

InvAsset's Voice



BHARATMALA
ROAD TO PROSPERITY

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The Indian Infrastructure Boom

Over the past few years, investments have surged in India's infrastructure sector. As a result, the Indian government has made many efforts to encourage investment in the industry, including Make in India, Smart Cities, and the Infrastructure Development Finance Corporation (IDFC). These initiatives have contributed to a rise in investment across several infrastructure sectors, including transportation, electricity, water, and sanitation.

Infrastructure development is crucial because it has numerous benefits for the economy, society, and the environment. It contributes to increasing GDP development, opening up employment possibilities, enhancing trade and investment prospects, enhancing connectivity and accessibility, upgrading healthcare facilities, and lowering pollution levels.

The outlook is positive for India's infrastructure during the next ten years. It is filled with alluring government initiatives and a backlog of substantial projects that are supported by a sizeable sum of funding. With an emphasis on building more sustainable structures using greener materials and technology, as well as a rising need for more sophisticated equipment, India is an important market for construction equipment makers and developers.

The government has undertaken infrastructure construction, and it is anticipated that it will be crucial to accomplishing its objective of creating a \$5 trillion economy by 2025. According to the Department of Economic Affairs, the nation needs to invest \$4.5 trillion in infrastructure development through 2030 to accomplish its \$5 trillion economic goal by 2025.



Bharatmala Pariyojana: Second Biggest Road Project of India

The Bharatmala Pariyojana (lit. 'India garland project') is a centrally-sponsored and funded Road and Highways project of the Government of India. The project was announced by the Prime Minister, Narendra Modi, on 24 February 2015. The project aims to develop a network of national highways, economic corridors, and border roads. The total length of roads to be developed under the project is 83,677 km (51,994 mi). The project is expected to be completed by 2022.



The Bharatmala Pariyojana is divided into **five components**:

- 1. Economic Corridors:** These are highways that connect major economic centers of the country. The total length of economic corridors to be developed under the project is 26,000 km (16,168 mi).
- 2. Inter Corridors:** These are highways that connect economic corridors and other important highways. The total length of inter corridors to be developed under the project is 8,000 km (5,000 mi).
- 3. Feeder Routes:** These are highways that connect rural areas to economic corridors and other important highways. The total length of feeder routes to be developed under the project is 7,500 km (4,662 mi).
- 4. National Corridor Efficiency Improvement:** This component aims to improve the efficiency of existing national highways by widening them, strengthening them, and improving the road safety features. The total length of national highways to be improved under this component is 10,000 km (6,214 mi).
- 5. Border Roads:** This component aims to develop roads along the borders of India. The total length of border roads to be developed under this component is 7,500 km (4,662 mi).

The Bharatmala Pariyojana is a major infrastructure project that will have a significant impact on the economy of India. The project is expected to create jobs, boost economic growth, and improve the connectivity of the country. The project is also expected to reduce the logistics costs and improve the overall efficiency of the transport system.

The Bharatmala Pariyojana is a ambitious project that will require a significant investment. The total cost of the project is estimated to be ₹10.63 lakh crore (US\$130 billion). The project is being funded by a mix of central government funds, state government funds, and private sector funds. The Pariyojana is a major step towards improving the infrastructure of India. The project is expected to have a significant impact on the economy of the country and improve the quality of life of the people.

Here are some of the benefits of the Bharatmala Pariyojana:

- **Improved connectivity:** The project will improve the connectivity of the country by developing new highways and improving existing highways. This will make it easier for people and goods to move around the country, which will boost economic growth.
- **Reduced logistics costs:** The project will reduce the logistics costs by improving the efficiency of the transport system. This will make it cheaper to transport goods, which will benefit businesses and consumers.
- **Increased employment:** The project will create jobs during the construction phase and after the project is completed. This will help to reduce unemployment and boost the economy.
- **Improved safety:** The project will improve the safety of roads by widening them, strengthening them, and improving the road safety features. This will reduce the number of accidents and deaths on the roads.

The Bharatmala Pariyojana is a major infrastructure project that will have a significant impact on the economy and people of India. The project is expected to improve the connectivity, reduce the logistics costs, increase employment, and improve the safety of roads.

Under Phase-I of Bharatmala Pariyojana, the implementation of 34,800 km of national highways in 5 years (from 2017 to 2022) has been approved at an estimated outlay of Rs. 5,35,000 crores.

Phase-I of Bharatmala Pariyojana includes development of:

Sr. No.	Scheme	Length (km)	Cost (cr.)
1.	Economic Corridors	9,000	120,000
2.	Inter-Corridors & feeder roads	6,000	80,000
3.	National Corridor Efficiency improvement	5,000	1,00,000
4.	Border & International connectivity roads	2,000	25,000
5.	Coastal & port connectivity roads	2,000	20,000
6.	Expressways	800	40,000
	Sub Total	24,800	3,85,000
7.	Ongoing Projects, including NHDP*	10,000	1,50,000
	Total	34,800	5,35,000

India Now Has the Second Largest Road Network In the World

India has about 54.82 lakh km of road network, the second largest in the world in terms of length. National Highways (NHs) constitute about 2% of the total road network, but carry about 40% of the total road traffic. The National Highways Development Program (NHDP) has reached a certain level of maturity. It is now important to re-define road development and have a macro approach while planning expansion of the national highways network. To date, point to point connectivity has been the rationale for highway construction; highways development has not been planned with an economic perspective. It is required, therefore, that the Origin and Destination of vehicular traffic, particularly of freight, be the basis of construction for the bigger i.e. 4-laning/6-laning National Highways (NHs). Hence it was proposed to launch a new umbrella program with the primary focus of optimizing the efficiency of the movement of goods and people across the country.



INDIAN ROAD NETWORK

NATIONAL HIGHWAYS

Central Government

STATE HIGHWAYS

State Government

DISTRICT ROADS

Local governments,
Panchayats & municipalities

RURAL ROADS

Local governments,
Panchayats & municipalities

India's thriving economy relies on the highways that have emerged as a dominant segment of the economy. Road networks play an essential role in India's growth story. More than 3.6% of India's GDP, or almost two-thirds of all transport-related GDP contributions, are made by this sector. Approximately 65% of India's freight and over 85% of its passenger traffic are both transported by roadways. India has one of the world's biggest road networks, with 5.5 million kilometres overall. Ninety per cent of India's total passenger traffic uses the country's road network for travel, and it transports 64.5 per cent of all goods and commodities in the nation. Therefore, the nation's significant road infrastructure construction would have a multiplier effect on growth.

Key Features of the Scheme

- **Improving the quality of roads** - The launch of the scheme has been done for bring a new wave of development in the nation in the form of well-maintained and developed roads. Under this project, the construction of roads, in all parts of the nation will be undertaken.
- **Total road construction** - As per the draft of the scheme, government and the ministry will strive to complete new roads, which will add up to a whopping 34, 800 kms.
- **Integrated scheme** - The Bharatmala is the name that is given to the road development and it will include many other related schemes as well. With the completion of all the schemes, the overall success of the scheme will be guaranteed.
- **Total tenure of the program** - The central government has plans of finishing the scheme within a span of five years. Thus, all is set for finishing the first phase before the end of 2022.
- **Segmentation in phases** - Due to the sheer magnitude and spread of the scheme, it will be divided into seven distinct phases. As of now, the first phase is under construction.
- **Constriction on a daily basis** - To finish the first phase in time, the respective department has made efforts of constructing at least 18 km of path on a daily basis. To beat the clock, continued efforts are being made to raise it to 30 km/day.

- **Different categories of road construction** - It has been highlighted in the official draft of the scheme that to provide better connectivity, the construction of various categories of roads will be undertaken.
- **Multi-source of finding** - One source will not be enough for funding a mammoth project. Thus, the government will have to depend on other sources for generating adequate money to meet the expenses.

The Bharatmala project intends to link, enhance, and reduce congestion on India's highway and road network. The Bharatmala project map shows the feeder roads, motorways, national highways, and integrated economic corridors. Bharatmala Project map presents a holistic view of the ambitious project and its vast expanse.



Bharatmala Pariyojana: Enhancing Effectiveness

The Bharatmala initiative focuses on improving the functionality of existing constructed infrastructure, integrating several modes of transportation, filling in infrastructure gaps for smooth travel, and linking national and economic corridors. The program was designed to achieve the best resource distribution for an all-encompassing highway expansion and renovation endeavour.

Once in effect, the Bharatmala Pariyojana is anticipated to connect 550 districts across the nation via NH connections. Currently, NH connections is available in almost 300 districts. Critical infrastructure gaps in the current highway network should be filled to improve safe and efficient traffic flow, which would benefit the nation's Logistic Performance Index (LPI).



The Bharatmala Pariyojana is a major step towards improving the infrastructure of India. The project is expected to have a significant impact on the economy of the country and improve the quality of life of the people.

Here is a roadmap of the Bharatmala Pariyojana:

Phase 1 (2015-2022)

The first phase of the Bharatmala Pariyojana will focus on the development of economic corridors, inter corridors, and feeder routes. The total length of roads to be developed under this phase is 34,800 km (21,600 mi). The estimated cost of this phase is ₹5.35 lakh crore (US\$67 billion).

Phase 2 (2022-2027)

The second phase of the Bharatmala Pariyojana will focus on the development of national corridor efficiency improvement and border roads. The total length of roads to be developed under this phase is 48,877 km (30,342 mi). The estimated cost of this phase is ₹5.28 lakh crore (US\$66 billion).

Phase 3 (2027-2030)

The third phase of the Bharatmala Pariyojana will focus on the development of national highways in the North East and Island areas. The total length of roads to be developed under this phase is 1,000 km (620 mi). The estimated cost of this phase is ₹1 lakh crore (US\$1.3 billion).

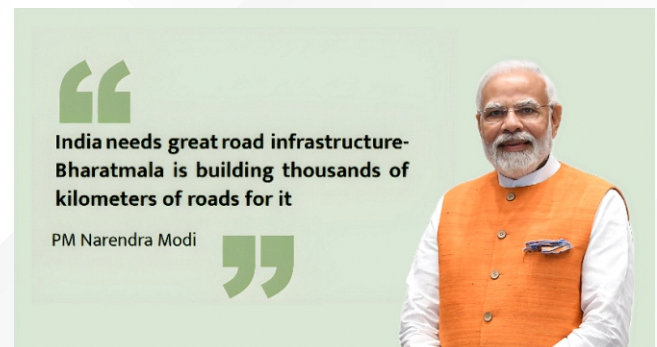
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Corridor Based Approach

The Bharatmala Pariyojana program's goal is to maximise the effectiveness of freight and passenger transportation throughout the nation by filling critical infrastructure gaps through the development of economic corridors, inter corridors and feeder routes, national corridor efficiency improvement, border and international connectivity roads, coastal and port connectivity roads, and green-field motorways.

Identification of the project stretches under the components of the proposed program is based on detailed Origin-Destination (O-D) study, freight flow projections and verification of the identified infrastructure gaps through geo-mapping.

Construction of a total length of about 24,800 kms is being taken up under Phase-I of Bharatmala Pariyojana. In addition, Phase-I would also include about 10,000 kms of residual works of National Highway Development Project (NHDP). Bharatmala Pariyojana was conceptualized as an umbrella program with a corridor-based approach:



- Origin-Destination study based on freight movement across 600 districts
 - Technology-based automated traffic surveys over 1,500+ points
 - Satellite mapping of corridors to identify upgradation requirements Decongestion of Highways
 - 191 congestion points were identified across key cities on the National Highway corridor network
 - Multiple interventions were identified for resolution of congestion points
- 29 ring roads addressing 44 CP1
 - 54 Bypasses addressing 56 CP1
 - 76 Lane Expansions

Bharat Mala: Recent Updates

The Bharatmala Pariyojana was introduced in 2017 with a 2022 completion date as its goal. However, the latest reports suggest that the project is currently far from completion because of the increased land cost and the increased estimated budget. The Central Government is now seeking more investments from funds collected from the market as well as any other private investment. If the estimated budget is not met, then the Government intends to auction completed highway projects or even look for foreign debts and bond markets. The deadline to finish Bharatmala project phase 1 was 2022, however, it seems that it will be delayed. The project is delayed by four years due to cost overruns, land acquisition, and covid. As per the ICRA rating agency, work on phase 1 will be completed by the financial year 2026, that too if contracts are awarded by 2023. Also, the cost of the project has increased to **Rs 8.5 lakh crores**. **Conclusively, the Bharatmala project is aimed at the development and improvement of the highway network across India and connecting the economic corridors with logistic parks and growth centres. Once complete, the Bharatmala project will significantly reduce the freight logistics cost and reduce travel time drastically.**



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