

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

RAJYA SABHA
UNSTARRED QUESTION NO. 3315
ANSWERED ON 20.03.2026

INTEGRATION OF AI-ENABLED 'TECH-RETAIL HUBS' IN AMRIT BHARAT STATIONS

3315 SHRI KARTIKEYA SHARMA:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether there is a proposal to monetize underutilized railway assets by establishing 'Viksit Bharat Tech-Retail Hubs' that integrate AI-driven 'Phygital' retail spaces with Startup incubation labs;
- (b) the details of the RailTech Portal, launched in February, 2026, and its role in providing 50 per cent development funding to youth-led Startups for deploying smart-commerce solutions in railway complexes;
- (c) the status of deploying 'Bhashini' (multilingual AI) and edge-computing at the 1,300+ redeveloped stations to assist young rural entrepreneurs in global trade; and
- (d) the timeline for the establishment of the first phase of these hubs as 'City Centres' to generate non-fare revenue through youth-led micro-enterprises?

ANSWER

MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND
ELECTRONICS & INFORMATION TECHNOLOGY

(SHRI ASHWINI VAISHNAW)

(a) to (d): Indian Railways (IR) is one of the largest and most complex railway systems in the world. To improve its operational efficiency, safety and service delivery, use of new technologies and innovative solutions are essential.

To support the development of cost-effective, implementable and scalable solutions, including those based on AI and data-driven technologies, a new policy called the Rail Tech Policy has been adopted on 26.02.2026 by IR. A portal (<https://railtech.indianrailways.gov.in>) in this regard has been launched to facilitate participation of innovators and startups. This policy is a reform to attract talented minds and startups in developing technological solutions for Railways.

The portal enables any innovator with a relevant solution to submit proposals for addressing challenges of Indian Railways, including through submission of self-initiated proposals, through a single-stage detailed submission mechanism.

Under the Rail Tech Policy, financial support is provided on a 50:50 cost-sharing basis between Indian Railways and the innovator/startup, with the maximum grant limited to ₹3 crore for prototype development and trials. For extended trials or scale-up of successful solutions, financial support may be provided up to five times of the initial grant, subject to a maximum of ₹10 crore.

The above proposed Policy will facilitate early adoption of new technologies in Indian Railways.

Adoption of Modern Technologies

Technological improvements in Indian Railways (IR) are a continuous process. Artificial Intelligence/Machine Learning (AI/ML) based applications are a developing area. Some major technologies deployed/piloted over IR are as follows:

1. **Machine Vision Inspection System (MVIS):** MVIS is an Artificial Intelligence (AI)/Machine Learning (ML) based system which generates alert on detecting any hanging, loose or missing components of moving trains.

Three (03) MVIS have been installed in Northeast Frontier Railway, two (02) in Dedicated Freight Corridor Corporation of India Limited (DFCCIL) and one (01) in South East Central Railway on pilot basis for freight stock. Further, a MoU has been signed between IR and DFCCIL to induct four (04) MVIS over IR network for freight stock.

Also, Research Designs and Standards Organisation (RDSO) has taken up development of MVIS for rolling stock in collaboration with industry through an Expression of Interest (Eoi).

2. **Wheel Impact Load Detector (WILD):** WILD is a way-side inspection system that measures the impact of wheel on track to identify the defective wheel in Rolling Stock. 24 such systems are installed over IR.
3. **Online Monitoring of Rolling Stock (OMRS):** OMRS is a way-side inspection system which monitors the health of bearing & wheel of Rolling Stock. 25 such

systems are installed over IR out of which one (01) OMRS is installed at Sirpur Kaghaznagar /Secundrabad Division in South Central Railway.

4. **Integrated Track Monitoring Systems (ITMS):** ITMS are deployed for comprehensive inspection and monitoring of Railway tracks. The ITMS utilizes machine learning and image processing to monitor and detect defects in railway track components such as rails, sleepers, and fastenings. The data from ITMS is analysed for urgent and planned maintenance of track. Presently three (03) ITMS are deployed for track recording and monitoring of IR track. It helps in better track maintenance planning, enhanced safety, improved reliability of track assets and operational efficiency.
5. **Intrusion Detection System (IDS):** Artificial Intelligence (AI) enabled Intrusion Detection System (IDS) using Distributed Acoustic System (DAS) is implemented in 141 RKms section of Northeast Frontier Railway for detecting presence of elephants on Railway tracks. The system is designed to generate alerts for loco pilots, station masters and Control Room about the movement of elephants in proximity of railway tracks, for taking preventive action timely
6. **Drone based monitoring of Overhead Equipment:** Drone based monitoring with thermal imaging of Overhead Equipment (OHE) has been taken up in Raipur division on pilot basis. Further, IR in association with IIT Madras, has taken up development of a Drone based aerial inspection of Overhead Equipment (OHE) which will also analyse the captured data using AI/ML.
7. **TRI-Netra:** RDSO has taken up development of TRI-Netra (Terrain Imaging for Locomotive Drivers Infra-Red, Enhanced Optical & Ranging Device Assisted) for assisting the Loco pilots during foggy, rainy and inclement weather. This system comprises of optical camera, infra-red camera and ranging devices (e.g. Radar/Lidar) & AI to create a real-time, enhanced vision system for assisting Loco pilots.
8. **Rail Madad and Passenger Reservation System:** For improving operational efficiency, AI/ML models have been implemented in the areas of passenger services (Rail Madad and Passenger Reservation System), freight operations (prediction of estimated time of arrival of freight trains), and prediction of unloading/loading time.

9. A Memorandum of Understanding has been signed between IR and Delhi Metro Rail Corporation to induct 4 numbers of Automatic Wheel Profile Measurement System (AWPMS). The AWPMS allows for automatic non-contact measurement of train wheel profile ensuring real-time measurement of wheel geometry and wear. The locations identified for installation of these 4 systems are as follows:
 - a. Lokmanya Tilak Terminus Coaching Depot over Mumbai Division of Central Railway
 - b. Anand Vihar Terminal Coaching Depot over Delhi Division of Northern Railway
 - c. Near Tughlakabad Wagon Depot over Delhi Division of Northern Railway
 - d. Near Pandit Deen Dayal Upadhyay Wagon Depot over Pandit Deen Dayal Upadhyay Division of East Central Railway

10. Centre for Railway Information Systems has signed a Memorandum of Understanding with Digital India Bhashini Division for auto language translation for handling of user complaints in any of the 13 scheduled languages.

11. Centre for Railway Information Systems has signed a Memorandum of Understanding with Indian Institute of Technology Delhi for enhancing efficiencies in the area of train operations.

12. Centre for Railway Information Systems has signed a Memorandum of Understanding with Indian Institute of Technology Mumbai for adoption of generative AI in transportation and related sectors.

13. Pilot initiatives involving AI-driven predictive maintenance of signaling are being undertaken over the Indian Railways.

BHASHINI has been integrated with Indian Railway Portal websites for providing translation into scheduled Indian Languages.

Amrit Bharat Stations:

To improve passengers' amenities and comfort, Ministry of Railways has launched Amrit Bharat Station Scheme for redevelopment of stations with a long-term approach.

The scheme involves preparation of master plans and their implementation in phases to improve the stations. The master planning includes:

- Improvement of access to station and circulating areas
- Integration of station with both sides of city
- Improvement of station building
- Improvement of waiting halls, toilets, sitting arrangement, water booths
- Provision of wider foot over bridge/air concourse commensurate with passenger traffic
- Provision of lift/escalators/ramp
- Improvement /Provision of platform surface and cover over platforms
- Provision of kiosks for local products through schemes like ‘One Station One Product’
- Parking areas, Multimodal integration
- Amenities for Divyangjans
- Better passenger information systems
- Provision of executive lounges, nominated spaces for business meetings, landscaping, etc. keeping in view the necessity at each station.

The scheme also envisages sustainable and environment friendly solutions, provision of ballastless tracks etc. as per necessity, phasing and feasibility and creation of city centre at the station in the long term.

So far, 1,338 stations have been identified for development under the Amrit Bharat Station Scheme.

Completed stations:

Development works at railway stations under Amrit Bharat Station Scheme have been taken up at a good pace. Till now, works have been completed at 180 stations. Names of stations completed so far are as following:

Alnavar, Amb Andaura, Ambikapur, Amgaon, Anandpur Sahib, Anara, Angamali For Kaladi, Ayodhya Dham, Badami, Bagalkot, Baijnath Paprola, Balrampur, Bantawala, Barabhum, Baramati, Bareilly City, Baripada, Barmer, Barpali, Begumpet, Beohari, Bhanupratappur, Bhilai, Bhind, Bijnor, Bimalgarh, Bommididi, Bundi, Chanda Fort, Chalakudi, Changanassery, Chennai Park, Chhindwara, Chidambaram, Chinchpokli, Chinna Salem, Chirayinkeezh, Cuttack, Dakor, Derol, Deshnoke, Devlali, Dharwad, Dhule, Dongargarh, Fatehabad, Fatehpur, Fatehpur Shekhawati, Ferok, Gadag, Gangapur City, Godda, Godhra Jn., Gogameri, Gokak Road, Gola Gokarnath, Gomti Nagar, Govardhan, Govind Garh, Govindpuri,

Govindpur Road, Hafizpeta, Haibargaon, Haldia, Hapa, Harpalpur, Hathras City, Hodal, Idgah Agra Jn., Izzatnagar, Jaisalmer, Jam Jodhpur, Jam Wanthali, Joychandi Pahar, Junnor Deo, Kakinada Town, Kalyani Ghoshpara, Kamakhyaguri, Kanalus Jn., Karaikkudi Jn., Karamsad, Karimnagar, Katni South, Kedgaon, Khairthal, Khambhaliya, Khalilabad, Koppal, Kosamba Jn., Kulitturai, Kuttipuram, Lasalgaon, Limbdi, Lohardaga, Lonand Jn., Mahe, Mahuva, Mailani, Mandal Garh, Mandawar Mahwa Road, Madhupur, Mambalam, Manaparai, Mandi Dabwali, Mangalagiri, Mannargudi, Matunga, M.C.S. Chhatarpur, Mithapur, Morappur, Morbi, Muktsar, Munirabad, Muri Jn., Murtizapur Jn., Nainpur Jn., Nandura, Narmadapuram (Hoshangabad), Netaji Subhash Chandra Bose Itwari Junction, Nidadavolu Jn., Nilambur Road, Okha, Orchha, Palitana, Panagarh, Panki Dham, Parel, Parlakhemundi, Pirpainti, Piska, Pokhrayan, Pollachi Jn., Polur, Porbandar, Rajgarh, Rajmahal, Rajula Jn., Ramagundam, Ramghat Halt, Rayanpadu, Saharanpur Jn., Sahibzada Ajit Singh Mohali, Sahebgunj, Samakhiyali, Samalpatti, Sanchi, Sankarpur, Savda, Seoni, Shahad, Shajapur, Sholavandan, Shoranur Jn., Shridham, Siddharth Nagar, Sihor Jn., Siuri, Sri Bala Brahmeswara Jogulamba, Srirangam, Srivilliputtur, St.Thomas Mount, Sullurpeta, Suraimanpur, Swaminarayan Chappia, Talcher, Tamluk, Thawe, Thiruvarur Jn., Tiruvannamalai, Tripunithura, Tuni, Ujhani, Urkura, Utran, Vadakara, Vadala Road, Vidisha, Vriddhachalam Jn., Wadakancheri, Warangal.

The activities for development at other stations have also been taken up at good pace and progress of some of the above stations is as given below:

- **Tirupati station:** The structural framework of new second entry station building on South side, 2 nos. air concourses and sewage treatment plant have been completed. The finishing works of new second entry station building on South side and air concourses, structural work of station building on North side, platform shelter, lift, escalator etc. have been taken up.
- **Nellore station:** The structural framework, brickwork and plastering of station building on both East and West sides have been completed. The finishing works of station building on both East and West side and air concourse, extension work of subway, parking, water tanks and sewage treatment plant have been taken up.
- **Bangalore Cantonment station:** The works of diversion road on South side, training centre, hostel on North side, electric substation building have been completed. The works

of South side station building, North side station building, circulating area and Foot Over Bridge have been taken up.

- **Kota Junction station:** The structural works of front departure hall, front arrival hall and rear side station building have been completed. The finishing works of front departure hall, rear side station building, air concourse, through roof, circulating area have been taken up.
- **Bhubaneswar station:** The structural work of new station building at East and West side and air concourse have been completed. The structural work of elevated driveway at East and West side station, extension of Foot Over Bridge and platform shelter have been taken up. The finishing works of new station building at East and West side, works of MEP (Mechanical, Electrical and Plumbing), HVAC (Heating, Ventilation and Air Conditioning) and escalators have been taken up.

Further, development / redevelopment / upgradation / modernisation of stations on Indian Railways is a continuous and ongoing process and works in this regard are undertaken as per requirement, subject to inter-se priority and availability of funds. Development / redevelopment / upgradation / modernisation of a station is carried out based on category of station/condition/traffic handled etc.

Development / Upgradation of railway stations is complex in nature involving safety of passengers & trains and requires various statutory clearances such as fire clearance, heritage, tree cutting, airport clearance etc. The progress also gets affected due to brownfield related challenges such as shifting of utilities (involving water/sewage lines, optical fibre cables, gas pipe lines, power/signal cables, etc.), infringements, operation of trains without hindering passenger movement, speed restrictions due to works carried out in close proximity of tracks and high voltage power lines, etc. and these factors affect the completion time.

Further, development / upgradation / modernization of stations including Amrit Bharat Station Scheme is generally funded under Plan Head-53 'Customer Amenities'. The details of allocation and expenditure under Plan Head-53 are maintained Zonal Railway-wise and not work-wise or station-wise or state-wise. The fund allocation of ₹ 12,120 crore has been made for the financial year 2025-26 under Plan Head-53 and expenditure (up to February, 2026) of ₹ 11,892 crore has been incurred so far.
