



KRS Infra Ventures Pvt. Ltd.

Indian Infrastructure

-Changes in process



Knowledge Paper

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From Director Desk

Dear Friends,

India is targeting a GDP of US\$5 trillion by 2027 and US\$7 trillion by 2030, focusing on infrastructure growth to support this ambitious goal. India's economy is valued at \$ 3 trillion and is expected to increase to \$ 5 trillion by 2027. Further Vision 2047 sets ambitious goals for the country to become a \$ 30 trillion economy.

The infrastructure sector's contribution to gross domestic product is projected to increase from 3.3 percent to 7 percent between 2025-2030 and is anticipated to grow 8 to 8.5 per cent per year.

In Future Prospects National Infrastructure Pipeline (NIP) aiming for significant investments, PPPs are expected to play a pivotal role in achieving India's infrastructure goals and contributing to economic growth.

Hope changes will shape Indian Infrastructure in bigger way.



Keshav Gandhi

Executive Director

KRS Infra Ventures Private Limited

Introduction

India has embarked on an ambitious journey of infrastructure development to reinvigorate the economy. To foster economic growth and development, the Government has allocated INR 11.11 lakh crore towards capital expenditure (3.4% of GDP), marking an increase of over 5 times in the last 10 years. Most of the capex surge has been witnessed in the last 5 years, with an annual growth of 27% witnessed during the same period. Government has consistently established its commitment and focuses on creating world-class, good-quality infrastructure assets.

India is undergoing significant changes in its infrastructure development process, driven by Government initiatives and investments. Here are some key developments:

Key Infrastructure Initiatives

1. Bharat Mala Pariyojana:

- **Objective:** Develop 34,800 km of national highways, focusing on corridor-based development.



- **Impact:** Enhances connectivity and reduces logistics costs.

2. Pradhan Mantri Gram Sadak Yojana (PMGSY):

- **Objective:** Connect rural habitations with all-weather roads.



- **Achievements:** Over 3.5 lakh km of rural roads completed, improving access to essential services.

3. Sagarmala Program:

- **Objective:** Modernize ports and optimize logistics efficiency.



- **Impact:** Boosts maritime trade and coastal development.

4. PM Gati Shakti National Master Plan:

- **Objective:** Integrate infrastructure planning across ministries for seamless coordination.



- **Impact:** Accelerates project delivery and enhances multimodal connectivity.

5. Greenfield Expressways:

- **Objective:** Build new expressways to enhance transportation infrastructure.



- **Progress:** Construction of 27 greenfield expressways underway, including major projects like the Delhi-Mumbai Expressway. ■

Sector Wise Projects for your Review

Roads & Highways

Chennai-Bengaluru-Vellore Highway Project:

- The Central Government has announced a INR 13.38 billion project to construct a 28 Km access-controlled highway in Tamil



Nadu. Key features of the project include a 10 KM bypass around Walajapet and Ranipet to reduce congestion in these towns.

- The Ministry of Road Transport and Highways (MoRTH) has planned over 8,891 km of new roads, while the Ministry of Railways has mapped more than 27,000 km of new railway lines.

Centre approves INR 65.85 Bn for seven national highway projects in Andhra Pradesh:

- The Central Government had sanctioned INR 65.85 billion for the development of seven national highway projects spanning 384 kilometers in the state.
- The projects include the highways connecting Kodumuru to Pericherla, Sangameshwaram



to Nallakaluva, Nandyal to Kurnool, Vempally to Chagalamarri, Gorantla to Hindupur, Muddanuru to B Kothapalli, and Pendurthy to Bavardha.

Cabinet approves INR 44.06 billion road construction works in border areas of Rajasthan and Punjab:



- The Union Cabinet has approved the construction of 2,280 km of roads in the border areas of Rajasthan and Punjab, with an investment of INR 44.06 billion.
- This initiative focuses on enhancing infrastructure in border regions, ensuring these areas receive facilities comparable to other parts of the country.

- The project is expected to significantly improve road and telecom connectivity, along with water supply, health, and education services. Additionally, it aims to boost rural livelihoods, facilitate easier travel, and integrate these border areas into the national highway network, contributing to overall regional development.

Eight National High-Speed Road Corridor Projects

India has approved eight national high-speed road corridor projects spanning 936 km, with an investment of INR 506.55 billion (US\$6.03 billion) to enhance logistics efficiency and connectivity.

The sanctioned projects are expected to boost the country's infrastructure, economy, and employment. The Agra-Gwalior Corridor is expected to double the traffic capacity in the region and significantly reduce travel time and logistics costs. The 231 km Kharagpur-Moregram Corridor, developed under Hybrid Annuity Mode (HAM) at INR 102.47 billion (US\$1.2 billion), will quintuple traffic capacity, linking West Bengal, Odisha, Andhra Pradesh, and the northeastern states.



Eight National High-Speed Road Corridor Projects

Project name	Length	Mode	Cost (value in INR billion)
6-Lane Agra – Gwalior National High-Speed Corridor	88 kms	Build-Operate-Transfer (BOT)	46.13 (US\$549 million)
4-Lane Kharagpur – Moregram National High-Speed Corridor	231 kms	Hybrid Annuity Mode (HAM)	102.47 (US\$1.2 billion)
6-Lane Tharad – Deesa – Mehsana – Ahmedabad National High-Speed Corridor	214 kms	Build-Operate-Transfer (BOT)	105.34 (US\$1.25 billion)
4-lane Ayodhya Ring Road	68 kms	Hybrid Annuity Mode (HAM)	39.35 (US\$468 million)
4-Lane Section between Pathalgaon and Gumla of Raipur-Ranchi National High-Speed Corridor	137 kms	Hybrid Annuity Mode (HAM)	44.73 (US\$532 million)
6-Lane Kanpur Ring Road	47 kms	Engineering, Procurement and Construction (EPC)	32.98 (US\$392 million)
4-Lane Northern Guwahati Bypass and Widening/Improvement of Existing Guwahati Bypass	121 kms	Build Operate Toll (BOT)	57.29 (US\$682 million)
8-Lane Elevated Nashik Phata – Khed Corridor near Pune	30 kms	Build Operate Toll (BOT)	78.27 (US\$932 million)

Power Sector

The Indian Renewable Energy Development Agency (IREDA) has sanctioned renewable energy projects worth INR 30 billion to support Odisha's ambitious plan to achieve 10 GW of renewable energy capacity by 2030. Government target few mentioned below:



- India's target is to achieve 500GW non-fossil energy capacity by 2030.
- Reduction of the carbon intensity of the economy by 45% by 2030, over 2005 levels.
- 50% of its energy requirements from renewable energy by 2030. India plans to create an extra 2.5-3 billion tons of carbon sink by 2030.
- 50 Solar Parks with an aggregate capacity of 37.49 GW, Wind Energy has an offshore target of 30 GW by 2030, 26.7 GW of Pumped Storage requirement by 2032, 47.2 GW of BESS requirement by 2032.
- India aims to achieve its target of 5 MMT of Green Hydrogen production, which will need 125 GW of Renewable Energy, by 2030.
- India is on spree to enhance the installation of Renewable Energy to 500 GW by 2030.

Railway Sector

The Indian Metro lite project is part of a broader strategy to enhance urban transportation by providing cost-effective solutions for cities with lower passenger volumes. Here's an overview of the Metro lite project plan for the next decade:

Key Features of Metro lite

- **Cost-Effectiveness:** Metro lite is designed to be more affordable than traditional metro systems, with construction costs targeted at INR 120-140 crores per kilometer.
- **Lower Capacity:** It caters to cities with lower ridership projections, serving as a feeder system for existing metro networks.
- **Dedicated Tracks:** Metro lite systems will have dedicated tracks separated from road traffic.

Proposed Metro lite Projects

Several cities are considering Metro lite projects:

- **Aurangabad, Maharashtra:** Details are yet to be finalized.
- **Bangalore, Karnataka:** A proposed network of 60 km.
- **Chennai, Tamil Nadu:** A proposed network of 15.50 km.

WHEELS OF CHANGE

12 metres Length of a coach

2.5 metres Coach width

300-320 mm Floor height of coaches

AT-GRADE SECTION
8 metres Proposed width of lane
1.1m width of side platform
4 metres width of island platform

ELEVATED SECTION
2.2 metres Road space occupied at the median of elevated section
0 metres Width of viaduct
5.5 metres Clearance between road traffic and viaduct

FEATURES

- 1 Metro Lite system to have high speed, rubber-tired electric coaches powered by overhead traction system running on elevated or at-grade sections
- 2 About three (3) to 20% of capital cost compared with Metro systems, operation and maintenance cost of Metro Lite also less
- 3 Coaches to have rubber tyres running on road slab
- 4 Car structure to be of stainless steel or aluminium
- 5 Electric coaches to have sufficient battery capacity to run up to 20km without S&T power. Metro/Lite authorities can decide the battery design and sizing based on site requirements. Building blocks to have energy regeneration system during braking
- 6 No or Class A rail gauging system
- 7 All grade to be separate
- 8 It runs road traffic through paths, forcing or kerb
- 9 Automatic Fire Protection system with anti-collision feature and grade/road speed limit
- 10 Ticketing system based on National Common Mobility Card and QR code
- 11 No AFC gates like Delhi Metro, but random checking with heavy penalty for fareless travel
- 12 Simple stations limited to platform area
- 13 No platform screen doors, X-ray baggage scanner and door frame metal detectors
- 14 Lighting, Passenger Information Systems, CCTV, automatic ticket vending machine, and value machine, ticket validator, signage, etc at stations to be provided in limited space
- 15 Platforms not to be restricted of length
- 16 All grade stations accessed through properly designed pedestrian crossing with mandatory traffic calming measures and signage or signal. Improvement in Facilities and Area around stations
- 17 No concourse level at elevated stations. Elevators are differently sized and sensor systems. Escalators to be provided only if absolutely necessary

- **Delhi:** A proposed network of 40.88 km.
- **Jammu, J&K UT:** A 23-km-long project is proposed.
- **Mathura, Uttar Pradesh:** A proposed network of 12 km.
- **Prayagraj, Uttar Pradesh:** A proposed network of 42 km.
- **Srinagar, J&K UT:** A proposed network of 25 km.

Besides the above cities, metro projects are proposed in Amritsar, Bareilly, Ludhiana, Chandigarh, Jalandhar, Jabalpur, Ranchi, Hubli, Mathura, Dholera, Thane, Gwalior, Bareilly, Dehradun, Mysore, and Mangalore.

The Government is actively promoting Metro lite as part of its urban development initiatives, aiming to enhance connectivity and reduce costs.



Private Sector Involvement: Encouraging private participation to expedite project execution and reduce financial burdens.

Technological Advancements: Leveraging advanced construction techniques to improve efficiency and reduce project timelines.

Aviation Sector

Indian airports and aviation planned wider Infrastructure development by 2040, Government estimate approx. 110 crore passengers will be travelling by air. It means that



in the next two decades, more than 4x times the number of existing passengers will travel by the air route. To meet the demands of the rising customer base, almost 200 commercial airports would need to be constructed. More than 1,50,000 acres of land would need to be developed for the Indian airports. A cost of more than INR 3,375 crore would be required for various schemes of civil aviation.

The Vision 2040 puts a lot of emphasis on the improvement of Indian MRO industry. It is estimated that the Indian MRO infrastructure would amount to \$540 million USD by 2040.

Few Airport projects received node recently from Indian Government in state of Bihar are:

Greenfield international airport in Rajgir: in-principal approval for the construction of a greenfield airport & selected site which is located near Nalanda University and the International Sports Complex, has already undergone an inspection by the Airports Authority of India



(AAI), which has deemed it suitable for development. The airport project is expected to provide a major boost to tourism and sports, enhancing Bihar's profile on the global stage while stimulating economic growth in the region.

Spanning 1,300 acres across villages in Rajgir block, including Meyar, Badhauna, Badhari, Patharora, and Goraur Mauja, the airport is set to be a game-changer for the state's connectivity. The airport's construction is expected to create employment opportunities and attract investment in sectors such as hospitality, transport, and local businesses.

Greenfield Airport in Sultan Ganj (Bhagalpur district): The Bihar Government has identified



855 acres of land in Sultan Ganj for the project. The proposed location, strategically placed on Sultanganj-Deoghar Road, ensures seamless connectivity. This project will connect Tarapur and other eastern Bihar districts to national and international destinations, positioning Bhagalpur as a key aviation hub. Further details will be soon available.

Greenfield Airport in Sonpur district: The Central Government has approved the construction of the Greenfield airport in Sonpur during the Union Budget 2025. The identified



land lies just 4 km from the Hajipur-Chhapra four-lane highway and about 20-25 km from Patna, making it a strategically viable choice. The airport aims to enhance regional connectivity, support tourism, and boost economic development in the area. It will also help reduce the increasing passenger pressure on Patna Airport.

Ports & Shipping Sector

Indian Maritime Vision for 2030, and Sagarmala Program have planned investments exceeding US\$ 82 Billion to improve port infrastructure and operational efficiencies. Significant reforms include amending the Major



Port Authorities Act and fostering autonomy and efficiency among major ports. Innovation is a key focus, supported by the Sagarmala Innovation and Startup Policy, which encourages the integration of advanced technologies like AI and IoT to streamline operations.

Future-proofing our ports:

The drive to decarbonize and boost efficiency is making global port operations fit for the future. Here are six innovations to reshape ports between now and 2050.

1. Renewable energy Wind, solar and other renewable energy sources will power ports more sustainably.



2. Port electrification Electrifying port equipment and operations will reduce emissions and power docked vessels.
3. Greener fuels.
4. Cleaner fuels like green ammonia, methanol and biofuels will help decarbonize shipping fleets. Smart technologies Virtual reality, digital twins, drones and other innovations are reimagining tomorrow's ports.
5. Digital platforms Blockchain-enabled systems optimize end-to-end supply chains and increase transparency.
6. Automation Automating repetitive tasks makes future port operations safer, more efficient and cost-effective.

Inland Waterways

To boost the inland waterways in the country, a budget of INR 1,944 crore has been provided for the Inland Water Transport Authority of India



(IWAI) in FY2025-26. This amount is 31 per cent higher than INR 1,644 crore in the revised Budget of FY 2024-25, according to the summary of budget provisions for the Ministry of Ports, Shipping and Waterways.

JAL MARG VIKAS PROJECT PROGRAMME HIGHLIGHTS

Massive Infrastructure push to boost movement of people and cargo on rivers

- Total 25 Terminals
Investment Cost INR 1,354 Cr.
- 3 Multimodal Terminals (Varanasi, Sahibganj, Haldia)
- 2 Inter-Modal Terminals (Ghazipur, Kalughat)
- 10 Ro-Ro Terminals
- 10 Floating Terminals

- **Investment:** INR 5,369 crore.
- **Features:** Development of terminals, jetties, and fairway infrastructure to facilitate cargo movement.

2. Investment in Jammu & Kashmir

- **Amount:** INR 100 crore.
- **Objective:** Develop infrastructure on the Chenab, Jhelum, and Ravi rivers for cargo and tourism.

3. Sagarmala Program

- **Inland Waterways Projects:** 38 projects with an estimated investment of INR 4,899 crore.

The Ministry of Ports, Shipping, and Waterways in India has several planned projects for expanding inland waterways across the country. Here are some key initiatives:

1. Jal Marg Vikas Project (JMVP)

- **Objective:** Enhance the navigability of National Waterway-1 (NW-1) from Haldia to Varanasi (1,390 km).



Project Sagarmala
A Port-led Prosperity Program. Powered by Ministry of Shipping.

Harnessing 7,500 km Coastline

14,500 km potentially navigable waterways

Project Plan
Sagarmala aims to modernize India's Ports. 12 major ports and 185 minor ports are targeted alongside new port development, port connectivity enhancement, port-linked industrialization, connecting coasts to hinterland and coastal community development from 2015 to 2035.

Government Model to increase the share of inland waterways to 5% by 2030. And offer financial incentives for shippers, development of loading/unloading facilities, and intermodal connectivity.



KRS MARKETING Partnership Proposal

Marketing Requirements

Handling business opportunities in India require various steps and Marketing Partnership will help you to understand the practice and management to work in India. Considering the promotion before official participation in business, few steps like promotion, introducing own product range to manage the requirement development accept our standard products or services, advance preparation of participation in Indian Opportunities, management of local vendor team, if required for joint participation, handling tenders, offers, negotiations, contract management support etc., the list is ongoing and KRS Infra Ventures Pvt. Limited ensure that our experience being in this trade from last three decades offer you wider experience base in INDIA.

Marketing Proposal

The KRS Group herewith introduce KRS Infra Ventures Pvt. Limited herewith offers the marketing partnership to your organization to promote you and yours associates interest in Indian Infrastructure Sector with following ways:

- ▶ Informing Business Opportunities in India for business scope of your organization.
- ▶ Promoting your organization with introducing and presenting details to various clients in

Government and Private Sector and follow-up for acquisition formalities (tendering process, finalization of business, all assistance during implementation & after sales etc.)

- ▶ Informing the current scenario of market in view of Government Policies, Procurements plans etc.
- ▶ Advising the strategies required during promotion for successful business opportunities.

The partnership terms will require discussions to finalize, which will be second step after receiving your principal approval and suggest you to work on following options for understanding:

- ▶ Marketing Partnership Joint Venture-which means "KRS Infra Ventures" will be offering all Marketing support in India and your organization handle the technical & commercial need of the projects targeted and rest terms & conditions of arrangement will decided after in principal approval of partnership.
- ▶ Exclusive Agent in INDIA-KRS will be offered exclusive Agency Agreement for 3 years minimum to develop and managing business opportunities for your organization and terms & conditions of this agreement will be discuss after principal approval of working.



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