

# **YOJANA MAGAZINE ANALYSIS**

(October 2023) (Part 1/3)

# **TOPICS TO BE COVERED**

# **PART 1/3**

- RAIL INFRASTRUCTURE
- ROAD INFRASTRUCTURE

# **PART 2/3**

- SPACE INFRASTRUCTURE
- UNITY MALLS

# **PART 3/3**

AGRICULTURE INFRASTRUCTURE

# **TOPICS (PART 1/3)**

- RAIL INFRASTRUCTURE
- ROAD INFRASTRUCTURE

# RAIL INFRASTRUCTURE

Railways has been a major **integrating force** since its introduction **167 years ago**. It is one of the principal modes of transportation.

Railways has also contributed immensely in **economic development**. (agriculture & industrial)

Railway planning has the main objective of **developing transport infrastructure** to carry the projected quantum of traffic and meet the Indian economy's developmental needs.

Nine five year plans (FYPs) have been implemented since 1950-51 by Indian Railways apart from some annual plans.

# **ASSETS OF THE RAILWAYS**

No. of stations: 7308

No. of passenger service vehicles: 74,744

No. of coaching vehicles: 10103

No. of wagons: 3,18,896

No. of loco sheds: 44

Around 74% of route kms, 80% of running track kms, 78.5% of total track kms are electrified.

## **CPSUs UNDER MIN. OF RAILWAYS**

- RITES Limited
- IRCON International Limited
- Indian Railway Finance Corporation (IRFC) Limited
- Container Corporation of India Limited (CONCOR)
- Konkan Railway Corporation Limited (KRCL)
- Mumbai Railway Vikas Corporation Limited (MRVC)
- Indian Railway Catering and Tourism Corporation Limited (IRCTC)
- Railtel Corporation of India Limited (RCIL)
- Rail Vikas Nigam Limited (RVNL)
- Dedicated Freight Corridor Corporation of India Limited (DFCCIL)
- Kolkata Metro Rail Corporation Limited (KMRCL)
- Braithwaite and Company Limited (BCL)

# **RAILWAY ZONES**

Zonal Railways	Headquarters
Central	Mumbai
Eastern	Kolkata
East Coast	Bhubaneswar
East Central	Hajipur
Northern	New Delhi
North Central	Allahabad (Prayagraj)
North Eastern	Gorakhpur
Northeast Frontier	Maligaon (Guwahati)
North Western	Jaipur
Southern	Chennai
South Central	Secunderabad
South Eastern	Kolkata
South East Central Railway	Bilaspur
South Western Railway	Huballi
Western	Mumbai
West Central Railway	Jabalpur
Metro Railway	Kolkata

# **RAILWAY RESEARCH & DEVELOPMENT**

The research and development (R&D) wing of Indian Railways is the Research Design and

Standards Organization (RDSO) at Lucknow.

+918988885050 +918988886060



www.vajiraoinstitute.com info@vajiraoinstitute.com



It acts as a consultant in technical matters to Indian Railways, and other organisations connected with railway manufacturing and design.

#### **RAILWAY FINANCE**

Owing to the **Separation Convention of 1924**, a separate railway budget was presented from 1924-25, even though it was part of the overall budget of the Government of India.

- The Railway Budget has been merged with the general Budget from Budget Year 2017-18:
  - To present the holistic financial position of the government
  - o To facilitate multimodal transport planning between highways, railways, and waterways
- Instead of 16 demands for grants, the Union Ministry of Finance has introduced one demand for grants for the Ministry of Railways.

## RAILWAY ELECTRIFICATION

Increasing railway electrification under the Ministry of Railways' Mission 100% Electrification policy will not only help reduce the country's crude oil imports but also has environmental benefits.

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It increases average speeds, and loadings for both freight and passengers, thereby, providing the opportunity for modernisation.

## **RAIL TOURISM**

Indian Railways (IR) has introduced the **Bharat Gaurav Trains Policy** to showcase cultural heritage and historical places of India to both domestic and foreign audiences with the help of tourism sector professionals and other service providers.

Specialised tourism products are also introduced from time to time in association with IRCTC and states.



### **NATIONAL RAIL PLAN**

Indian Railways have prepared a National Rail Plan (NRP) for India – 2030. The Plan is to create a 'future ready' Railway system by 2030.

The NRP is aimed to formulate strategies based on both operational capacities and commercial policy initiatives to increase modal share of the Railways in freight to 45%.

### **OBJECTIVE**

The objective of the Plan is to create capacity ahead of demand, which in turn would also cater to future growth in demand right up to 2050 and also increase the modal share of Railways to 45% in freight traffic and to continue to sustain it.

To achieve this objective all possible financial models including Public Private

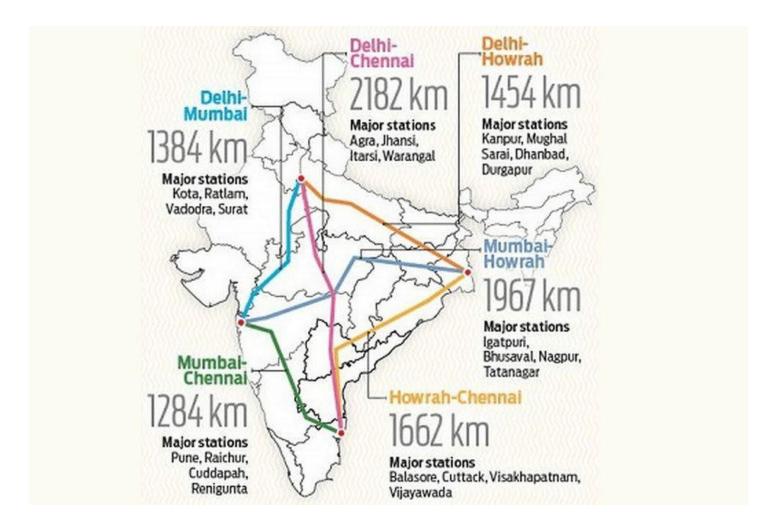
Partnership (PPP) are being considered.

As Indian Railways is the growth engine of the nation, NRP is aimed to **reform Railways** to make it **more efficient, greener and modern** which will translate into cheaper, safer and assured mode of transport to the common man be it in passenger or freight segment.

#### **FEATURES**

 Formulate strategies based on both operational capacities and commercial policy initiatives to increase modal share of the Railways in freight to 45%.

 Reduce transit time of freight substantially by increasing average speed of freight trains to 50 Kmph.



As part of the National Rail Plan, Vision 2024 has been launched for accelerated implementation of certain critical projects by 2024 such as 100% electrification, multi-tracking of congested routes, upgradation of speed to 160 kmph on Delhi-Howrah and Delhi-Mumbai routes, upgradation of speed to 130 kmph on all other



Golden Quadrilateral-Golden Diagonal (GQ/GD) routes and elimination of all Level Crossings on all GQ/GD route.

- Identify new Dedicated Freight Corridors.
- Identify new High Speed Rail Corridors.
- Assess Locomotive requirement to meet twin objectives of 100% electrification
   (Green Energy) and increasing freight modal share.
- Assess the total investment in capital that would be required along with a periodical break up.
- Sustained involvement of the Private Sector in areas like operations and ownership of rolling stock, development of freight and passenger terminals, development/operations of track infrastructure etc.

# ROAD INFRASTRUCTURE

India has the second longest road network (after USA) in the world.

The road infrastructure of India is classified into **six categories**. The road length in kilometres (km) of each of these categories and its compound annual growth rate (CAGR) in percentage over 1991, is shown in the table below.

# DELINKING ROAD DEVELOPMENT & DIRECT EMPLOYMENT GENERATION

There have been focus on planned development until Liberalisation.

- Nagpur Plan (1943-1963);
- Bombay Plan (1961-1981) &
- Lucknow Plan (1981-2001).

The focus was on direct employment generation. This resulted in **labour intensive** processes. But in late **1990s**, this approach was given up and capital intensive road construction approach was focussed upon.

### **NHAI**

NHAI was formed in 1995. It has been said that 2% of India's road carry 40% of the traffic.

These roads are now constructed & administered by NHAI.

Prior to NHAI, these roads were constructed by the State governments using the funds allocated to them from the central government.

National Highways Development Project (NHDP): It was started in 1998 by NHAI.

- Phase I: Four laned Golden Quadrilateral (GQ) connecting four metro cities.
- Phase II: Four laned connecting the north-south and east-west corridors, connecting India's extreme points.

#### STATE LEVEL ROAD DEVELOPMENT CORPORATION

The first such corporation, the Maharashtra State Road Development Corporation Limited (MSRDCL) was established in 1996.

It has developed the Mumbai-Pune Expressway (opened in 2002).

Many other states have also followed suit since. Uttar Pradesh is a leader in developing expressway-standard roads.

## **ELECTRONIC TOLL COLLECTION**

Penetration: 96% by 31st March, 2022.

The average Electronic Toll Collection during 2021-22 was **Rs. 90 crore per day** through **55** lakh transaction, a little over **Rs. 160 per transaction average.** 

## **CHALLENGES**

- There is a need for better road safety.
- Issues with urban roads such as lack of attention due to shift towards rural roads, low speeds leading to loss of time and money, poor last-mile connectivity, poor urban goods movement, parking issues, coordination issues with urban public transport.
- Need to focus on lane kilometres rather than road kilometres which will help to
  focus on access as well as capacity. Number of lanes needs to be specified in maps for
  better road choices by users.
- Proper collection of Origin to Destination (OD) data.
- Improvement in coordination with PPP players.