

# Helping To Improve Efficiency and Safety At Track Side Locations.

A bespoke monitoring, logging and reporting system was developed for Network Rail and installed at 5 initial locations. Following initial success, the programme was quickly rolled out to a further 15 sites.

## The Challenge

Evidence from Network Rail South East Regions' BMS system showed that there is a greater incidence of equipment failure within high voltage transformer rooms and lineside signalling buildings when internal temperature exceed 30°C.

The main focus was to provide a solution that would predict failures, establish reliability of the equipment and reduce costs overall for Network Rail.

Further monitoring was required in order to provide continuous temperature monitoring of water systems in order to reduce the risk of legionella and meet the requirements of legionella compliance.



## The Solution

The system alerts engineers in real-time to temperature changes before signals and relays develop a fault, allowing them to intervene before costly line closures are required. It also captures and reports site-specific data, this information is used to identify future preventative maintenance requirements.

Following the initial trial, the remit of the system was expanded, with the reach of the GPRS gateways increasing from 1.5km to 5km to accommodate more remote sites; further monitoring capacity added to cover track temperature, water ingress and flood detection and reporting; and a digital 16-camera two-way communication system installed to provide additional remote monitoring and management.

The system is also linked to Network Rail's Very Early Smoke Detection Alarm, triggering specific area cameras to be live on screen when activated.

## Did you know?

The longest single journey on one National Rail train is from Aberdeen to Penzance, taking 13 and a half hours and covering 785 miles.



## Beyond Invisible

This kind of approach can be applied anywhere.

Our industry-leading software solutions are already providing businesses like yours with useful, real-world insights on energy consumption and potential waste – empowering them to maximise their efficiency and profitability, while reducing their environmental impact.

By connecting assets and devices, allowing them to share and analyse data, Invisible Systems can intelligently and automatically optimise your business.

## Software & Compliance.

Real-Time Online, our bespoke web-based software that displays the data, gathered by Invisible Systems IoT devices, as actionable information.

Real-Time Online is able to automate the continuous temperature monitoring of water systems to reduce the risk of Legionella. Capable of recording results from multiple sites within a single dashboard, the system provides comprehensive data to enable the control of legionella bacteria in water systems.

The system was initially used with Network Rail's London Bridge Signalling Centre, to improve the understanding of water usage on site and deliver robust reporting. Ten temperature probes collect data continuously, capturing all high and low temperatures relevant to critical requirements; thereby improving water safety and negating the need for costly manual water temperature testing.

## Ready to take control of your data?

For a comprehensive consultation on needs of your business, talk to the Invisible Systems team today.

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