

Tackling Low Adhesion using Digital Technology

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Digital technology consultancy 3Squared has teamed up with the Met Office and Colas Rail to tackle one of the rail industry's biggest seasonal challenges that can result in significant disruptions to passenger journeys.

A major problem for the industry, it has been estimated that low adhesion costs the industry millions of pounds each year.

The solution proposed by the consortium involves the development of an Adhesion Digital Solution (ADS), the funding for which comes through the RSSB's TOC 17 competition to identify innovative projects that will improve operational performance.

ADS will compliment a number of solutions for tackling low adhesion that exist today, including double variable rate sanders and rail head treatment programmes, by focusing on providing drivers with detailed information on the likely adhesion conditions they will experience along a route in real-time allowing them to regulate the train accordingly.

ADS will also combine data from the Met Office Low Adhesion model together with 'crowd sourced' driver reported data to give operators detailed up to the minute route relevant adhesion forecasts.

James Fox, 3Squared's Commercial Director said: "The whole industry works hard to manage low adhesion which costs the rail industry millions of pounds each year causing major delay for both passenger and freight train services.

"This collaborative project takes a dramatically different and innovative data driven approach to solving a problem that continues to cause significant disruption on the UK network".

"ADS will provide operators and drivers with detailed route adhesion insight to help them make more informed decisions on train regulation that will ultimately reduce the likelihood of incidents and help reduce risk."

3Squared will lead the consortium, providing project management, software development and systems integration expertise for the ADS project.

The Met Office provides government, the military and road, rail and aviation markets with information about weather and climate and offers the project high spatial and temporal resolution forecasts, training and low adhesion expertise.

Colas Rail will provide locations and key operations personnel across Scotland for trials of the system.