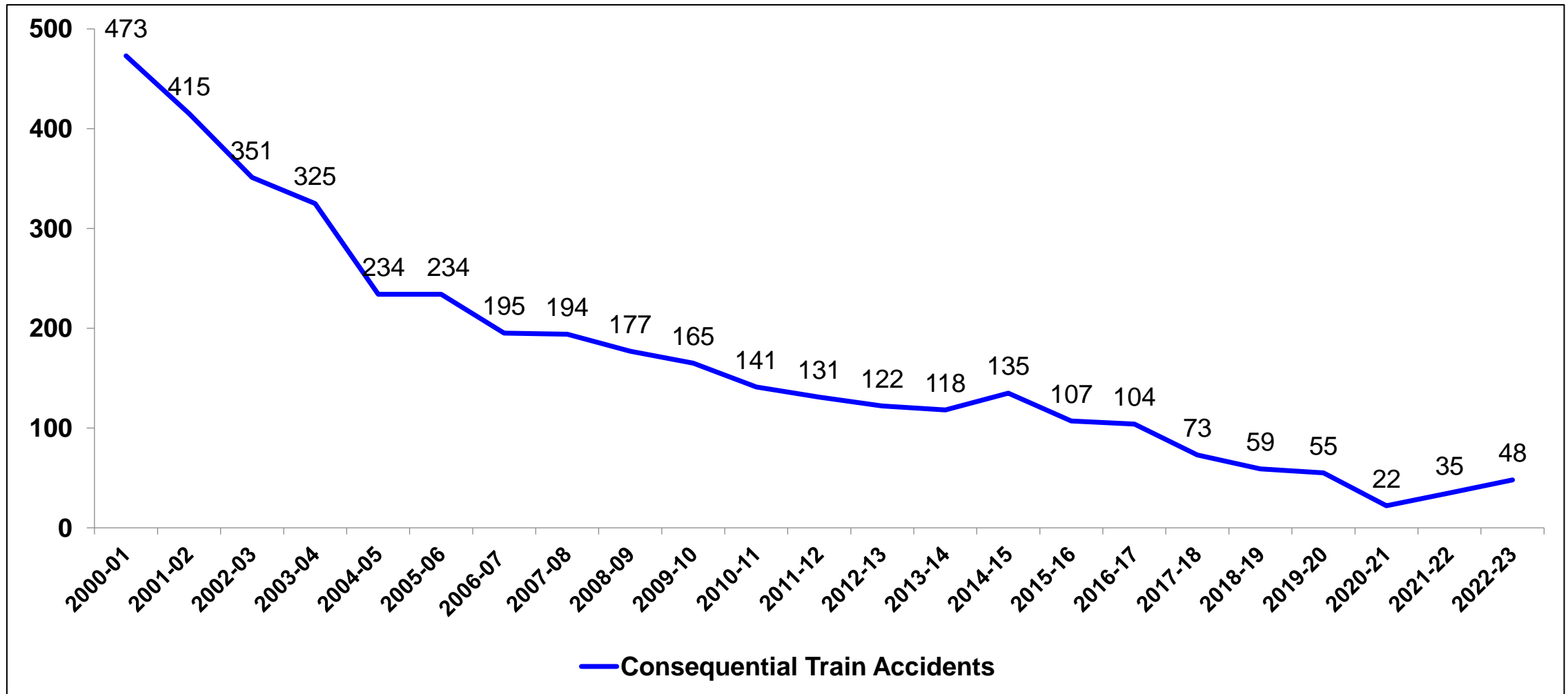




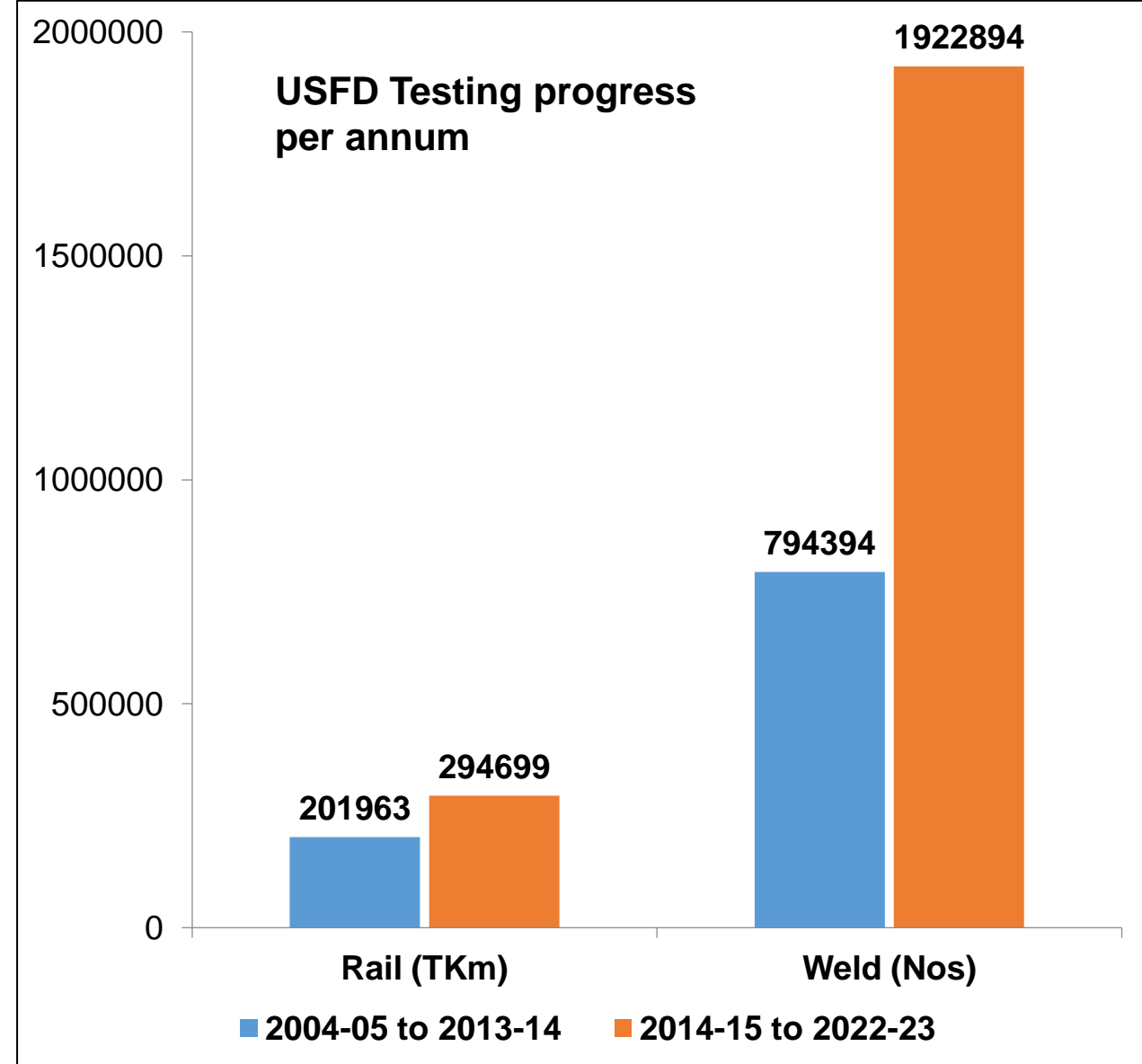
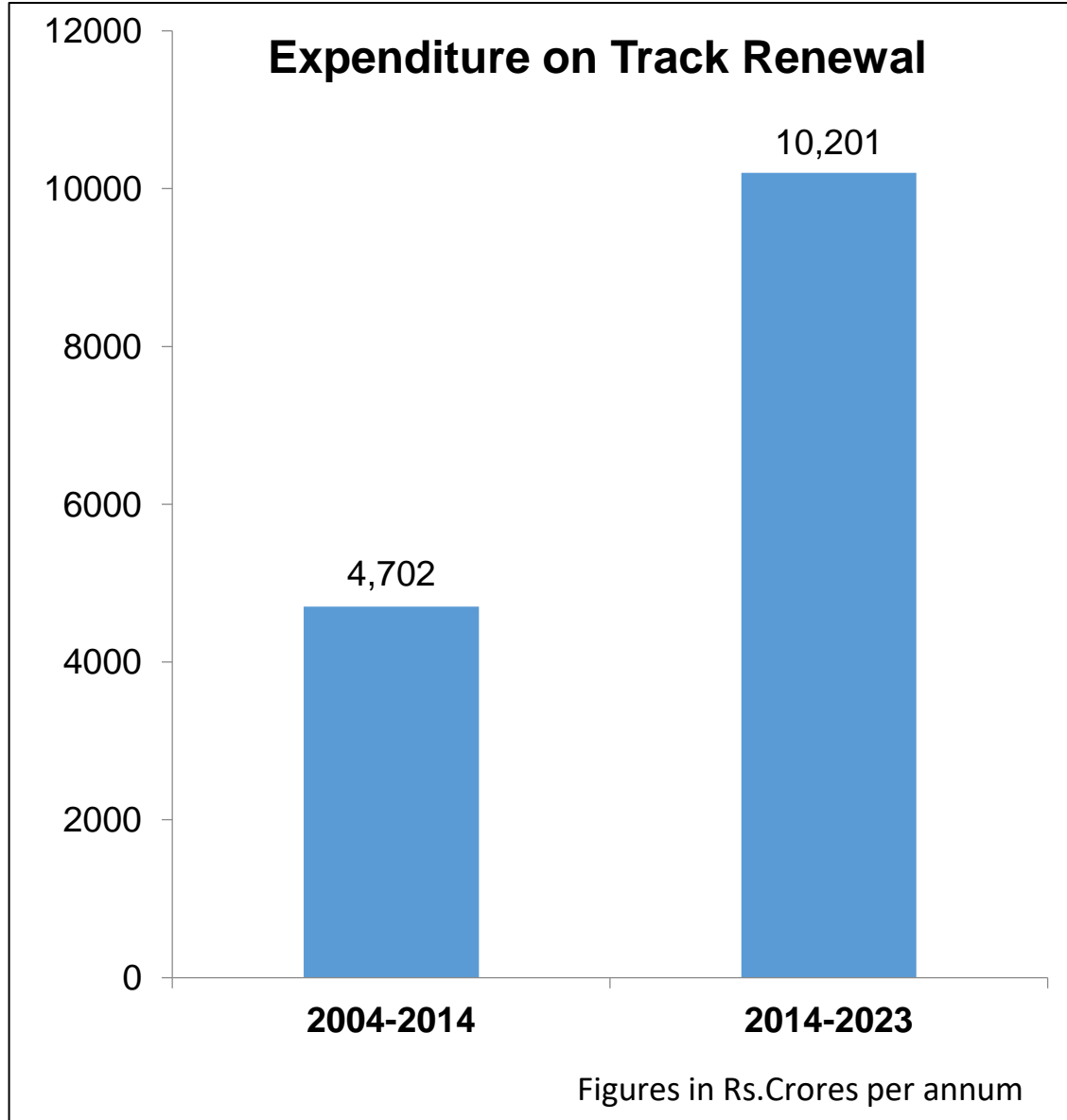
# Press Briefing

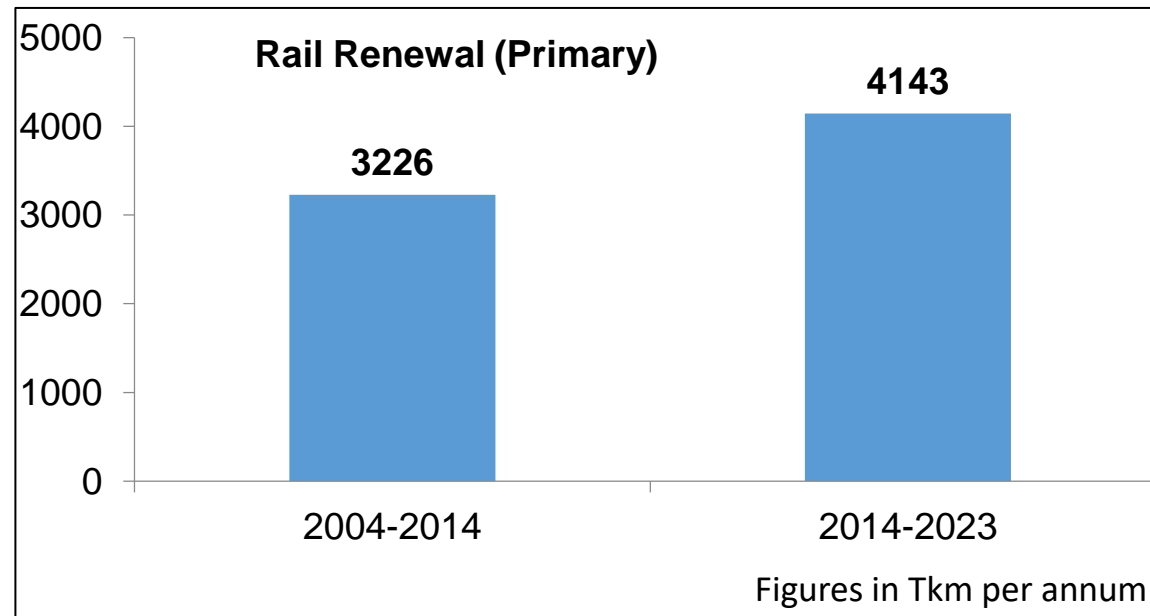
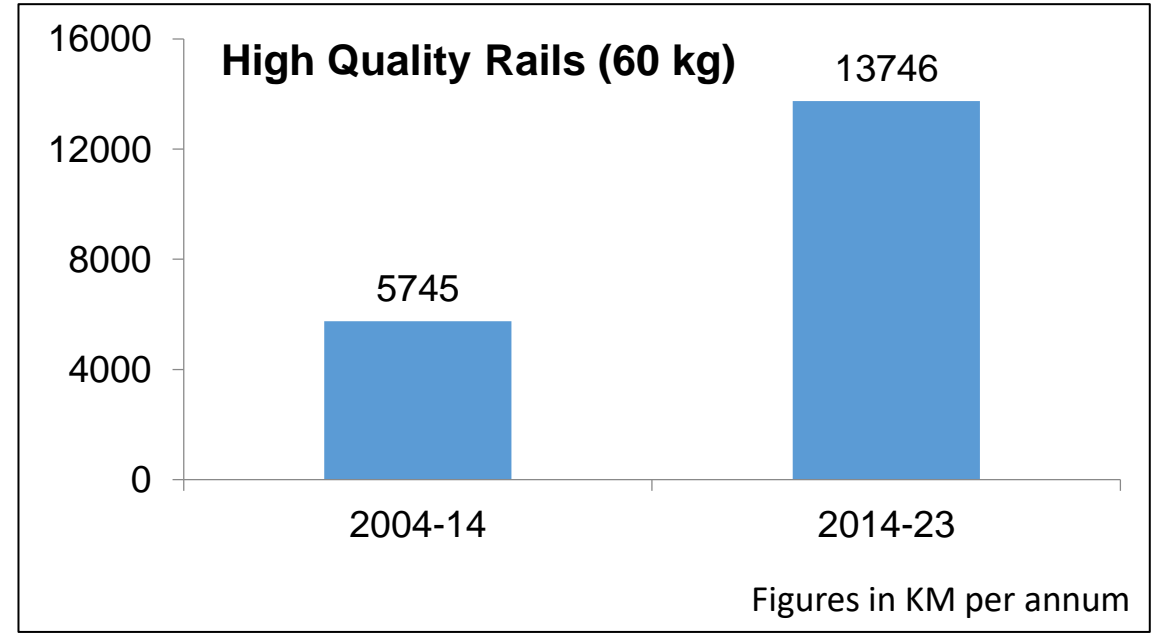
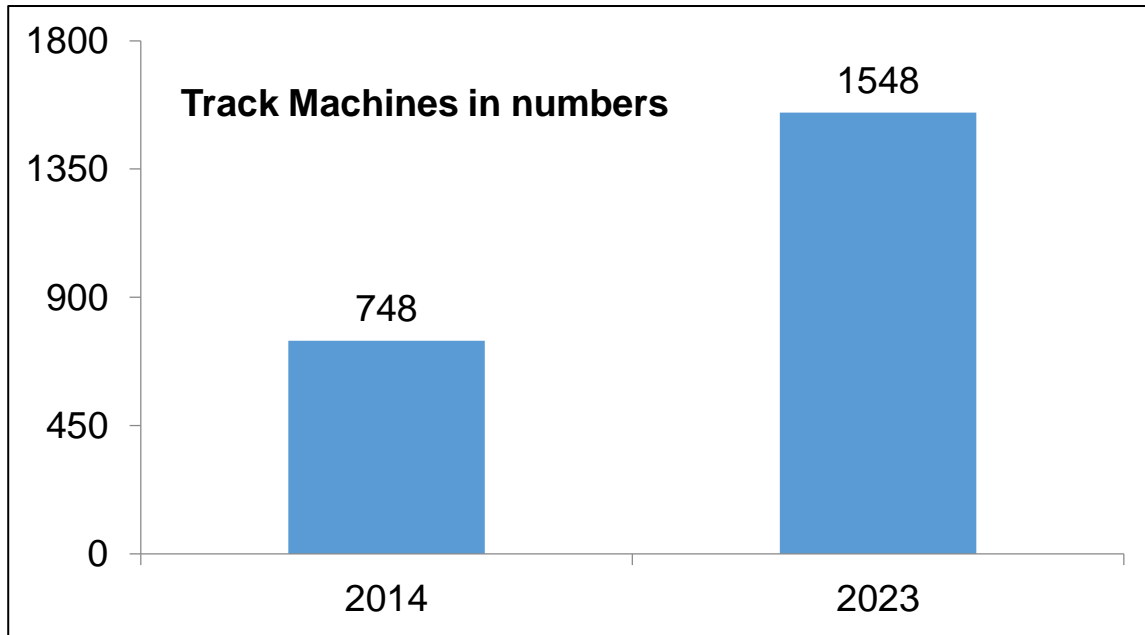
# Consequential Train Accident:

- The number of consequential train accidents over Indian Railways has declined from 473 in 2000-01 to 48 in the year 2022-23.

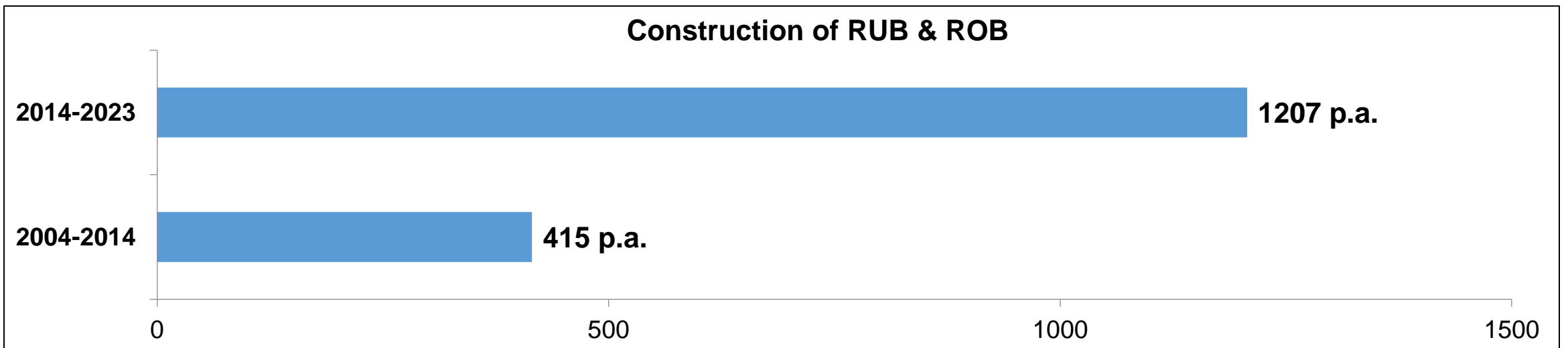
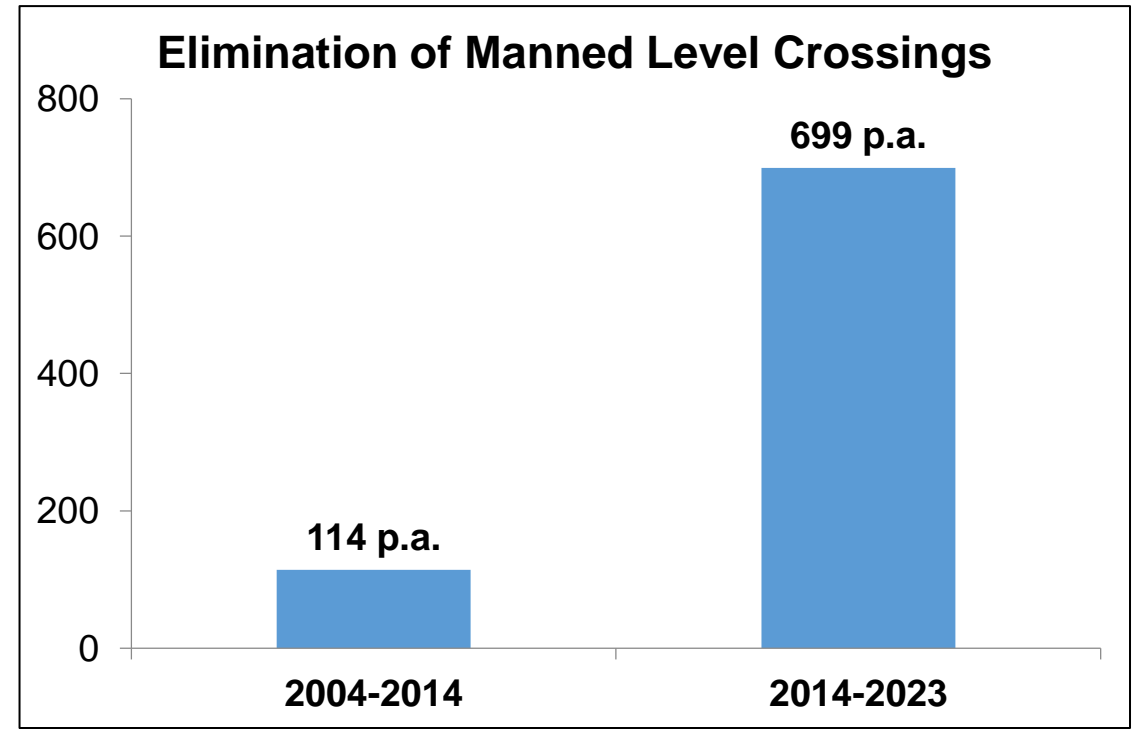
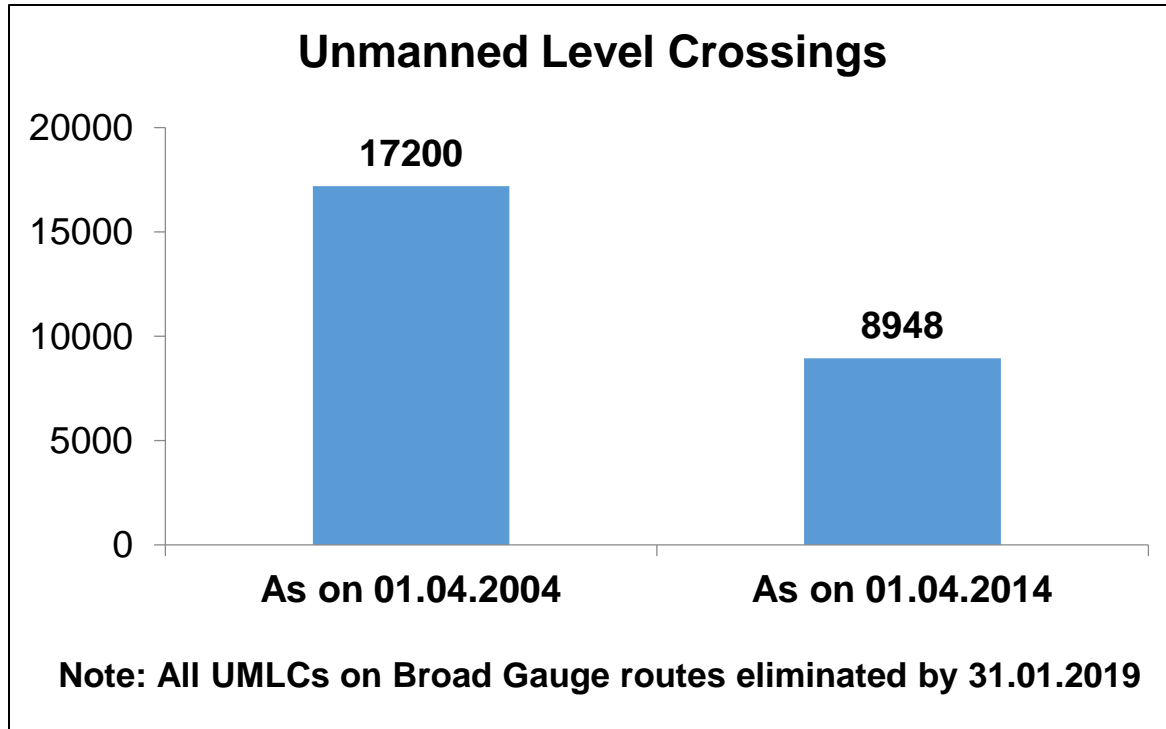


# Measures taken to reduce Derailments

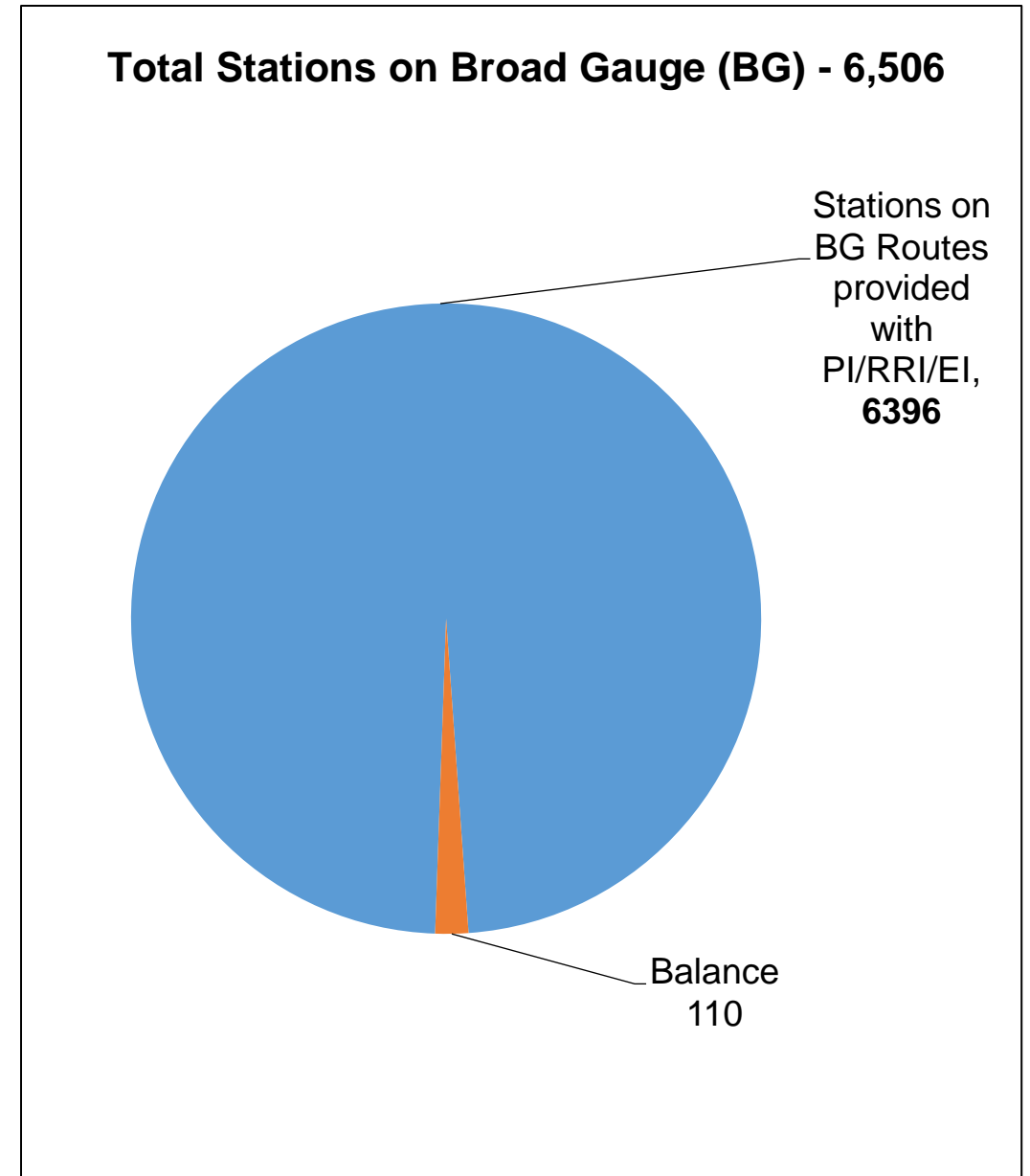
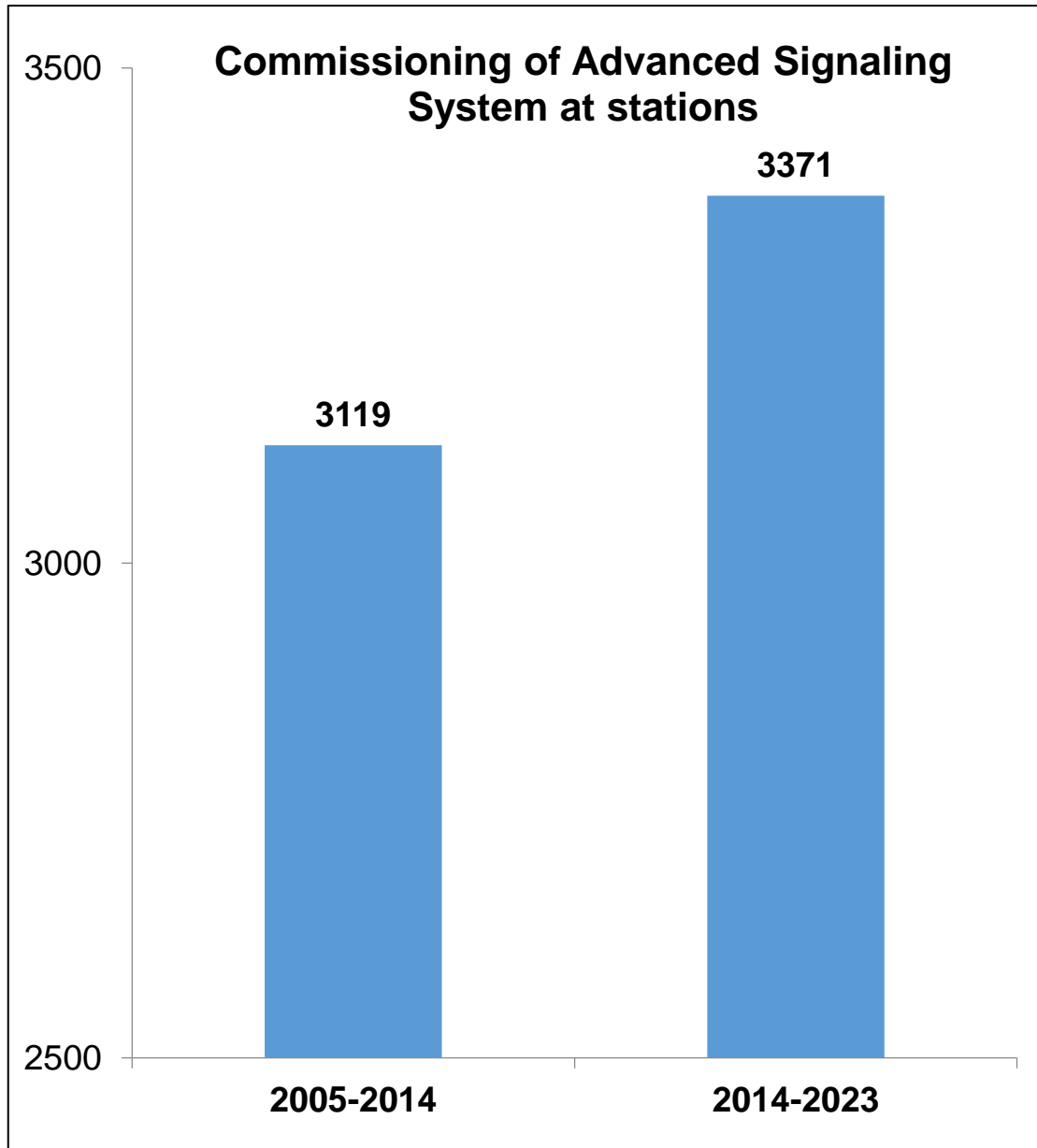




# Measures taken to reduce accidents at Level Crossings



# Measures taken to reduce Collisions



# Measures taken to reduce Collisions

- **India's own Automatic Train Protection (ATP) System named KAVACH (Train Collision Avoidance System)** developed by RDSO and Indian OEMs.
  - Provided on 1465 Route Kms and 121 locomotives of South Central Railway.
  - Contracts awarded for 3000 RKm on Delhi-Mumbai & Delhi-Howrah section. Targeted for commissioning in 2024.
  - Indian Railways is preparing Detailed Project Report (DPR) and detailed estimate for another approximately 6000 RKm
  - Development of Kavach on LTE platform under progress

# Preventing Collisions: Other Assistive Technology for Crew

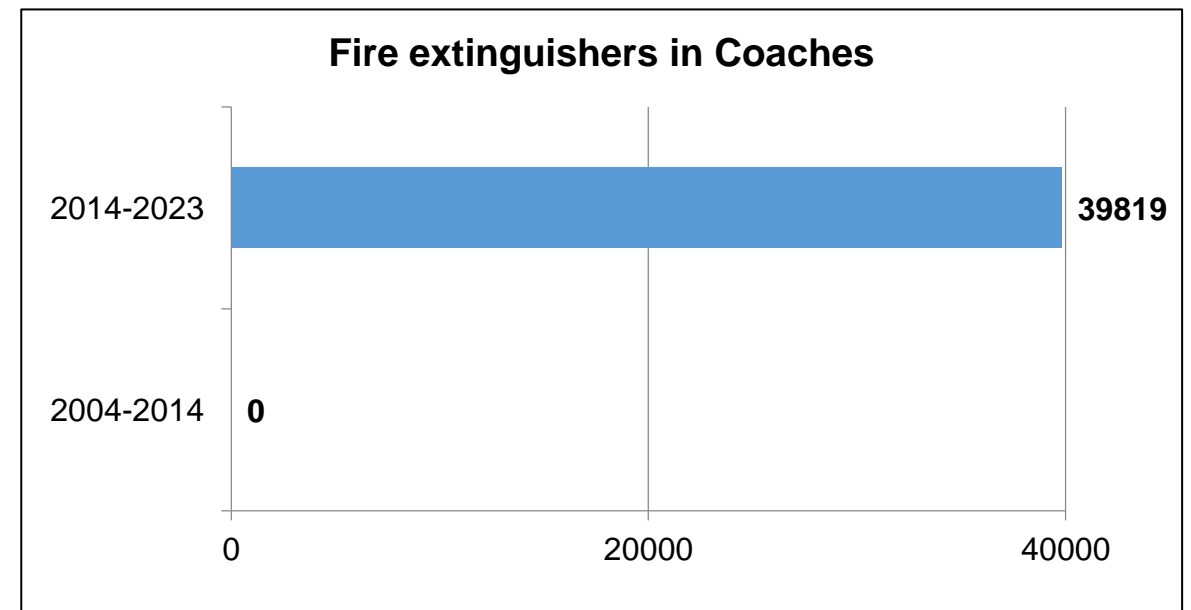
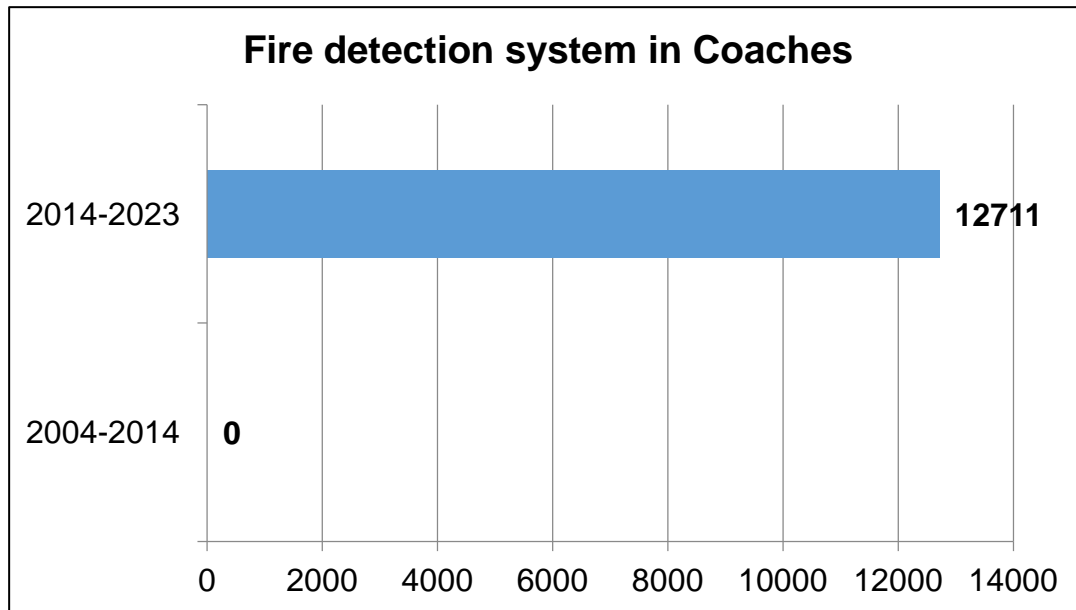
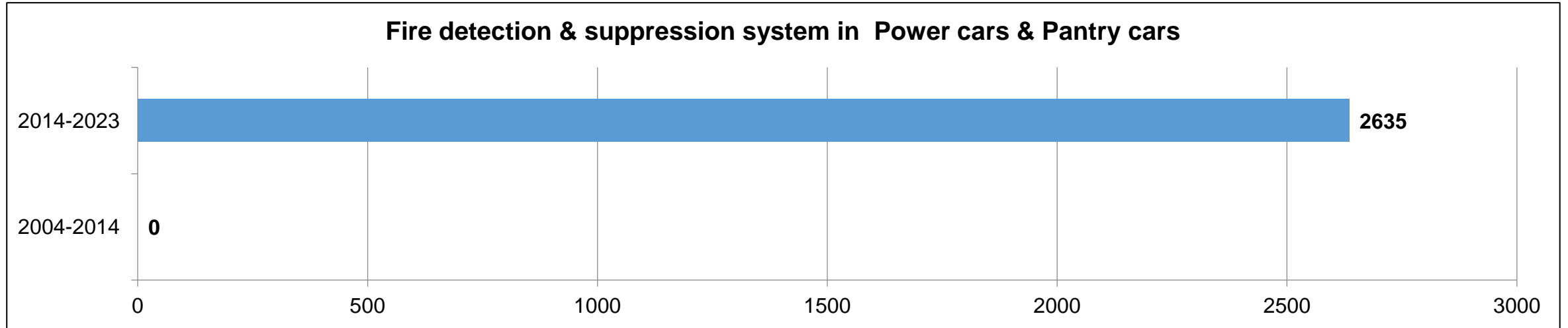
- Collisions can happen sometimes as an aftereffect of passing signal at danger. Tech inputs have been provided to Loco Crew as follows:

- **Vigilance Control Device:** All locomotives have been provided with VCDs that alert the loco pilots in case of inactivity
- **Fog-Pass Safety Devices:** These are GPS-based devices that alert the loco pilot regarding approaching signals, gates etc., and are used during foggy weather where visibility is reduced. **19,652** provided during **2014-23** against only **90** during **2004-2014**
- **Retro reflective sigma Board:** These are provided on masts and glow under locomotive headlight alerting the loco pilot of approaching signal in low visibility

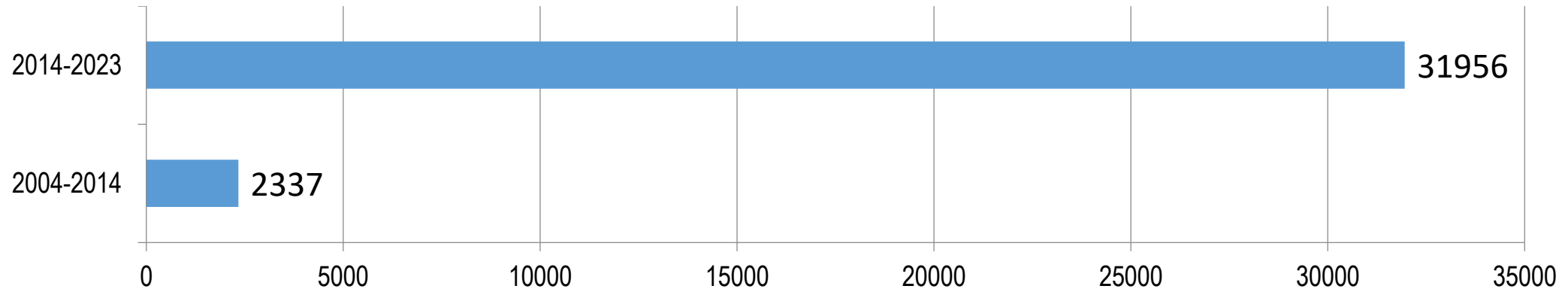




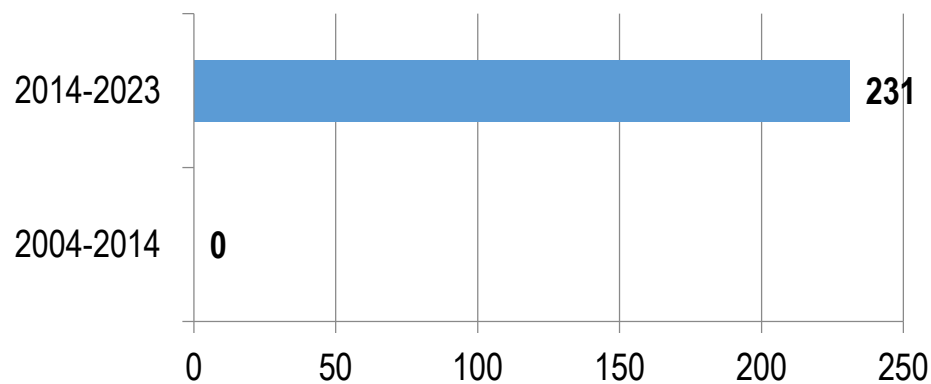
# Measures taken to prevent Fire in coaches



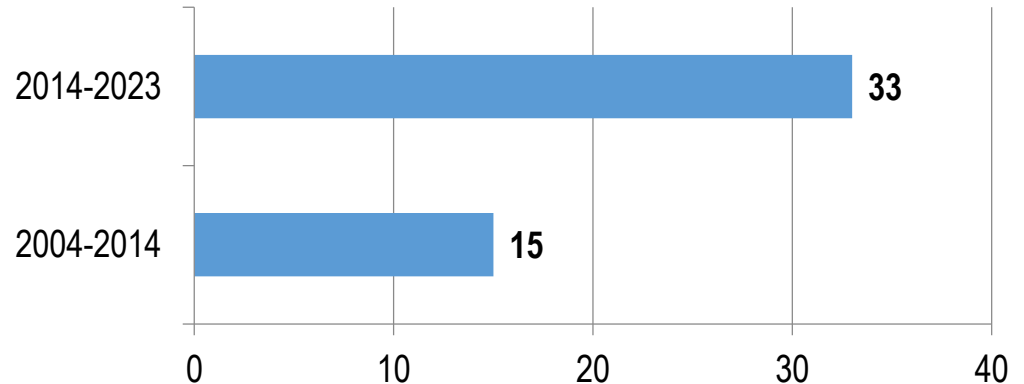
# Measures taken to improve safety and reliability of Rolling Stock



## Production of safer & more comfortable LHB Coaches



## Hot Box and Hot Axle Hot Wheel Detectors



## OMRS / WILD

Further, installation of 111 OMRS devices, 150 WILDs and 200 HBDs has been planned by 2024-25

# Other Safety Measures

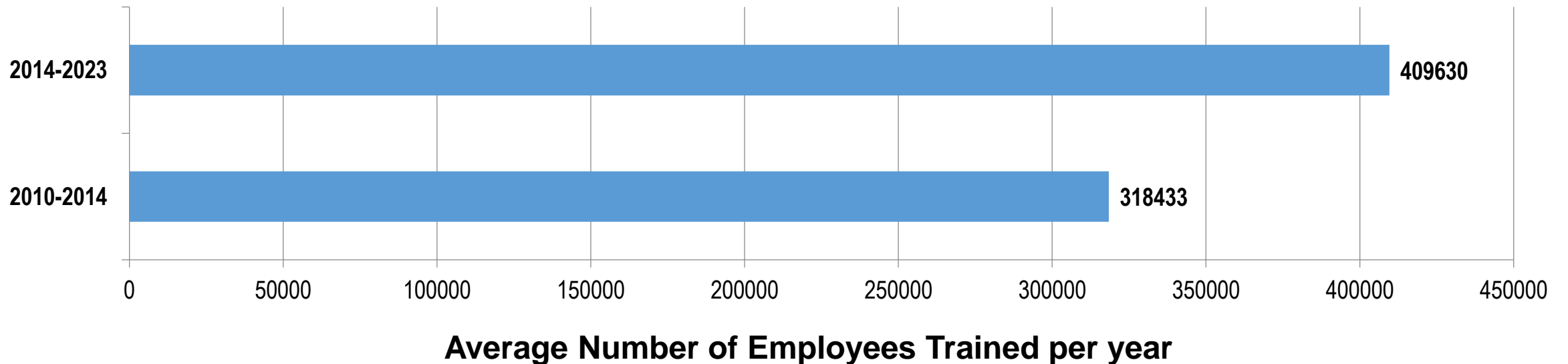
- Fencing of tracks at vulnerable locations.
- Regular Footplate Inspections, Night Inspections and other laid down inspections.
- Hot Weather Patrolling, Monsoon Patrolling & Cold Weather Patrolling of track.



# Measures taken to reduce Human errors

## Training

- All safety category employees trained initially & during service
- Simulator- based training to Loco Pilots
- Counseling of running staff and interaction with their families
- Training on fire fighting & use of fire extinguishers to front line staff
- Yoga and Meditation lessons in training centers
- Approx. 5 Lakh employees imparted training (initial, promotional, refresher & specialized) during 2022-23.



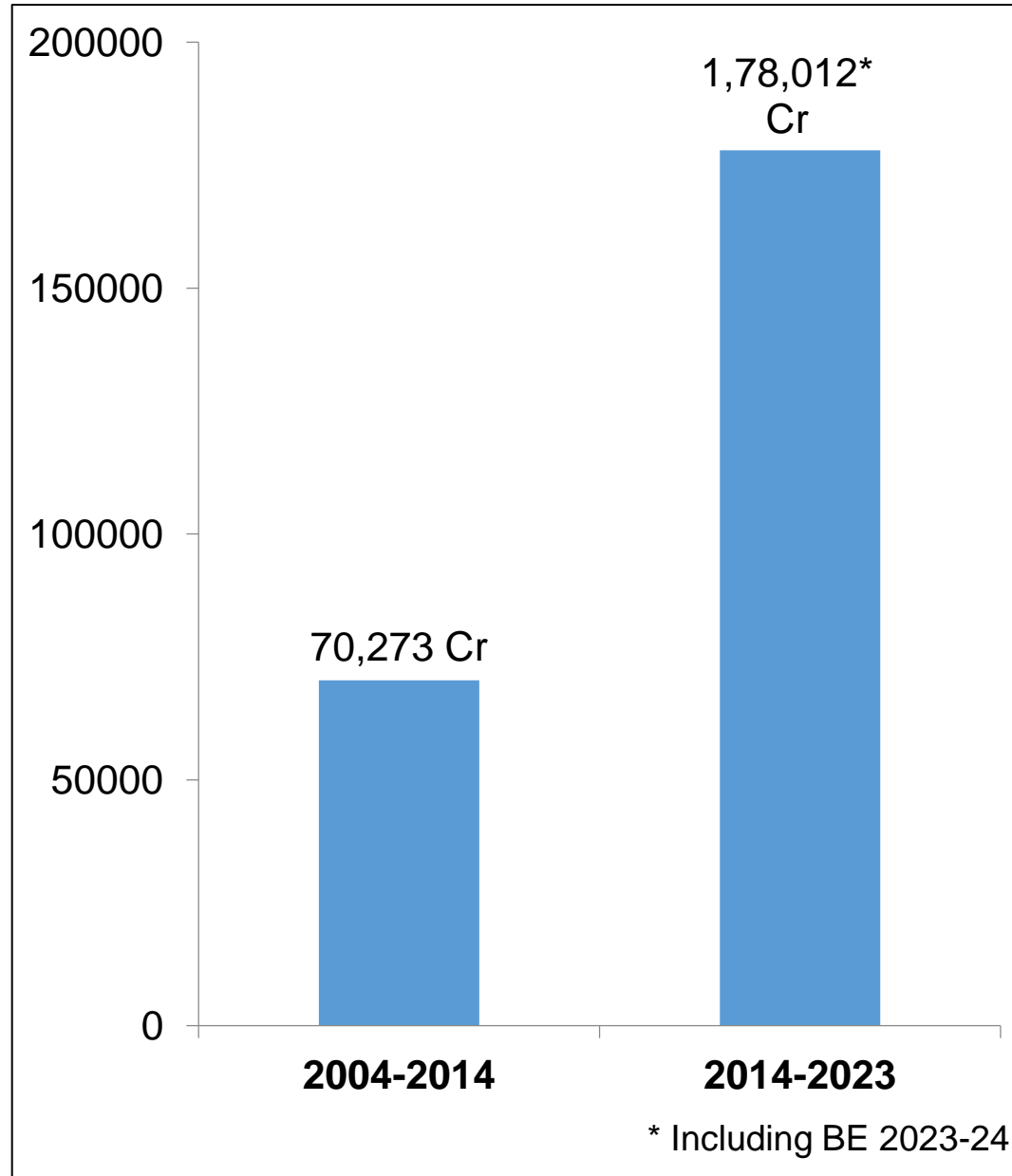
## **Rashtriya Rail Sanraksha Kosh (RRSK):**

- Introduced in 2017-18 for replacement/renewal/up-gradation of critical safety assets, with corpus of Rs 1 lakh Crore for five years.
  - Gross Expenditure of Rs.1,08,743 Crore incurred on RRSK works till end of 2021-22.

## **Expenditure incurred on Safety works**

- Total expenditure on Safety related works, since 2014-15 to 2022-23 and BE 2023-24, is Rs.1,78,012 cr.
- Total expenditure on Safety related works from 2004-05 to 2013-14 Rs 70,273 Cr.

# Expenditure on Safety related works



**Thank you**