



At the Heart of the Rail Ecosystem

12K+
Active Users



£50M+
Cost Savings annually

3M+
Workforce hours saved annually

250+
AIVR systems deployed

150+
Industry partners & clients

From data capture to automated AI-powered insights, AIVR transforms how the rail industry inspects, monitors and maintains critical infrastructure – **delivering actionable intelligence** across all disciplines to improve **safety, performance and efficiency**.



Data Capture

AIVR systems are installed onboard maintenance and in-service trains, or integrated with existing systems, capturing a variety of data:

- **Video capture:** Forward-facing, lineside, overhead line, thermal imagery, conductor shoe
- **Rail Inspection imagery:** Conductor rail, switches & crossings, plain line
- **Geometry data:** Track alignment, rail profile, overhead



Data Access

All data is available online on AIVR for collaborative, remote inspection:

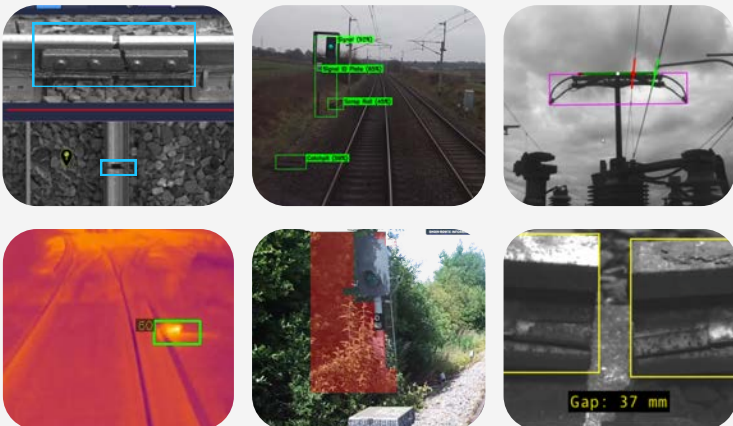
- **Digital tools:** Annotate, measure, search by asset, export data & reports
- **External data integration**
- **Receive automated issue alerts**



Data Analysis

AI-powered analysis delivers automated infrastructure monitoring, including:

- **Asset Mapping:** Signals; OLE structures; signage; scrap rail; joints; S&C; adjustment switches
- **Defect Detection:** Rail defects; broken rail, fishplates, joints; joint gaps; arcing
- **Condition Monitoring:** Vegetation encroachment; contamination; tensioners; height & stagger; temperature exceedances; ballast condition; S&C





Trusted Across the Rail Industry

AIVR is deployed across the rail industry, supporting **over 12,000 users** and covering **over 95% of the UK network**. From train operating companies and infrastructure managers to rolling stock operators and maintenance contractors, organisations of all sizes trust AIVR to deliver multi-disciplinary inspections and drive immediate improvements in **safety, efficiency and cost**.

southeastern

Data Capture



Use Case: Visible and thermal video systems installed across the Class 707 and 375 fleets capture extensive daily track data to support proactive maintenance planning.

Impact: Provides early visibility of infrastructure issues, reducing manual inspections and helping prevent service disruption.

“
Train-borne cameras provide the early warnings we need to identify and fix problems before they cause disruption for our customers . . . I'm confident that they will really help us in our drive to improve performance and reduce delays.”

Fleet Maintenance Director,
 South Eastern Railway

SIEMENS

Data Access



Use Case: Siemens teams across the UK use AIVR to streamline trackside site assessments, significantly improving safety while reducing time on site and associated carbon emissions.

Impact: Supports safe access checks, signal placement planning, and site familiarisation before stepping trackside.

“
An intuitive tool that is increasingly in use across our delivery projects as we digitalise the Siemens delivery process and drive efficiencies for the client on our renewal projects.”

Head of Digitalisation and
 Innovation, Siemens

NetworkRail

Data Analysis



Use Case: AIVR ML models detect a range of infrastructure conditions such as rail defects, contamination, scrap rail, thermal hotspots, vegetation encroachment, and more.

Impact: These automated insights enable safer, more efficient remote inspections and help engineers predict and prevent failures before they affect passenger services.

“
It's a fantastic project and the outputs greatly improve Network Rail's ability to predict and prevent failures, improving the service we provide to our customers.”

Principal Engineer,
 Network Rail

Get in Touch