



Research Unit
Press Information Bureau
Government of India

Indian Railways 2024: Major Investments, Enhanced Safety, and Modernization to Drive Future Growth

(Ministry of Railways)

July 29, 2024

The government has prioritized transforming Indian Railways into a world-class entity. **In the Union Budget 2024-25**, presented by Union Minister for Finance and Corporate Affairs Smt. Nirmala Sitharaman on July 23, 2024, **a record capital expenditure (Capex) of ₹2,62,200 crores has been allocated to the Railways. The Gross Budgetary Support for the same period is set at ₹2,52,200 crores, a significant increase from the ₹2,40,200 crores in 2023-24, and a substantial rise from ₹28,174 crores in 2013-14.**

The infusion of Capex has yielded remarkable results, with Indian Railways achieving an all-time high freight loading of 1,588 million tonnes (MT) in FY 2023-24, up from 1,095 MT in 2014-15. The Railway's goal is to reach 3,000 MT by 2030. Additionally, in 2023-24, Indian Railways reported all-time high total receipts of ₹2,56,093 crores and generated a Net Revenue of ₹3,260 crores, which will further support Capex.

Initiatives Undertaken for Effective Implementation of Rail Projects

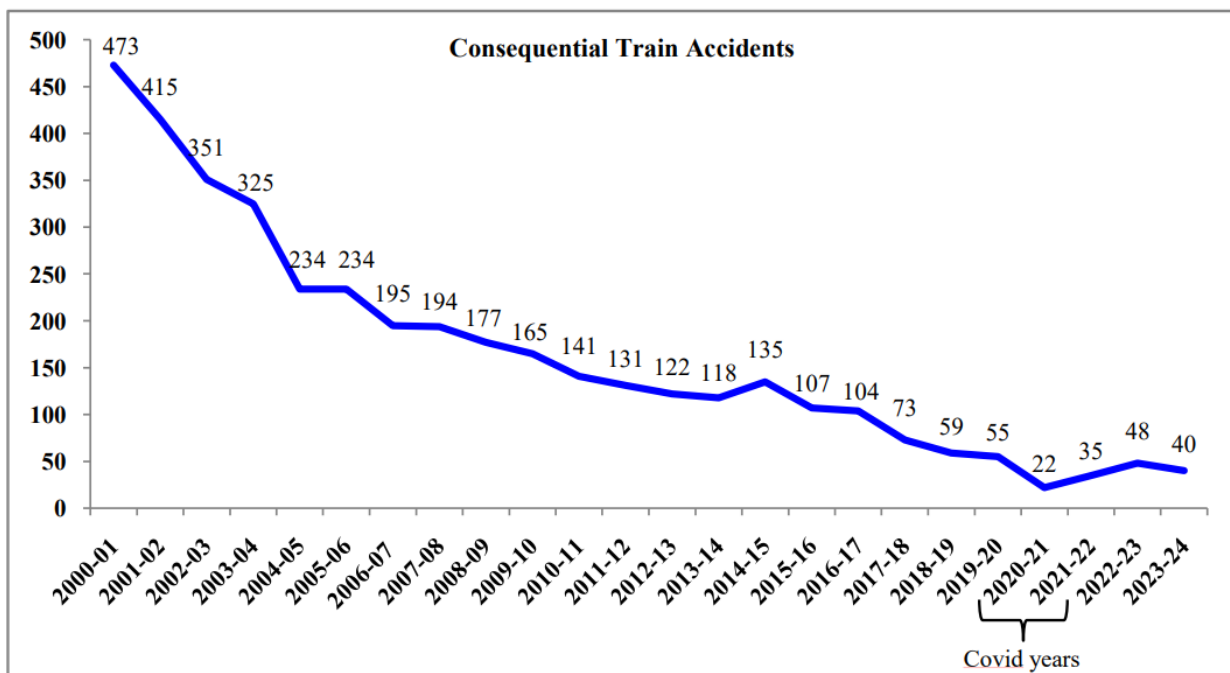
- Establishing the Gati Shakti Directorate within the Ministry and corresponding units in the field
- Prioritizing key projects
- Significantly increasing the allocation of funds
- Delegating powers to field-level authorities to enhance decision-making
- Closely monitoring project progress at different administrative levels
- Maintaining regular coordination with State Governments and relevant authorities to expedite land acquisition, forestry, and wildlife clearances, as well as resolving other related issues

Indian Railways has achieved significant milestones, including commissioning 31,180 track kilometers in the past decade. The pace of track laying has increased from 4 kilometers per day in 2014-15 to 14.54 kilometers per day in 2023-24. Furthermore, 41,655 Route Kilometers (RKMs) have been electrified from 2014-2024, compared to only 21,413 RKMs before 2014.

This year's budget also allocates additional funds to promote industrial development, focusing on infrastructure to support industrial clusters at strategic locations. Key nodes include Kopporthy on the Visakhapatnam-Chennai Industrial Corridor, Orvakal on the Hyderabad-Bengaluru Industrial Corridor in Andhra Pradesh, and Gaya on the Amritsar-Kolkata Industrial Corridor in Bihar. These initiatives aim to catalyze industrial growth, particularly in eastern India.

Under the PM Gati Shakti Mission, Indian Railways has adopted a new approach to infrastructure development. Three Economic Railway Corridors—Energy, Mineral, and Cement Corridors (192 Projects); Port Connectivity Corridors (42 Projects); and High Traffic Density Corridors (200 Projects)—have been identified. The focus remains on enhancing capacity, decongesting high-density networks, reducing logistics costs, and improving passenger experience and safety.

Steep Decline in Train Accidents



As a result of various safety measures taken over the years, there has been a steep decline in the number of accidents. The consequential train accidents during the period 2004-14 was 1711 (average 171 per annum), which has declined to 678 during the period 2014-24 (average 68 per annum).

Various Safety Measures Taken to Enhance Safety in Train Operations

1. **Rashtriya Rail Sanraksha Kosh (RRSK)** was introduced in 2017-18 to replace, renew, and upgrade critical safety assets, with a corpus of ₹1 lakh crore over five years, ending in 2021-22. In 2022-23, the government extended the RRSK for another five-year period, with Gross Budgetary Support (GBS) of ₹45,000 crores.

Period	Allocation in RRSK (Rs in Cr)	Expenditure in RRSK (Rs in Cr)	Remarks
2017-18 to 2021-22	1,00,000	1,08,743	
2022-23 to 2026-27	45,000	26,702 (Till 2023-24)	RRSK extended for another five years

Total expenditure on safety works

Period	Expenditure on safety works (Rs in cr)
2004-05 to 2013-14	70,273
2014-15 to 2023-24	1,77,332 (2.52 times)

2. **Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been installed at 6,589 stations up to June 30, 2024**, to eliminate accidents caused by human error.
3. **Interlocking of Level Crossing (LC) Gates has been provided at 11,048 level crossing gates up to June 30, 2024**, enhancing safety at LC gates.
4. Complete Track Circuiting of stations, which enhances safety by verifying track occupancy through electrical means, has been implemented at 6,609 stations as of June 30, 2024.
5. **Kavach**, an indigenously developed Automatic Train Protection (ATP) system, assists loco pilots by automatically applying brakes if the pilot fails to do so, and ensures safe operation during adverse weather conditions. Adopted as the National ATP system in July 2020, Kavach has been deployed over 1,465 Route km and on 144 locomotives (including Electric Multiple Unit rakes) on South Central Railway. The latest Kavach 4.0 specification was approved by RDSO (Research Designs and Standards Organisation) on July 16, 2024. **As of July 24, 2024, ₹1,216.77 crore had been spent on Kavach, with an additional ₹1,112.57 crore allocated for 2024-25.**
6. Axle counters for Automatic clearance of Block Section, BPAC (Block Proving Axle Counter) are provided to ensure complete arrival of train without manual intervention before granting line clear to receive next train and to reduce human element. These systems have been provided on 6079 Block Sections up to June 30, 2024.
7. A project for the provision of a Long-Term Evolution (LTE) based **Mobile Train Radio Communication system has been approved for 34,803 Route Kilometers** over Indian Railways.
8. **Emergency talk-back systems and emergency alarm systems are installed in Vande Bharat train sets.**

9. CCTV cameras have been installed in all Vande Bharat Express coaches. **As of July 24, 2024, more than 9,572 coaches are equipped with CCTV.**
10. **All locomotives are equipped with Vigilance Control Devices (VCD) to enhance the alertness of loco pilots.**
11. **A GPS-based Fog Safety Device (FSD) is provided to loco pilots in fog-prone areas,** allowing them to gauge the distance to upcoming landmarks like signals and level crossings.
12. **Ultrasonic Flaw Detection (USFD) testing of rails is conducted to identify and replace defective rails timely.**
13. **Preventive maintenance of railway assets (coaches & wagons) is undertaken to ensure safe train operations.**
14. A web-based online monitoring system for track assets, including a track database and decision support system, has been adopted to optimize maintenance requirements.
15. Detailed instructions on track safety issues, such as integrated block, corridor block, worksite safety, and monsoon precautions, have been issued.
16. **All unmanned level crossings (UMLCs) on Broad Gauge (BG) routes were eliminated by January 2019.**
17. Safety of railway bridges is ensured through regular inspections, with repairs or rehabilitation undertaken as needed.
18. **Indian Railways displays statutory "Fire Notices" in all coaches to educate passengers on fire prevention measures,** including prohibitions on carrying inflammable materials and smoking.
19. **Production Units provide Fire Detection and Suppression Systems in newly manufactured Power Cars and Pantry Cars,** with progressive fitment in existing coaches underway by Zonal Railways.

Modernisation and Upgradation of Railway Infrastructure

Locomotive: Indian Railways has implemented a long-term plan to acquire new technology, including 12,000 HP electric locomotives and 9,000 HP electric locomotives for freight operations.

Traction Distribution System: The existing 1X25 kV system is being upgraded to a 2X25 kV system in a phased manner.

Coaching Stock: Indian Railways is modernizing its coaching rolling stock. The Vande Bharat Chair Car trains, featuring enhanced safety, better ride index, and improved passenger amenities, have been introduced. Additionally, Indian Railways plans to manufacture Vande Bharat sleeper rakes at IR Production Units for long and medium inter-state journeys. Vande Metros are also planned to revolutionize travel for suburban and regional commuters, providing a better experience for short-distance inter-city movement and suburban commuting, leveraging the features of Vande Bharat.

Non-AC Amrit Bharat Trains: Indian Railways has introduced complete Non-AC Amrit Bharat Trains to meet the needs of the masses. These trains have advanced features such as CCTV surveillance, Passenger Information System (PAPIS), aesthetically pleasing and ergonomically designed seats and berths, improved luggage racks, enhanced LED lighting, and additional charging sockets.

Wagon: 25T (Higher Axle Load) wagons (BOXNHL (25T), BLCS, BLSS etc.) have been introduced to improve throughput. In addition, special purpose wagons for Steel Coil (BFNV, BOSM, BFNS), Multipurpose wagon (FMP), for Cement/Fly Ash Loading (BTFC) and Auto Carrier

(ACT1, ACT2) for higher throughput have been introduced. In addition, trackside detection equipments i.e. OMRS, HABD, WILD are being introduced for detecting possible failures.

Track Structures: Modernization efforts include the use of weldable track crossings to reduce the number of fish-plated joints. Flash butt welding is maximised in place of thermit welds by providing long rail panels and testing Flash Butt welds with advanced phased array technology to enhance weld reliability. Indian Railways is also providing higher-strength R260 & R350 HT rails with upgraded modern fastening systems. Rail grinding is conducted across the network using state-of-the-art modern machines manufactured in India to improve asset reliability.

Station Development: Station development projects aim to provide state-of-the-art amenities and transform stations into city centers.

Signalling: To enhance the safety and efficiency of train operations, signalling systems are being modernized with the latest technologies, including Kavach, Electronic Interlocking, and Automatic Signalling.



1,324 stations selected under Amrit Bharat Station Scheme



102 Vande Bharat Express services are operational



**Data as of July 24 and July 19, 2024*

Land utilization for Railways

The Standing Committee on Railways (2022-2023), in its Sixteenth Report on the Performance of the Rail Land Development Authority (RLDA), noted that developmental activities by RLDA have accelerated following the COVID-19 pandemic. There has been a significant increase in the number of commercial sites and colonies awarded to developers, and RLDA's revenue was notably encouraging during 2019-20. The Ministry of Railways has accepted the committee's recommendations, which include a phased approach to redevelopment, prioritizing stations based on factors like passenger footfall, connectivity, and strategic importance. The recommendations also emphasize the development and monetization of the existing land bank to maximize asset value, the creation of a centralized database to store land records digitally, conducting surveys by field officials,

establishing a proper monitoring mechanism to oversee the work and outcomes of field officers and surveys, and the establishment of a dispute resolution mechanism within RLDA contracts.

To increase capacity, Indian Railways has undertaken massive infrastructure expansion projects, such as multitracking, major yard remodelling, and the development of maintenance facilities. The availability of encumbrance-free land is a crucial component for any infrastructure project.

Conclusion

The Indian Railways is undergoing a transformative phase, marked by significant investments and modernization efforts to enhance its infrastructure, safety, and passenger experience. The record capital expenditure allocated in the Union Budget 2024-25 underscores the government's commitment to elevating Indian Railways to world-class standards. Key initiatives, such as the Amrit Bharat Station Scheme, modernization of locomotives and coaching stock, and the implementation of advanced safety measures, are crucial steps towards achieving this vision. The Rail Land Development Authority's efforts in optimizing land use further contribute to the holistic development of the railway network. These comprehensive measures are expected to not only boost the efficiency and safety of train operations but also support India's broader economic growth and connectivity goals.

Reference

<https://pib.gov.in/PressReleasePage.aspx?PRID=2036104>

[Lok Sabha Unstarred Question No. 460 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 446 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 429 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 415 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 413 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 399 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 376 Dated July 24, 2024](#)

[Lok Sabha Unstarred Question No. 414 Dated July 24, 2024](#)

<https://pib.gov.in/PressReleaselFramePage.aspx?PRID=2009790>

Santhosh Kumar/ Sarla Meena/ Sheetal Angral/ Ritu Kataria/ Aswathy Nair