The importance of digitalisation in the UK rail industry: A case study on the Transpennine Route Upgrade

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A guest writer article from Luke Allen, Managing Director of eviFile.

It's no secret that the UK's railway system has long suffered from outdated technology and manual processes, which have led to inefficiencies, delays, and high operational costs. However, as projects become more complex and more details need to be tracked for compliance, the importance of digitalisation is becoming increasingly clear. Because of this, eviFile, short for 'evidence file', has been contracted to work with Network Rail to power their digital project management and progressive assurance approach for the multi-billion pound Transpennine Route Upgrade (TRU) programme.

Background & Challenge

The Transpennine Route, which stretches from York to Manchester, transported 29 million passengers between 2019-2020. However, despite the heavy usage, passengers often faced slow, crowded, and infrequent services. The upgrade project, managed by Network Rail and the TRU Alliances, aims to

revolutionise this route, introducing full electrification, upgraded signalling, and enhanced line speed, which will enable them to provide faster and more frequent journeys.

However, large scale projects like these usually have lots of challenges. The route's difficult terrain and accessibility issues mean that any upgrades would disrupt service, so they would need to take place on weekends and holidays. Over 106 worksites were classified as 'Highly Disruptive' with an anticipated 400+ blockades exceeding 27 hours, so the challenge was to ensure timely, safe, and efficient work while minimising disruptions. Network Rail and the TRU Alliance saw that there was an urgent need for real-time visibility into all areas of the project to ensure that the work was being done on time and would pass compliance.

The Digital Solution

eviFile is a digital project management platform that tracks process improvement, engineering assurance, maintenance, and operational compliance. eviFile was brought on to the project to streamline communications, coordinate maintenance activity and track every detail to provide the necessary golden thread of information to prove compliance.

The pilot project for TRU demonstrated a 20 per cent improvement in project efficiency and an average 50 per cent reduction in possession reporting hours. Engineers and site managers now have a tool to gather and process data seamlessly.

Within the first 18 months, the TRU workforce was saving an average of 2.5 hours in every 24-hour possession. This was accomplished due to swift decision-making, rapid defect management, and instant visibility of the programme's impact.

Furthermore, the ability for stakeholders at every level to have real-time, hour-by-hour insights from any location emphasised the importance of digitising all data collection processes. eviFile's centralised approach enabled data consolidation across regions by incorporating data from other software sources and from on-site mobile devices to feed real-time data into PowerBI, to deliver completion.

Key Outcomes & Future Projects

● Improved productivity: Visibility into real-time data enabled on-site teams to find any construction errors during progressive assurance checks, instead of after the work had been completed.
● Enhanced decision-making: All essential data was consolidated into one digital platform, ensuring decisions were made based on comprehensive insights.
● Better collaboration: Alliance partners, Network Rail, and the HQ control room could work in tandem, driven by real-time data and streamlined communication between stakeholders.
● Live health & safety monitoring: Real-time tracking of accidents and close calls offered an unparalleled safety feature, enabling proactive measures for future projects.

In the future, eviFile will be used to provide real-time blockade reporting, daily shift management, close call data capture, quality check sheets, and inspection and test plan management tailored for contractors across the entire TRU project.

The successful rollout of digitalisation in the TRU project highlights the potential for digital transformation in the UK rail industry. Digital tools should not just be seen as an upgrade, but as a necessity for navigating the complexities and challenges of modern rail infrastructure management.