IoT Solution to Build Safer, Smarter and More Efficient Rail of the Future

Intelligent, real-time business decisions with our IoT solution optimizing rail asset efficiency and availability while ensuring worker and passenger safety.
Leverage the Power of Digitalization to Optimize Performance

Cyient offers a comprehensive, data-driven, safety and operational performance solution that collects relevant information through sensors from physical assets and analyzes the processed data to generate actionable insights and enable intelligence-driven business decisions. This combined with our rail-specific Cybersecurity offering allows us to co-secure cyber and physical safety in rail. Our IoT-based solution helps rail OEMs and operators achieve their core objectives along four key themes as shown below.

The Cyient Edge

**Engineering & Process Knowledge:** With three decades of experience in engineering spanning various safety critical industries, Cyient has a wide competency range available in-house and a strong partnership ecosystem that enables us to cater to a diverse set of requirements and to provide solutions leveraging best-in-class technology and industry standards.

**Customized IoT Solution:** Our solutions for asset tracking, asset condition monitoring and ensuring worker safety can be tailored to solve your unique business challenges — either as an end-to-end solution, spanning the “assess to enable” life cycle or as discrete data analytics services.

**Rail Expertise - Internet of Trains:** IoT in rail requires a tailored approach as key enabler for a successful solution implementation. Our rich domain knowledge, based on 16+ years and 20 Mn+ hours of experience across rolling stock and signaling assets, enables us to understand key operational challenges and develop a solution customized to meet your requirements.

The End-to-End Value Chain of Our IoT Solution

Our robust, data-driven solution can be applied to rolling stock, signaling and infrastructure assets and spans the complete rail value chain — from requirement identification to data capture, processing and analytics. Our flexible IoT Edge Gateway family is capable of collecting data from multiple sensors, supports multiple RF connectivity options, and can integrate with existing network protocols. Perform edge computing for real-time analytics or aggregate, process and run advanced analytics in the cloud.

As an example, Cyient’s comprehensive and proven **Prognostics Health Monitoring Solution** for rolling stock, addresses the eight critical subsystems of a train such as doors, bogies, braking or HVAC. This solution helps predict service affecting failures, compute remaining useful life, and optimize maintenance tasks, helping transition into condition based maintenance.