Automatic Identification and Data Collection (AIDC) of Rolling Stock (RFID Project)

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Need for the project

- Indian Railways is amongst the largest Railway systems in the world, It carries about 23 million passengers per day and over 3 million tons of freight every day over 65000 route kilometers.
- It has major growth plans and needs to improve service levels and operating efficiency.
- As a part of this endeavour, the **RFID project has been taken up which aims to automatically and accurately track and trace rolling stock** as they move across the country with a special focus on improving their safety and reliability.

What is RFID?

It is a technology that exchanges data trough Radio Frequency. In this, a tag is used to track individual objects. The RFID tags are designed by the Centre for Railway Information Systems.

About the project

- For implementing RFID project over Indian Railways, the **Centre for Railway Information Systems (CRIS, the IT arm of the Indian Railways), GS1 India and the Indian Industry have come together in alignment with the 'Make in India' initiative**
- This project is being spearheaded by the Rolling Stock

Department of the Indian Railways. GS1 India is deeply involved in ensuring the quality of the work and the proper adoption of international standards.

- CRIS has been utilizing the considerable expertise of GS1 in developing and validating solutions, based on GS1 Standards, for the Indian Railways.
- The project enables **real-time visibility of railway wagons through the National Rail Network using cutting edge technologies like RFID with GS1 global standards** for unique & universal identification, in line with global best practices.
- It enables enhanced operational efficiency of the Indian Railways
- In order that RFID tags can be used in all locations in the country including those with poor connectivity, Indian Railways opted to use the GIAI-202 standard.
- Indian Railways has successfully field-tested this CRIS designed GIAI202 encoded tags at a speed of 182.7 kmph. This feat puts the Indian Railways in the league of leaders with respect to AIDC technology in the Railways sector.