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## RAIL INNOVATIONS SECURES INNOVATION FUNDING TO HARNESS THERMAL RADIOMETRY TO INCREASE TRAIN RELIABILITY

Rail Innovations has been successful in winning funding to lead a consortium including Angel Trains, DB ESG, the Great Central Railway and Sesys that will monitor trains using thermal radiometry to reduce service failures and reduce costs through increased preventative maintenance.

Thermal imaging can differentiate between surfaces with different temperatures and represents these different temperatures with different colours. Thermal radiometry is a more sophisticated technology in which surface temperatures are measured in every pixel of the image and this technology is currently being deployed at some airports to measure the body temperatures of passengers.

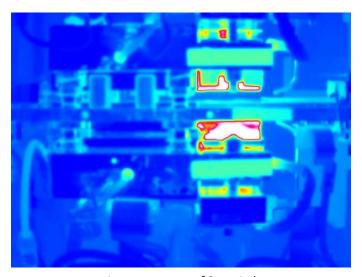


Image courtesy of Sesys Ltd

Rail Innovations and its consortium will harness thermal radiometry to measure and monitor the temperatures of different parts of the train's engine and its auxiliary systems so that, as soon as the system detects an over-temperature event in any of the equipment, it will transmit a snapshot of the thermal image to the train operator over the mobile phone network, via an independent SIM card. This will enable the operator to assess the severity of the incipient failure and plan the most cost-effective repair regime. The monitoring system will be completely autonomous and resulting preventative maintenance will reduce costs.

Without the funding provided by the Department for Transport as part of its "First of a Kind 2020 Rail Innovation Programme", with facilitation from Innovate UK, the cost of running proof-of-concept trials for this technology on a passenger train and trackside in the safety critical environment of an active railway would be prohibitive for small & medium-sized enterprises, let alone a micro enterprise like Rail Innovations.

Rail Innovations is excited to be transferring the benefits of this proven technology from other sectors onto trains in Great Britain to reduce train breakdowns and improve train on-time performance for passengers, plus reducing maintenance costs for train operators.

Greg Howell Director

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