Productivity loss, lower asset turnover, added costs to shippers
- Driver health and safety problems due to lack of truck parking facilities



Addressing Road Congestion

As per the 2022-23 data, the Port handled around 73.75 million tons of cargo, positioning it as the third-largest major port. With this trend, the port is expected to handle 125 million tons by FY 2047. However, this growth momentum has led to concerns about road congestion.

Due to the increased movement of heavy trucks, especially logistics vehicles, causal factors for the fatal accidents were discussed during a meeting of the District Road Safety Committee. As a result, industries in specific areas were often directed to restrict logistics vehicle movement during shift hours (between 7 AM to 9 AM and 6 PM to 8 PM) to prevent accidents.

Inadequate Truck Terminals

Given the presence of Visakhapatnam Port Trust, Gangavaram Port, Steel Plant, NTPC, and major industries, the VMRDA region witnesses substantial truck movement³. Adequate truck terminals are essential to mitigate congestion and efficiently manage freight vehicle traffic within the region.

³ VMRDA: Visakhapatnam Metropolitan Region Development Authority

Truck parking terminals, most important today

- There are two designated parking spaces at VPA and Gangavaram port
- HPCL oil refinery is estimated to run **~350 oil tanker trucks** for daily distribution
- Adani Gangavaram port truck parking yard can accommodate **~250 trucks**
- Other trucks are generally parked on NH 16 by private operators

Private parking - 1



Private parking - 2



Adani Gangavaram port parking yard



Rising Demand for Warehousing and Logistics Parks

The warehousing sector has experienced remarkable expansion, witnessing an extraordinary surge of 265% in demand between the years 2022 and 2023, outpacing growth even in metropolitan regions^{xi}.

Within the Gajuwaka-Auto Nagar, and Anakapalli-Parawada clusters, a substantial 79% of the entire warehousing infrastructure is concentrated, signifying a remarkable focal point for storage and logistics operations.

Growing warehousing demand will lead to additional traffic



Gajuwaka-Auto Nagar, Anakapalli and Parawada and Madhurawada Warehousing clusters

In the Pendurti - Anandapuram cluster, a noteworthy 21% of the total warehousing infrastructure is located.

The imminent commencement of mainline calls to Visakhapatnam in the year 2025 is projected to catalyze a staggering fivefold increase in container cargo volume. This can lead to a higher demand for warehousing facilities, as businesses will require storage spaces to temporarily house their products before distribution or transportation.



Ripple Effect on NH 16 Traffic

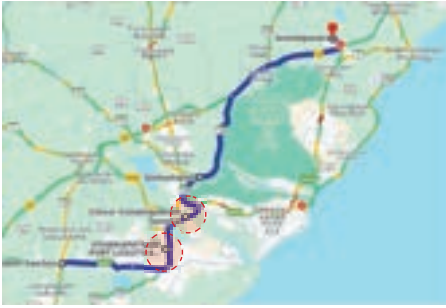
As a corollary of these developments, an estimated movement of 400 to 500 vehicles along NH 16 is projected to be closely associated with the influx of inbound trucks, returns, and the circulation of city distribution trucks. This multifaceted movement underscores the intricate web of traffic dynamics in the region.

The trajectory of urban goods distribution traffic on NH-16 continues to display an upward trajectory. As the region's economic activities burgeon, this phenomenon is poised to sustain its growth trajectory, necessitating ongoing strategies to effectively manage and optimize traffic flows.

Crucial Role of Multi-Modal Logistics Parks (MMLPs)

Multi-Modal Logistics Parks (MMLPs) emerge as pivotal enablers for streamlining freight movements. The inaugural MMLP, established by the Container Corporation of India Ltd (CONCOR) in 2017 at Visakhapatnam, has substantial infrastructure with 12,500 TEU holding capacity^{xii}.

Multi-modal Logistics parks (MMLP)



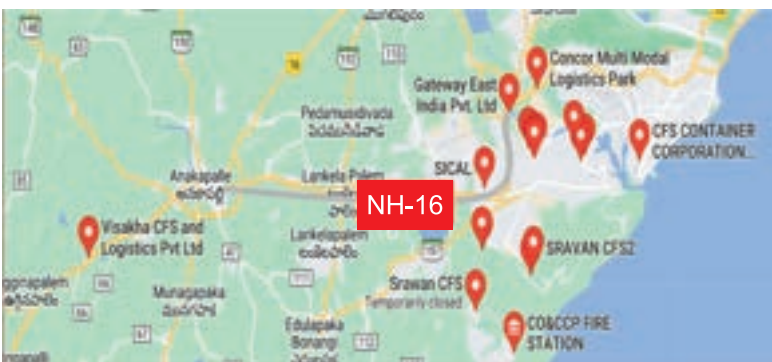
- **CONCOR terminal and Balmer-Lawrie** Logistics parks are on NH-16.
- Both facilities were developed for multi-modal logistics.
- Proposal for new MMLP in Nakkapalli (VMR master plan).

Underlining its commitment to innovative solutions, the Visakhapatnam Port Trust, in collaboration with BalmerLawrie&Ltd., has inaugurated a Multimodal logistics hub. This facility has an assortment of capabilities, including sheltered warehouse space, cold storage provisions, and adept container handling mechanisms^{xiii}. The forthcoming MMLPs slated for Visakhapatnam and Vijayawada aspire to encompass a comprehensive array of parameters, encompassing seamless freight flow, enhanced connectivity, and adept handling of cargo demand. These facets converge to facilitate the efficient orchestration of cargo management.

Operational Excellence in Container Freight Stations (CFS)

The operational prowess within Visakhapatnam is reflected in the active functioning of 10 Container Freight Stations (CFS). Each of these CFS possesses an expansive warehouse capacity spanning from 2 to 3 million square feet, accommodating diverse storage needs. Beyond warehousing, these CFS offer an integrated spectrum of multi-modal logistics services to cater to the distinctive requirements of customers^{xiv}.

Container Freight Stations



- 10 CFS are operational in Visakhapatnam.
- Each CFS has a warehouse capacity ranging from 20-30 lakhs SFT.
- The CFS also has warehousing and perform multi-modal logistics services to customers.

CWC, Sravan Shipping Services -1 & 2, CONCOR, Gateway East India, VCT CFS, Visakha CFS, VPL CFS, Visakha Logistics park, and SICAL CFS

Sustainable Solutions for the Future

As cargo movement continues to grow at Visakhapatnam Ports, a combination of strategic rail and road connectivity, advanced truck terminals, and cutting-edge logistics facilities will be crucial to ensure efficient and safe operations.

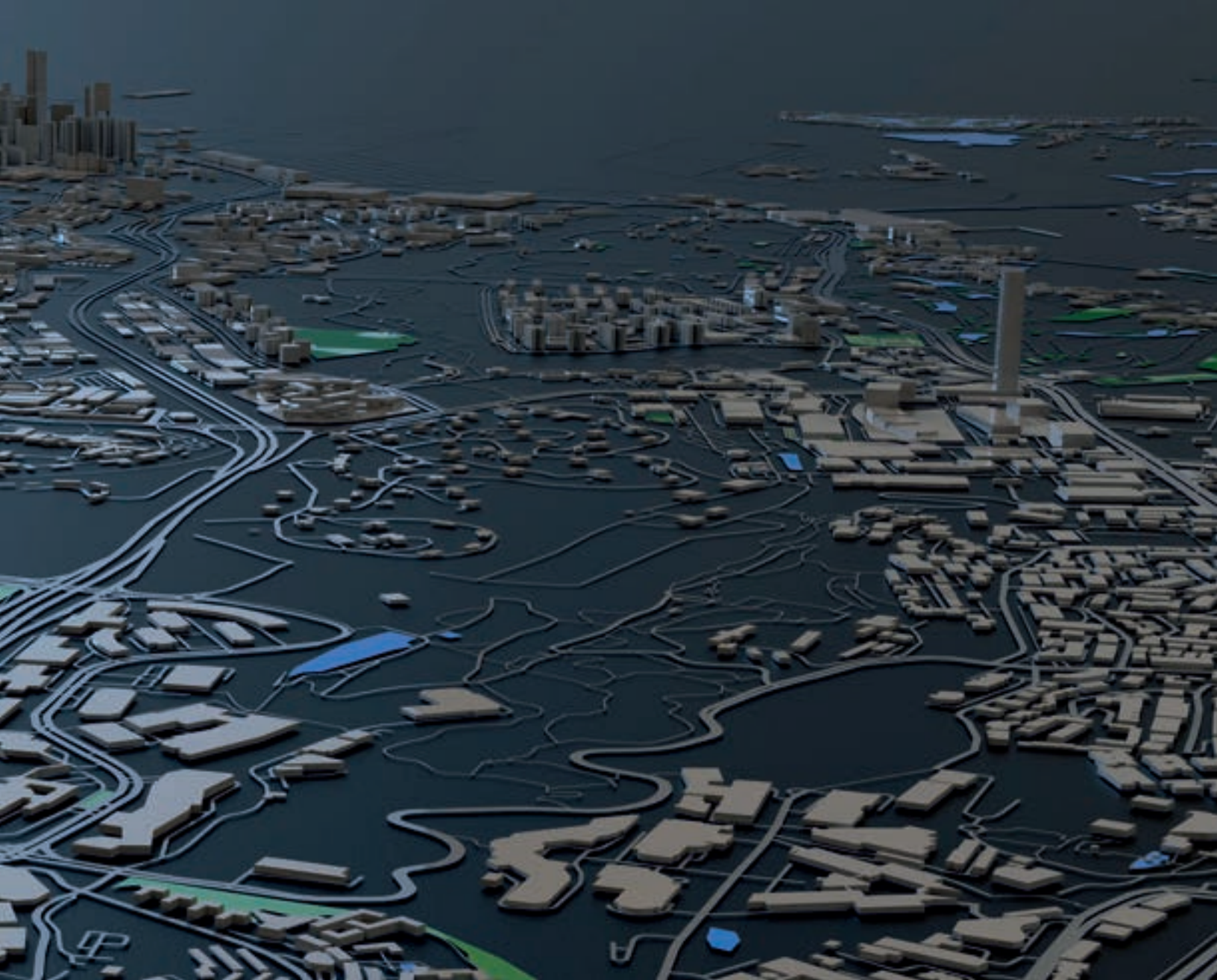
The upswing in demand for warehousing coupled with the establishment and expansion of Multi-Modal Logistics Parks and innovative warehousing solutions underscore Visakhapatnam's strategic commitment to enhancing its logistics infrastructure, accommodating surges in trade, and optimizing cargo movements.

Impact of MMLP on traffic

- The first-of-its-kind MMLP development work with a project cost of Rs. 1146 Crores is in progress and is expected to be completed by the end of the year 2023.
- This MMLP is expected to handle 1.67 MMT and 2.88 MMT of bulk cargo, 1876 TEU, and 2249 TEU and container cargo by 2025 and 2030 respectively.
- **Anticipate similar capacity in Visakhapatnam.**
- **Additional traffic of cargo on NH-16 as main industries are alongside of NH-16 from VPA to Anakapalli via Gajuwaka.**



With Direct Air, Road, Water Connectivity, India's First Multi-Modal Logistics Park in Assam Nearly Complete, 2023



STRATEGIC DEVELOPMENT BLUEPRINT FOR VISAKHAPATNAM REGION

The Visakhapatnam region's strategic development plan integrates global insights, prioritizing public transportation and port connectivity. Collaborative efforts are expanding road infrastructure, including a 4 to 6-lane Port Road and a transformative 12.7 km direct route project. These initiatives aim to enhance cargo movement and alleviate traffic congestion.

Informed Planning with Global Insights

A comprehensive master plan for the Vizag region has been meticulously crafted, drawing inspiration from esteemed metropolises such as Mumbai, Chennai, Barcelona, Brasilia, and Rotterdam. This visionary plan integrates a range of perspectives and undergoes continuous review and benchmarking.

Incorporating insights from the city transportation study and aligning with international standards, the master plan emphasizes vital aspects. These include enhancing the public transportation network encompassing regional railway, suburban railway network, metro rail, port roads, coastal stretch roads, and harmonizing the Visakhapatnam-Kakinada Petroleum, Chemical, and Petrochemical Investment Region (VK-PCPIR).

Synergistic Collaboration for Infrastructure

Effective coordination among various stakeholders—Ports, Roads and Buildings departments, Urban Development Authority, Municipal bodies, and the National Highway Authority—has been a cornerstone. This coordination facilitates the seamless integration of infrastructure development, notably right-of-way for roads and efficient utilization of resources.



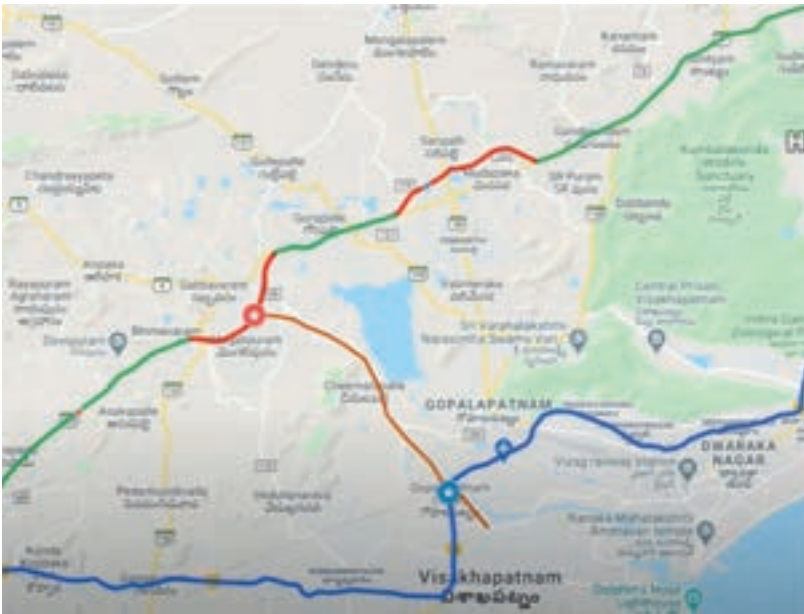
Holistic Vision under Sagarmala

Aligned with the Sagarmala initiative, Vizag's ports are not only optimizing operational efficiencies and expanding capacity but also embarking on comprehensive port connectivity, logistics park, and coastal community development projects^{xv}.

Strategic Enhancements in Port Connectivity

Vizag Port and NHAI have collaboratively undertaken port road connectivity improvements under Phase II. This endeavor has transformed the Vizag port's road connectivity from 2 lanes to 4 lanes, a remarkable accomplishment necessitating an investment of INR 77 crores.

Future Proofing Road Network



Expansion Initiatives for Efficient Connectivity

With a steadfast commitment to seamless connectivity, plans are in motion to elevate a 4-lane road to a 6-lane road and establish 4-lane dedicated Port Roads connecting Convent Junction to Sheelanagar Junction. Encompassing a length of 9.58 kms, this project holds a cost estimate of INR 501.65 crores. The project's execution is under the aegis of NHAI, with the EPC contract awarded in March 2023^{xvi}.

Easing Traffic Woes with Six Lane Road

The momentum towards improved traffic management continues as NHAI develops a Detailed Project Report (DPR) for the expansion of a 14.4 km road from Gajuwaka to Gangavaram port. This expansion, estimated at INR 50 crores, aims to alleviate existing traffic congestion in Vizag city. The six-lane highway's impact is projected to divert 50% of traffic away from the city's core, providing smoother passage for heavy vehicles bound for Chennai and Kolkata^{xvii}.



Charting a Direct Route

In July 2023, a momentous event unfolded as Shri Nitin Gadkari, the Minister of Shipping, Road Transport & Highways, Water Resources, River Development, and Ganga Rejuvenation, laid the foundation stone for a transformative project. This initiative encompasses a 12.7 km road connecting Sheelanagar Junction to Anakapalli-Sabbavaram/Pendurti-Anandapuram road (NH 16) at a cost of Rs. 619 Crore. The outcome promises direct, bypass connectivity, aiding Port-based cargo movement both North and South, while circumventing the city limits. NHAI is spearheading the implementation of this significant project.



NAVIGATING THE LOGISTICS CAPITAL VISION: CHALLENGES AND PROSPECTS

The traffic congestion on NH 16 in the Vizag region, despite ongoing bypass construction, is accentuated by industrial complexes along the route. Challenges include managing port growth and evolving vehicular dynamics. A vision for transforming Visakhapatnam into an East Coast Logistics Capital involves short, medium, and long-term actions focused on traffic regulation, dedicated lanes, logistics parks, and sustainable transport planning, aiming to accommodate industrial demands and alleviate traffic issues

Current Traffic Scenario and Bypass Construction

NH 16, stretching over 58 km within Vishakhapatnam city limits, faces congestion due to 51 minor and 12 major junctions. Despite the ongoing construction of a 6-lane bypass along Anandapuram-Pendurti-Anakapalli, the city portion of NH 16 remains heavily congested. In response to this challenge, the AP State Government approached the Ministry of Road Transport and Highways. As a result, the decision was made to develop underpasses and flyovers for a one-time improvement, as outlined by the Ministry's directive on 15-09-2021.

Traffic Dynamics and Industrial Landscape

The *Visakhapatnam Metropolitan Region Development Authority's (VMRDA) Draft Perspective Plan for 2051* illuminates the gravity of the ongoing traffic challenge, underscoring its significance against the backdrop of the anticipated regional expansion of economic activity. While the potential of the VK-PCPIR expressway is acknowledged for the year 2051, its ability to offer an immediate antidote to the mounting urban congestion remains limited. It is worth noting that several substantial industrial complexes, including the Visakha Steel Plant, Parwada industrial area, and BHEL, are strategically nestled along the southern stretch of NH 16 within the city's bounds. This pivotal artery serves as a lifeline for nearly 72 extensive industries, relying heavily on its thoroughfare for the swift movement of cargo. This industrial stronghold, encompassing approximately 90% of the total, is concentrated within the Sheelanagar-Anakapalle section of NH-16, intricately intertwined with the urban infrastructure^{xviii}.





A Glimpse into Port Triumphs and Challenges

In June 2023, the *Port of Visakhapatnam* achieved a momentous feat by registering a container throughput of 63,256 TEUs. To contextualize this achievement, considering an estimated throughput with 40% import, catering to this demand for container movement would entail the participation of roughly 25,000 trucks.

Port's Evolution and Forward Trajectory

The growth trajectory of the port is clearly delineated by its cargo handling statistics. In the fiscal year 2016-17, the port efficiently managed a substantial cargo volume of 61 million tons. This figure experienced a remarkable surge, scaling up to 73.75 million tons in the fiscal year 2022-23, a testament to the notable expansion of operational capacity.

Looking ahead, the port's cargo handling capacity holds promising prospects. Its strategic positioning to efficiently handle an impressive 125 million tons of cargo by the fiscal year 2047-48, a proactive approach in accommodating the growing demands of trade.

Critical Nodes and Traffic Management

Sheela Nagar toll plaza, spanning 9.158 kilometers of the port road (NH 16), serves as a pivotal section for traffic management. Notably, the plaza is equipped to manage up to 40,000 Passenger Car Units (PCUs). An interesting facet emerges from June 2017, when the toll plaza reported a daily traffic count of 34,442 PCUs, thereby highlighting stress on flowing traffic in the NH 16 section.

Learning from NH 16 Audit

An audit conducted by the *National Highway Authority of India (NHAI)* in 2021 offers valuable insights into the condition of the NH 16 stretch in Visakhapatnam. This comprehensive evaluation encompassed three key facets: efficiency (45%), highway safety (35%), and user services (20%). Garnering an overall rating of 41, the highway is categorized as "Good" within the scale of 40-60. This rating underscores the need for actions to maintain a high standard of quality, safety, and efficiency on NH 16, ensuring the seamless movement of goods and vehicles.

Industrial Dynamics and Vehicular Landscape

Commencing with prominent establishments such as the *RINL-Visakha Steel Plant*, extending to the *Parwada industrial park*, *BHEL*, *APIIC*, *Ports*, *VSEZ*, *Auto Nagar industrial park*, *Pedangtyada industrial park*, *Pharmacy*, *Pharma SEZ*, *NTPC*, and *Hinduja Power*, the roster features a rich tapestry of approximately 72 large-scale industries. These industries significantly lean on NH 16 within the city's urban confines for their cargo movement requirements. This interdependence necessitates meticulous consideration during the planning and execution of forthcoming metro alignments, requiring a finely choreographed approach to land acquisition and seamless orchestration of cargo movement amid concurrent construction activities.



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The vehicular landscape of Visakhapatnam reflects its vibrant nature, boasting an existing registration count of 1.4 million vehicles (as of 2023). The majority comprises two-wheelers (75%), followed by cars (15%), with the remaining 10% constituted by heavy vehicles. This dynamic automotive presence continues to evolve, with the addition of 200 to 300 new vehicles each day, further amplifying demands on the existing infrastructure^{xix}.

As the region marches steadfastly towards its logistical aspirations, these challenges serve as catalysts, propelling concerted efforts to metamorphose Visakhapatnam into a logistical nucleus that not only accommodates but thrives amidst the burgeoning industrial and vehicular dynamics.





Key Initiatives towards creating the East Coast Logistics Capital

The convergence of industrial development, sea ports, airports, rail networks, and road network plans positions Visakhapatnam to potentially become an East Coast Logistics Capital. However, realizing this vision necessitates prioritization and collaboration among multiple stakeholders. To systematically address the logistics sector, initiatives have been categorized into three stages based on priority.

Short-Term Focus



Stakeholder Consultations for Traffic Regulation

Engaging with relevant stakeholders including government authorities, transport associations, and urban planners to collaboratively develop effective traffic regulations and solutions. This could involve implementing traffic management strategies, signal synchronization, and route optimization to reduce congestion on NH 16. Furthermore, it is imperative to ensure the appropriate usage of service lanes along NH-16 for their designated purpose, and to take necessary actions to eliminate unauthorized encroachments, thereby mitigating the risk of accidents.

Action items

Traffic data sharing, removal of encroachments, driver training programs, traffic education including public transport and mobile apps for updates, and stakeholder feedback meetings.



Lane Discipline Enforcement

Launching awareness campaigns and enforcement drives to educate drivers about the importance of adhering to lane discipline on NH 16. Implementing stricter penalties for lane violations can discourage erratic lane changes, thereby promoting smoother traffic flow.

Action items

Lane markings, lane discipline signs, awareness campaigns, driver communication, institutional outreach – offices, schools, and public places, enforcement drives.



Logistics Capacity Development

Conducting workshops, seminars, and outreach programs to enhance awareness about the logistics sector's potential and diverse career opportunities. This can attract talent to the field, contributing to a skilled workforce that can effectively manage the region's logistics demands.

Action items

Career awareness workshops, industry seminars, educational institution collaborations, skill development programs, career fairs and expos, webinar series, and collaboration with industry associations.



Logistics Zoning and Truck Parking Facilities

Designating specific zones along NH 16 for logistics-related activities, including loading and unloading. Establishing dedicated truck parking facilities equipped with basic amenities and security measures to ensure that trucks can efficiently park without obstructing traffic.

Action items

Zoning regulations, truck parking layouts, basic amenities, public-private partnerships, prompt maintenance, online booking, and real-time traffic updates.

PPP Model for Truck Parking Terminals

Encouraging public-private partnerships for the development of large-scale truck parking terminals. Collaborating with PSUs, APIIC, and port authorities to allocate suitable land and resources, thereby ensuring a well-organized and secure environment for truck parking. It is recommended that PSUs, APIIC and Ports to explore the adoption of the PPP model for the development of truck parking terminals spanning 50 to 100 acres.

Action items

PSUs and APIIC and Port collaboration for land allotment, private sector participation, self-sufficient costing models, modern designs.

Medium-Term Actions



Expansion of NH 16

Undertaking the expansion of NH 16 from Sheelanagar junction to Lankalapalem junction. This expansion will provide an additional eight lanes to accommodate the growing traffic volume, reducing congestion and allowing smoother movement of vehicles.

Action items

Proposal through state logistics cell to be considered in PMGatiShakti National Master Plan.

Dedicated Road Freight Lane

Establishing a dedicated lane on NH 16 for road freight vehicles, particularly those connecting Sheelanagar to Anakapalle and the bypass. This dedicated lane is designed to facilitate unhindered movement for cargo-carrying vehicles, ultimately augmenting the efficiency of overall traffic management. The proposed configuration includes four lanes tailored for heavy vehicles and cars, alongside an additional eight lanes dedicated to local traffic, split evenly with four lanes on each side.

Action items

Refer to the models of dedicated truck lanes operated in the United States, Germany, Netherlands, China, Brazil, Australia, and the UK, and conduct a detailed feasibility study.



Multi-Modal Logistics Park

Develop a multi-modal logistics park to serve as a central hub for cargo handling and distribution. This park can facilitate seamless transfers between various modes of transportation, reducing the need for cargo vehicles to traverse through congested city areas.

Action items

Review of Port of Rotterdam, Dubai South Logistics District, Port of Los Angeles Logistics Centre, Hamburg Logistics Park, Singapore Logistics Hub, and London Gateway Logistics Park models can provide insights into the benefits of establishing Multi-modal logistics parks.



Turck Terminal & Road Synergy

Executing the plans for the suggested truck parking terminals in accordance with the VMRDA Master Plan is important to improve traffic conditions and safety. This initiative will coincide with the expansion of roads to a width of up to 80 meters.

Action items

Propose feasibility studies on suggested locations in the VMRDA Master Plan.

Long-Term Actions



Enhancing Multi-Modal Cargo Handling Capacity

Strengthening the capacity of multi-modal cargo handling facilities to accommodate the increasing volume of goods passing through the region. This expansion will contribute to smoother cargo movement and reduced congestion on NH 16.

Action items

Rail-truck ramps, Automated Guided Vehicles, Palletization/Unitization equipment to be positioned at ports, multi-modal logistics parks, and container freight stations.

Urban Logistics and Sustainable Transport Planning

Developing comprehensive urban logistics and transportation plans that focus on sustainable practices. This can involve promoting public transportation, encouraging the use of electric and hybrid vehicles, and optimizing delivery routes to minimize congestion.

Action items

Review of models in the Netherlands, Denmark, Sweden, Singapore, Germany, and Norway provide insights into sustainable transport planning.

Elevated Corridor for Industrial Zones

Constructing an elevated corridor with dedicated exits leading to industrial zones situated alongside NH 16. Entry and Exit points can be evaluated at junctions of RINL, AGPL, Lankelapalem. This specialized infrastructure will facilitate the seamless movement of goods between industries and major transportation routes, reducing road congestion.

Action items

Integrate elevated corridor proposal in urban planning (VMRDA) to ensure industrial zones are well-connected and support the efficient movement of goods within the broader urban context.



Real-Time Cargo Movement Metrics

Implementing advanced tracking and monitoring systems to provide real-time and reliable data on cargo movement within the Visakhapatnam region. This data-driven approach will enable better decision-making, allowing authorities to proactively manage traffic and optimize logistics operations.

Action items

Pune and Surat have implemented intelligent transport systems for monitoring traffic. In a similar spirit, review Smart Freeway Management, California, USA, Variable Message Signs, Netherlands, and e-Tolling, Norway to develop indigenous integrated transport systems to monitor cargo movement. Existing Port Community Systems and Logistics Data Bank may provide insights into the development of key cargo movement metrics for Visakhapatnam city.

By progressively implementing these strategies, Visakhapatnam can not only alleviate its traffic woes but also pave the way for becoming a thriving East Coast Logistics Capital, catering to the growing demands of the region's industrial and commercial activities.

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