



Irish Rail Implements Remote Diagnostic System



Greater operational efficiencies and fleet performance

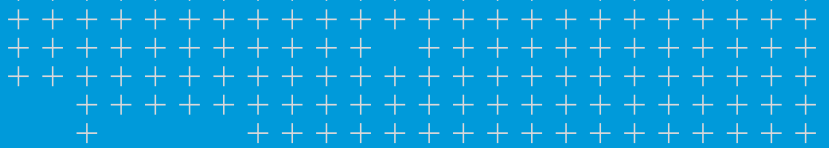
Irish Rail has significantly improved the performance, reliability, and customer environment of its Hyundai DMU 22000 fleet of trains by implementing the Trimble® R2M real-time remote diagnostic monitoring system and on-board Trimble NCU (on-train-software).

Solution

Trimble R2M System

Real-time remote diagnostics

Find out more at
trimble.com/rail-assets



overview

Retro-fitting a comprehensive real-time data, transmission, and analysis system to a complete fleet of trains, delivering real-time information to the Irish Rail control center, is a first for the Irish rail industry.



Location
Ireland



CHALLENGE

The original objective for using the Trimble system was to improve operational efficiencies and fleet performance.

As the project progresses it delivers much wider benefits in areas such as fleet safety, driver performance, timetabling data, infrastructure, and energy analysis, becoming a cross departmental project with more benefits across the business.

Irish Rail began their exploration for a real-time diagnostic technology system in 2007. High maintenance costs and reduced operational efficiencies prompted them to seek a system that would streamline their maintenance costs and provide efficiencies across their unreliable fleet and also automate some manual tasks.

The company was conscious of the fact that there was a lot of data that could be extracted from the train but they were unsure of the breadth of data that could be gathered.

These issues prompted Irish Rail to issue a Request for Information (RFI) for a technology system that was able to extract this data and provide it in a structured way.

SOLUTION

This is where Trimble came into the equation. As part of an EU public procurement tendering process, where a detailed evaluation of a number of different proposed systems was undertaken, Irish Rail chose Trimble for this project as they provided the most economically advantageous tender when scored against technical merit and cost.

The project took nine months to implement and consisted of three concept phases, all of which were delivered on time and within budget. During the first phase of the project Trimble proved that they could collate the data from the train in real time. In the second phase Trimble showed Irish Rail the benefits of implementing the system. The third and final phase was implementing the system and training the engineers to use the train's data that was extracted using the Trimble R2M system.

Trimble R2M combines shore-based software and on-train equipment to deliver alerts of faults as they occur for effective condition based maintenance. Communicating with the maintenance depots in real time, it allows for efficient fault diagnostics, and work scheduling by the maintenance team. Furthermore, by analyzing irregularities of individual components and their behavior across the entire fleet, it allows maintenance actions to be performed to potentially avoid future failures.



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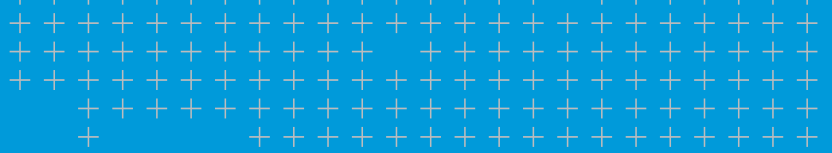
One of Irish Rail's main issues was a technical obstacle in accessing the data on the train and Trimble was able to overcome this with the Trimble R2M remote diagnostic system. Irish Rail have been so impressed with the Trimble system which has been rolled out across the Hyundai DMU 22000 fleet that they will be rolling it out across more of their fleets in time.



TRIMBLE R2M SYSTEM

Trimble R2M system for remote diagnostic monitoring

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RESULTS

The system provides Irish Rail with the ability to plan for maintenance by automating manual tasks such as counting and recording the hours until engine maintenance is required. This reduces man hours as previously the mileage had to be manually counted.

Reports are generated daily from the Trimble R2M system such as air conditioning reports from the trains. This reduces the maintenance costs as workmen no longer need to inspect each carriage on a daily basis.

Reports can be configured to the customer's own specifications and the type of data extracted from the train can also be configured.

“Trimble’s real-time remote diagnostic system has been successfully rolled out across our intercity railcar fleet. This has resulted in significant maintenance savings, incident prevention and recovery, and improved operational efficiencies.”

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