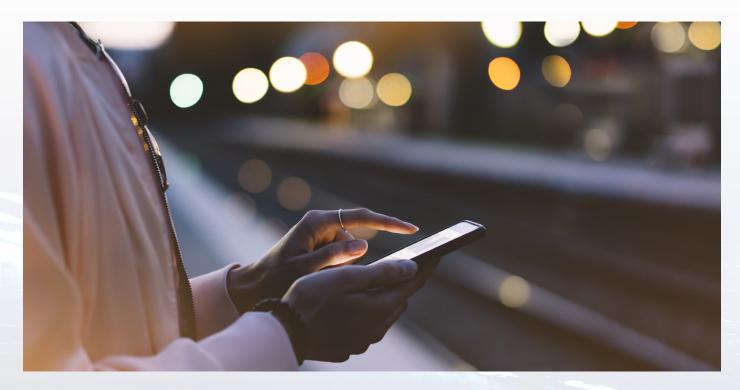🏠 **Directory**

Data & Monitoring

Nomad Digital

Nomad Digital – Championing the Digital Train

Nomad Digital is a world-leading provider of passenger, fleet management and monitoring solutions to the transport industry.

Partnering with train and freight operators, rolling stock owners and train builders, Nomad Digital brings its systems architecture and integrator capabilities to provide modern processing, monitoring and connectivity solutions.

Understanding the potential value of data collected from rail journeys, Nomad Digital also supports operators in achieving operational efficiencies through real-time fleet monitoring, utilising artificial intelligence (AI) and machine learning expertise. This supports the development of proactive rail maintenance strategies with robust rail connectivity and edge processing at the core. Providing operators with in-depth fleet intelligence for data-driven decision-making can help tackle operations and maintenance challenges early, thus preventing costly fleet downtime.

Nomad Digital also offers extensive infrastructure monitoring solutions with a powerful onboard data centre (ODC), providing edge processing capabilities to report on 'events' detected by onboard monitoring systems.

For the Whole Journey

Passengers seek more than just a journey that gets them from A to B; they want to feel comfortable and

in control when using public transport. Seamless connectivity and other value-added services, all easily accessible in a safe and connected environment, are now simply part of an expected service for passengers. With this in mind, Nomad Digital focuses on developing innovative, AI-supported solutions to meet ever-evolving industry demands for a fully connected, end-to-end passenger experience, supporting Mobility-as-a-Service (MaaS) initiatives.

Nomad Digital stands at the forefront of the modern-day landscape of rail services, with connectivity at the heart of everything. The rollout of 5G connectivity across all projects being an example of this. The integration of Nomad's products and services into the on-train environment improves the passenger journey and delivers efficient technology, both operating on one common platform. Nomad Digital aims to add intelligence to what were once passive fleet sensors, eradicating the need to rip and replace.

Integrated & Scalable Solutions

Among all of the available solutions within Nomad's portfolio its offerings include:

- Fleet & rail connectivity
- Trackside networks
- Real-time reporting
- Real-time fleet management
- Security-as-a-Service
- Wi-Fi & internet access
- Remote online condition monitoring
- Onboard data centre
- CCTV
- Engage Portal
- Passenger & on-board information systems
- Mobile engineering applications
- Infrastructure monitoring solution
- 5G network

The Future of First-Class Connectivity

Improved utilisation of available data and extracting more value from existing onboard and wayside sensors is vital to the future of rail and public transport. Harnessing more insights from existing data sources and filling gaps with AI techniques will help build passenger and operator confidence. From a passenger perspective, they will be alerted when issues have

arisen along their journey and will be aware of alternative options which may not necessarily be using a traditional mode of travel, such as e-scooters. Operators can detect potential issues with their rolling stock or the infrastructure they operate on and be able to act before service-affecting failures occur.

Increased edge processing will make the reliance on data transmission less demanding, with only event data sent. Connectivity will improve with the rollout of 6G networks but will also see satellite connectivity become a viable alternative with the development of new phased array antennas, LEO satellite constellations and falling data costs.

The latest innovative communication solutions, which include trackside radio networks, can revolutionise the rail industry by providing a flawless, uninterrupted connection for the end consumer and long-term use cost savings for rail operators.

Every indicator suggests an increasing demand and higher expectation from rail passengers for fast, consistent and reliable Wi-Fi communications during their journeys. Although introducing 5G technology for the train-to-ground link has improved this, a strong argument remains for a private trackside radio network for when the digital experience of passengers becomes a priority.

Leading the Way in Connected Transport

As rail industry requirements continue to evolve, Nomad Digital is committed to the development of innovative industry leading solutions to champion the digital train becoming a reality.

Scalable Onboard 5G Connectivity in an Ever Connected World

Innovative solutions to enhance your passenger experience and fleet management

Nomad Digital has over 20 years of experience in providing proven connectivity solutions and continues to innovate to meet that growing demand.

experts@nomad-digital.com |

Nomad Digital
connected transport, intelligent solutions