



# VIPER INNOVATIONS

## UK-Based Technology SME Supports Rail Operators with CP7 Challenges



Real-time data insights are visible on the CableGuardian Web Portal, enabling remote condition monitoring of assets

Reviewing the High-Level Output Statement from the Secretary of State for Transport, laying out the desired objectives from Government to the Office of Rail and Road for Control Period 7, it is clear that the industry will be challenged to deliver outstanding performance, accessibility for all and world-class environmental management. All while improving efficiency, operational effectiveness and ensuring a solid underpinning of safety management.

The big picture states that rail will play a prominent part in the levelling-up and green agendas for the UK will be very welcome across the industry and society-at-large. Twin this with strong statements on creating supply chain stability, SME spend and the visibility of project pipelines, there is much to be positive about. It cannot be ignored, however, that there is a significant portion of the document given over to the need to modernise and drive ever-greater efficiency into the system.

Strong statements on the need to improve long-term asset sustainability will undoubtedly drive improved punctuality and provide the financial efficiency required for a world-class railway. Strong collaboration with local authorities will move towards delivery of a timetable that meets local needs and will cement the devolved railway's regional relationships. R&D will be hard-wired to the objectives in the HLOS and will be delivered collaboratively between academia, industry

and the Rail Safety and Standards Board. This will be monitored using a data-driven, closed-loop approach of the effectiveness of innovation expenditure – with this statement on demonstrable benefit giving an indication of where the industry will need to apply efforts in the next control period.

Viper Innovations welcomes the objectives set out in the HLOS and the spirit of continuous improvement that the document is undoubtedly striving for. Driving forward modern maintenance and asset management practice and contributing fully to a team-based approach to a data-driven railway is in Viper's DNA. The requirement to demonstrably deliver forward-thinking asset management and innovation, best-in-class safety performance with excellent value for money mirrors our vision of the rail industry.

Viper's CableGuardian system is already delivering vastly improved safety, huge efficiency improvements and significant delay minute savings in CP6 and will deliver even more in CP7 and beyond. The unique technology and proactive service model has provided a never-before-seen opportunity to gain an insight into this most critical of railway assets – signalling power supplies. Viper's malleable technology and collaborative service model fits perfectly into both the spirit and requirements specified in the HLOS, providing the user a ready-made opportunity to deliver the railway we all need moving forward, whilst also offering the opportunity to contribute to UK PLC as an exportable system.

Signalling power failures are a key asset, accounting for a vast amount of delay minutes, whether these are caused by cable theft, impact damage, rodent ingress, design issues or age and environmental degradation. These failures directly oppose all of the aspirations from the HLOS requirements.

Viper has worked collaboratively with Network Rail to implement this technology and is supporting a change in company standards to enable working practices to be made more efficient and develop a product and service providing asset insights to really improve railway performance. Underlying asset problems have been identified months before becoming a service-affecting issue, and failure modes not previously detectable are now being monitored and prevented. A change in standards would eliminate the need to perform a wide range of expensive and intrusive manual trackside



*Installation of CableGuardian units can be completed in under an hour without the need to power down*

tests. This collaboration is moving the UK rail industry into a new era of predict-and-prevent maintenance on a critical railway asset.

With respect to asset management, presently, renewals are done across a wide area based on information collected about the asset in a snapshot every 5 years, costing millions every year. This asset information can be seriously flawed as weather and transient conditions can affect the asset at the time of testing, giving a skewed view of asset condition and meaning too much of the asset is renewed.

CableGuardian allows the asset engineer to minimise the scope of renewals to individual elements of the system by continuously monitoring all cables, switchgear and transformers, providing a clear and accurate picture of asset condition. This is enabling spot renewal rather than system renewal, fundamentally changing the asset management landscape for future control periods.

Through its collaboration with clients, Viper Innovations is making fundamental improvements across the board. Exceed your CP7 targets and join regions up and down the country who are already seeing the proven benefits of this outstanding UK technology.

Click [here](#) to find out more.

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**CableGuardian** is a Network Rail approved Tier 3, Tier 2 and Tier 1 cable monitoring system as specified in NR/L2/SIGELP/27725 – Insulation Monitoring and Fault Location Systems for use on Signalling Power Systems.

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