

Project Design Phase-1

Solution Architecture

Team ID	PNT2022TMID52171
Project Name	Smart solutions for Railways

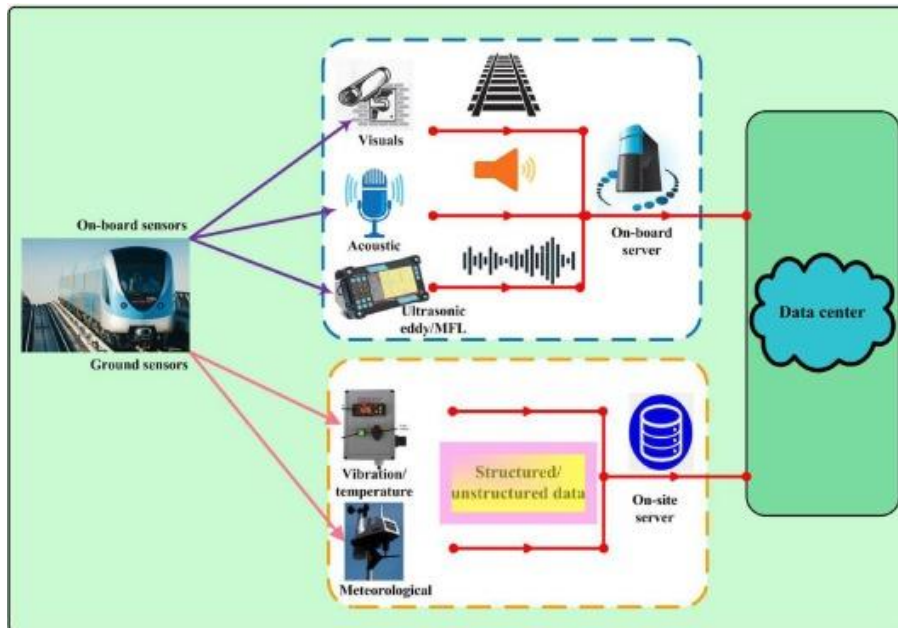
Solution Architecture:

Solution architecture, term used in [information technology](#) with various definitions such as; "A description of a discrete and focused business operation or activity and how [IS/IT](#) supports that operation"

Digitisation of Railways Includes:

- Track-laying machines for mechanisation of construction.
- Electrification through machines such as self-propelled overhead electrification laying trains.
- Complete train scanners for improved diagnostics and maintenance.
- Use of distributed power to improve the efficiency of train operations with coordinated acceleration and deceleration.
- Establishment of smart railway stations by implementing access control at entry points.
- e- ticketing with services such as infotainment and app-based systems.
- Use of training simulators and virtual reality (VR) training systems to improve personnel capabilities

Example – Solution architecture diagram



Reference: <https://www.metrorailnews.in/smart-railway-automation-system-using-various-techniques/>