L&T Technology Services

Unified Vehicle Data Platform for Connected Mobility

Enabling secure vehicle-data access, commercial data products, and ecosystem integration

CASE STUDY



engineering intelligence

EXECUTIVE SUMMARY

A global automotive OEM needed to unify connected-vehicle data across multiple brands and make it securely accessible to business users, developers, and ecosystem partners.

L&T Technology Services developed a cloud-native vehicle DataHub that enabled secure data access, commercial data products, partner integration, consent management, and regulatory compliance through a unified platform.

CLIENT CHALLENGE

The client's connected-vehicle data landscape spanned multiple automotive brands, vehicle data sources, digital services, and partner requirements. The client needed a centralized platform that could make this data consistently accessible while supporting different commercial and regulatory use cases.

The platform also had to provide secure access to static and dynamic vehicle data, simplify partner onboarding, manage user consent, and comply with evolving data-sharing regulations without limiting the continued development of new data products and services.

ENGINEERING COMPLEXITY

01

Creating a Unified Data Model

Vehicle data originated from multiple brands and connected systems, with differences in data structures, availability, and service definitions. The platform needed to present this data through a consistent access and consumption model.

02

Managing Data Ownership, Consent, and Access

Vehicle-data consumption involved multiple stakeholders, including vehicle users, business customers, developers, and ecosystem partners. Each interaction required appropriate identity, authorization, consent, and access controls.

03

Operationalizing Vehicle Data as Products

Raw telemetry and connected-vehicle data had to be transformed into usable static and dynamic data products that could be securely discovered, accessed, and integrated into external applications and services.

04

Transition without Disruption

The platform had to transition from an incumbent provider while supporting live data services, ongoing product development, and partner integrations. LTTS needed to rapidly establish delivery ownership, stabilize the platform, and consistently meet defined performance parameters.

OUR SOLUTION

LTTS Team designed and developed a centralized, cloud-native vehicle DataHub for managing, accessing, and commercializing connected-vehicle data across brands.

The platform integrated vehicle-data processing, commercial data products, secure Application Programming Interfaces, developer and partner services, consent management, and regulatory capabilities within a unified ecosystem.



Centralized Multi-Brand DataHub

Built a centralized platform with a unified interface and access model for connected-vehicle data across multiple automotive brands and vehicle platforms.



Cloud-Native Data Processing

Developed cloud-native microservices and event-driven processing capabilities to ingest, manage, and deliver telemetry and connected-vehicle data at enterprise scale.



Commercial Data Products

Developed static and dynamic data products covering charging, battery State of Health, Vehicle Identification Number, mileage, traffic, and hazard information.



Secure Application Programming Interface Layer

Built and managed secure Application Programming Interfaces to make vehicle-data products discoverable and consumable by authorized users, applications, and partners.



Developer and Partner Ecosystem

Designed and developed the DataHub and Application Programming Interface portal for standardized partner onboarding and secure third-party integration. LTTS also performed architecture gap analysis, implemented platform-wide enhancements, and supported homologation across brands and vehicle platforms.



Identity, Security, and Consent Management

Implemented Identity and Access Management, Open Authorization 2.0, OpenID Connect, Application Programming Interface security, and user-consent controls to govern vehicle-data access.



Regulatory Compliance Enablement

Embedded capabilities supporting alignment with the European Union Data Act, Motor Vehicle Block Exemption Regulation, and Catena-X requirements for vehicle-data access and ecosystem participation.



Continuous Platform Engineering

Established Development, Security, and Operations practices, Continuous Integration and Continuous Delivery pipelines, platform-engineering capabilities, and Artificial Intelligence-assisted engineering to support enterprise delivery and continued expansion of data products.

BUSINESS OUTCOMES

- **6+ brands and multiple vehicle platforms** supported through a unified vehicle-data access and consumption model.
- **168M+ vehicles** are supported through scalable connected-vehicle data services.
- **100+ vehicle data points** made available for static and dynamic services, including charging, battery health, mileage, traffic, and hazard information.
- **20+ commercial data products, APIs, and ecosystem integrations** enabled through standardized access and secure partner onboarding.

THE EI EDGE

L&T Technology Services transformed a fragmented, multi-brand vehicle-data landscape into a unified platform for secure access, productization, and ecosystem consumption.

By combining connected-vehicle domain knowledge with cloud engineering, data-product development, security, consent management, and regulatory enablement, we developed a scalable foundation for commercial vehicle-data services. The platform connected vehicle data with developers, partners, and business users while supporting continuous expansion of the connected-mobility ecosystem.



This collateral includes AI-enhanced imagery

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ENGINEERING THE CHANGE

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