

Case Study

Leveraging the power of existing data with Infinitive Group

In association with:

porterbrook 

Good diesel engine reliability positively impacts fleet availability and passenger service, reducing maintenance cost and operational penalties. This is often a greater issue during summer months creating a maintenance and operations challenge.

Infinitive Group has a passion for innovative and creative engineering and works with its customers on their most critical strategic initiatives to accelerate digital strategy and transformation by injecting products and services to deliver tangible business outcomes.



Porterbrook owns around a quarter of the national passenger rail fleet and is leveraging the power of existing data in current condition-based monitoring projects to reduce operator costs and improve fleet reliability.

New partnerships

Porterbrook has recently entered into a new agreement with one of its customers focused on reducing costs and improving fleet reliability.

The partnership will see responsibility for the heavy maintenance of the trains move from the train operator to Porterbrook.

This new, more collaborative, way of working between the train operator and the rolling stock asset manager, covers the delivery of heavy maintenance, future maintenance optimisation and product enhancements.

The partnership builds on fleet improvements which have taken place over the last year during a pilot scheme, whereby Porterbrook provided additional support beyond the standard train leasing arrangements. That scheme was built around maintenance optimisation and remote condition monitoring.

“ Better leveraging of data across the railway can provide real benefits for passengers and taxpayers. We are using existing train system data to successfully predict engine failures on our Turbostar fleets. ”

Stephanie Klecha, Head of Digital Services at Porterbrook

Porterbrook engaged Infinitive Group to discover what could be done with existing data and systems to drive customer value. Infinitive Group used its in-house software team to develop a number of applications leveraging existing remote systems to extract data, then restructure it to make it more useful for pilot initiatives and advanced analytics. Huge value in terms of reliability improvement has been delivered for a number of Porterbrook's customers.

“ It was great to support Porterbrook and their customers with the data insight trials and pilots. We were proud to share our joint experiences with the railway community at the recent Munch & Learn session organised by the Rail Innovation Group. ”

Ben Craze, CEO at Infinitive Group

Using its specialist domain knowledge of rolling stock and railway operations coupled with data science subject matter expertise, Infinitive Group was able to develop engine failure predictive algorithms with unprecedented levels of accuracy.

Data analytics, provided by Infinitive Group, required no additional fitment of sensor technology and showed that 70% of diesel engine issues could be predicted in advance of service affecting failures. Work is underway to further refine the models developed to realise the full reliability benefits of digital analytics achieved through close collaboration between operator, owner and specialist advisor.



The Rail Innovation Group is an independent community with a mission to develop the technology ecosystem in rail. We hold regular Munch & Learn sessions and welcome others to join our meet ups. Join us to hear from our members on a variety of exciting topics across the railway or follow us on LinkedIn.