Connected Vehicles

Harnessing the power of data to optimize operations and enhance decision-making for a leading connected vehicles company in North America

Client
Connected Vehicles

Location
North America

Featured Partners

databricks

A leading North American connected vehicles company needed to better utilize its rapidly growing data to drive operational efficiency and enable proactive, data-informed decisions. Their existing systems were fragmented, which slowed down insights and limited visibility across critical operations. Marlabs partnered with them to design and deliver an end-to-end data modernization initiative that consolidated infrastructure, automated pipelines, and enabled near-real-time analytics.

The project resulted in improved decision-making, reduced operational costs, and increased data trustworthiness. Through a collaborative and phased implementation, the client now benefits from a robust and scalable data foundation that supports their long-term innovation strategy.

Data Strategy

Data Platform Modernization

Advanced Analytics & Visualization

Data Governance & Quality

The Challenge: Overcoming data silos to unlock operational insight

Objective: Establish a single source of truth to improve decision-making and enable future innovation.
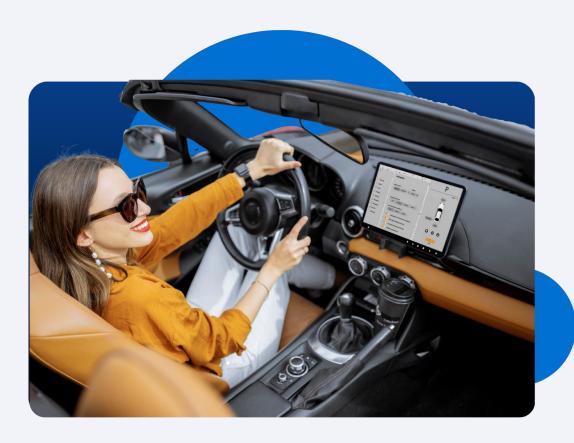
Existing Issues: Fragmented data sources and manual reporting limited operational visibility and efficiency.

Solution Needed: A modern, cloud-based data platform with automated ingestion and unified reporting.

Outcome: A scalable data ecosystem that supports proactive operations and strategic growth.

The client was operating in a complex ecosystem of connected vehicle services and needed to overcome data silos and inefficient legacy systems to fully realize the value of their data assets. Rapid growth and evolving market needs highlighted the urgency of scalable, unified data infrastructure.

The Solution: Building a scalable, cloud-native data foundation

Marlabs delivered a comprehensive solution that combined cloud migration, automation, and real-time analytics. The team followed a phased roadmap that ensured minimal disruption while accelerating value realization across business functions.

Phase 1: Discovery & Roadmap

We conducted a detailed assessment of existing systems, business goals, and data flows.

Workstreams:

- Infrastructure evaluation
- Data source inventory
- Business use case alignment

Phase 2: Cloud Architecture & Migration

We designed and deployed a cloud-native platform on AWS to centralize data assets.

Workstreams:

- Platform architecture
- Secure data migration
- Storage optimization

Phase 3: Pipeline Automation & Integration

The team built automated and scalable pipelines for seamless data ingestion and transformation.

Workstreams:

- Pipeline development
- Source system integration
- Real-time data flow

Phase 4: Analytics Enablement & Governance

We enabled self-service analytics and established governance to ensure data quality and access control.

Workstreams:

- Dashboard configuration
- Role-based access
- Quality monitoring

Services and Technologies Used:

Services:

- Data Strategy
- Data Integration
- Data Architecture and Engineering
- Data Governance
- Advanced Analytics
- IoT
- AI-Powered Analytics
- AI

The Results: Impact on the client organization

The partnership between Marlabs and the connected vehicles company resulted in a high-impact digital transformation of their data capabilities. With a centralized, automated, and governed data platform in place, the client now benefits from better insights, faster decision-making, and a scalable foundation for future innovation.

Operational Efficiency: Automated pipelines reduced manual reporting and accelerated insight delivery.

Data Quality & Trust: Central governance policies improved confidence in data-driven actions.

Improved Decision-Making: Real-time dashboards empowered stakeholders with actionable insights.

Scalability & Flexibility: Cloud architecture enabled seamless scaling and support for new use cases.

Cost Savings: Consolidated infrastructure and automation led to measurable cost reductions.

Innovation Analytics Enablement: A modern data foundation unlocked advanced analytics and experimentation.