

Automating Safety Intelligence Across 21,000 Miles of Rail



Real-Time

PTC braking event analysis vs. days of manual review

Automated

Compliance report generation at every braking event

Zero

Manual root-cause reviews, fully replaced by Xtrack

SERVICES

- AI / Machine Learning
- Cloud Architecture
- Data Engineering

TECHNOLOGY

- Xtrack Platform (OCI)
- AWS Cloud Infrastructure
- Machine Learning Pipeline
- Natural Language Processing

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THE CHALLENGE

Railroad operators must meet strict regulatory standards for safety monitoring, including detailed analysis of Positive Train Control braking events. For CSX Transportation, investigating each event required a manual root cause analysis process that consumed significant time and delayed operational adjustments across the network.

Object Computing developed Xtrack, an automated analytics platform that processes large volumes of operational logs, applies machine learning to identify root causes, and generates compliance reports automatically, transforming a weeks-long process into a real-time operation.

Operations teams now receive insights immediately, enabling faster adjustments that improve network performance and safety oversight at scale.

THE SHIFT

BEFORE Manual, labor-intensive root-cause analyses for PTC braking events causing operational delays and regulatory risk across the network.

AFTER Automated, real-time identification of braking root causes and instant generation of compliance reports at every event.

BRIDGE Xtrack — OCI's AI and cloud platform that processes PTC log data at the full scale of a national rail network.

WHAT WE BUILT

FEATURES AI and cloud-based Xtrack platform with built-in machine learning for automated root-cause analysis of PTC log data at network scale.

ADVANTAGES Automates the processing of extensive log data and compliance report generation, removing human error and manual labor entirely from the review cycle.

BENEFITS Ensures strict regulatory compliance and enables faster operational adjustments for a leading freight railroad operating at national scale.



Engineered to **evolve.**

Three decades of mission-critical systems, engineered for performance and agility.

Let's Talk - hello@objectcomputing.com