

RailBlazer Railcar Telematics

Moving Railcar Telematics Beyond the Basics

Railcar location is only the starting point. The real value comes from knowing what is happening to the car, its condition, and which exceptions require action.

Built on Trilogical's 30 years of IoT experience, 18 years in railway applications, and large-scale global deployments monitoring thousands of mobile assets, RailBlazer combines RailPulse-aligned visibility with load status, weight estimation, impact severity, wheel-flat detection, track-level location, geofencing, ETA visibility, and intra-train event communication.

That broader operating view helps customers move from basic asset visibility to exception management, maintenance prioritization, claims evidence, utilization insights, and more efficient operating decisions.



What Sets RailBlazer Apart

RailBlazer captures higher-value railcar signals and turns them into actionable information.

RailBlazer Differentiator	Practical Difference	Why It Matters
Track-Level Location Visibility	RTK-based positioning identifies the specific track or facility location of a railcar, with up to 5 ft accuracy.	Reduces time spent finding cars, confirming placement, resolving yard exceptions, and coordinating switching or terminal moves.
Load / Empty / Partial Status + Weight Estimation	Adds loaded, empty, or partial status and 5-10% estimated load weight to location, geofencing, and ETA data.	Improves shipment visibility, car availability decisions, utilization analysis, RTM tracking, pipeline visibility, and load-related exception review.
Impact Monitoring with Load Context	Captures peak impact events within 50 milliseconds, calculates force in KIPS, and evaluates severity against the car's load condition.	Helps prioritize inspections, support claims review, identify damaging events, and separate routine handling from higher-risk impacts.
Wheel-Flat Detection Without Trackside Sensors	Uses AI-driven vibration analysis to detect wheel flats in real time, with 85% accuracy for flats under 2 inches.	Enables earlier maintenance awareness, more targeted inspections, and better prioritization before defects create larger service disruptions.
Intra-Train Connectivity	Uses a proprietary mesh network to connect railcars and the locomotive, communicating critical railcar events without relying only on cellular coverage.	Improves real-time event awareness in limited-coverage areas and enables faster response to train integrity, car, cargo, or End-of-Train events.

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Where the Business Case Starts

The strongest use cases often start with the teams already dealing with car-location uncertainty, exception handling, claims exposure, maintenance prioritization, or shipment visibility.

- **Yard and Terminal Execution** - Locate cars faster, confirm placement, detect movement with the handbrake engaged, and reduce yard-level uncertainty.
- **Impact and Claims Evidence** - Identify damaging events, understand severity, and support inspection or claims review.
- **Maintenance Prioritization** - Detect developing wheel-flat conditions, focus attention on cars most likely to need action, and support maintenance cost reductions of up to 30%.
- **Load Status, ETA, and Utilization** - Improve

visibility into loaded, empty, and partial-load cars, using geofencing and ETA visibility to support shipment decisions, pipeline visibility, fleet utilization, and RTM tracking.

- **Critical Event Awareness** - Communicate car-, cargo-, train-, and End-of-Train exceptions when cellular-only reporting may be delayed or unavailable.

Built for a Practical First Deployment

A RailBlazer pilot is built around a real operating problem, not a generic telematics trial.

RailBlazer can be deployed on a defined group of railcars, in a selected yard, facility, lane, or operating environment, to evaluate one or two priority outcomes. RailBlazer is designed to make the first deployment straightforward:

Deployment Factor	RailBlazer Approach
Certification / railcar fit	Designed for AAR-compliant railcar applications; S-2045 certified; RailPulse certification in process
Installation	10-minute installation with no wiring required
Infrastructure	No trackside infrastructure required
Railcar compatibility	Compatible with all major railcar types
Battery life	Up to 6 years of battery operation, depending on configuration and operating conditions
Battery service	10-minute in-service battery replacement
Maintenance burden	Requires zero maintenance
Pilot focus	Structured around a measurable operating outcome, not a generic device trial

By the end of the pilot, RailBlazer gives customers a practical view of which data matters most, where it improves daily operations, and how to evaluate a broader rollout.

See What Your Railcars Have Been Missing

RailBlazer turns connected railcars into a source of

actionable operating intelligence, helping customers locate cars faster, understand load status, trace impact events, prioritize maintenance, and reduce uncertainty across daily operations.

When visibility gaps lead to wasted time, uncertainty, or delayed action, RailBlazer helps turn car-level data into clearer operating decisions.

Explore a focused RailBlazer pilot with Trilogical. [Go to Website](#) 