

CEMIT

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Intelligent Fault Prediction for the Railway Industry

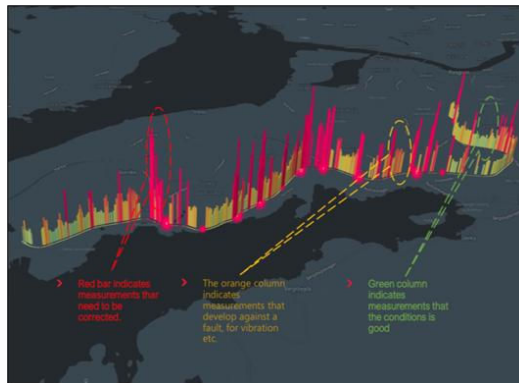
The Challenge – Enabling Predictive Maintenance

Fifty per cent of all operating costs in the rail sector are for maintenance. Reducing this depends on early detection and correct diagnosis of faults through ongoing monitoring. However, existing approaches rely on either intermittent inspections of tracks or expensive component-level monitoring, which is too expensive for most operators to use across all their rolling stock and networks. The industry is thus demanding a continuous, affordable monitoring solution to enable more cost-effective and safer predictive maintenance.

The Solution - ATTUNE

ATTUNE is a low-cost, accurate, automated predictive monitoring platform. It gives users direct access to live cloud-based railway status information, “asset health” and bespoke automated alerts.

ATTUNE gathers ‘Big Data’ from Inertial Measurement Units and cameras and uses intelligent algorithms to correlate and identify emerging faults and determine the root cause.



The Funding

The team at Neon Innovation secured a €822k grant from the Eureka Eurostars programme for a consortium led by Cemit Digital. The money is being used to develop key innovations including pantograph and catenary monitoring, track geometry monitoring and free space risk detection.

The Impact

Successful completion of ATTUNE project will enable train operators, maintenance contractors and other rail stakeholders detect faults earlier and schedule maintenance more effectively, reducing costs and improving safety. By 2030 the consortium expects 2,000 trains to be fitted with the ATTUNE system, generating profits of €9.5m.



eurostars™



30 months



€822,000 Grant



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innovation