

'DRISHTI' System

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Why in news?

Indian Railways is planning to install Artificial Intelligence (AI)-based technology to enhance the safety of freight trains.

- It is an *AI-based surveillance* and *locking monitoring* system for goods coaches in real time.
- **Jointly developed by** Northeast Frontier Railway (NFR) and IIT Guwahati Technology Innovation and Development Foundation.
- Objectives To enhance freight safety, improve transparency, and boost operational efficiency for Indian railways.

Key Features of DRISHTI

- **Real-Time Monitoring** The system uses computer vision and machine learning to detect door tampering or unlocking in real time.
- **Surveillance-** It integrates AI-powered cameras and sensors strategically mounted on moving freight trains, enabling anomaly detection without manual inspection.
- **Scalability** Designed for deployment across freight corridors, especially in strategic and high-risk zones.
- **Data-Driven Alerts** Capable of generating automated alerts for security breaches or operational faults.
 - Traditionally, detecting such issues relied heavily on manual inspections, which are often time-consuming and impractical for long freight rakes moving under dynamic conditions.

Advantages -

- Real-time monitoring of wagon door locks.
- Automated alerts in case of tampering or abnormalities.
- $_{\circ}$ Reduced human intervention, ensuring faster response times.
- $_{\circ}$ Enhanced transparency and safety across the freight network.

 $_{\circ}$ Seamless integration with existing railway operations without disruption.

References

- 1. Indian Express | AI-based technology DRISHTI was unveiled
- 2. Rail Analysis | AI-based technology DRISHTI was unveiled

