

SUCCESS STORY

GEN- AI Aftersales

Transforming Aftersales Diagnostics Through AI-Guided Repair Planning

Company Name

FUSO

Industry

Automotive

Location

Japan

Impact

Helping technicians diagnose faults and plan repairs faster through a Generative AI-powered aftersales platform

Application

FUSO Portal

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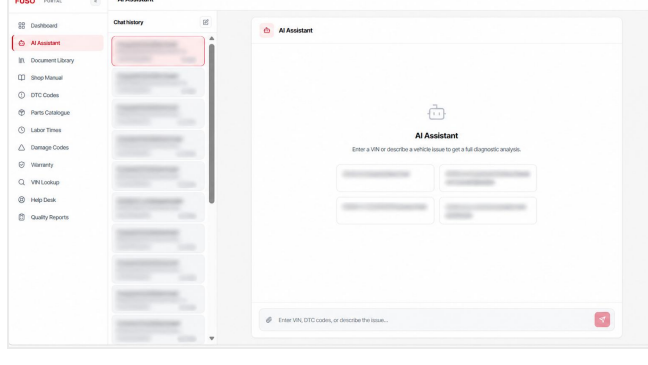
A CASE STUDY

Connecting vehicle intelligence, technical documentation, and repair data to enable faster, more reliable aftersales decisions

Background

Mitsubishi Fuso Truck and Bus Corporation (MFTBC), known for its FUSO brand, is a Japanese commercial vehicle manufacturer headquartered in Kawasaki, Japan. The company manufactures light, medium, & heavy duty trucks, buses, & industrial engines for customers around the world. Aftersales service, which covers maintenance, troubleshooting, parts identification, & repair, is a key part of its business. Each of these tasks needs accurate, vehicle-specific information at the time of service.

FUSO had this information, but it was hard to bring together. To solve this, FUSO partnered with Cubastion to build the FUSO Portal, a Generative AI platform that combines shop manuals, parts, damage codes, and labor details in one place. It helps technicians go from a reported fault to a repair plan in a single guided workflow.



Problem Statement

FUSO's aftersales technicians need accurate, vehicle-specific information to diagnose faults and repair vehicles. The problem was not missing information, but the effort needed to collect it. The details for a single repair were spread across several sources, and technicians had to find and match them manually. FUSO wanted one guided workflow that links diagnosis, parts, and labor estimates, while leaving the final decision with the technician.

Solutions

AI-Assisted Vehicle Diagnosis

Cubastion built a Generative AI Assistant that identifies the vehicle from its VIN and accepts a fault code or a plain description of the problem. It lists possible causes based on the shop manual, and the technician confirms the one that fits.

Vehicle-Specific Repair Guidance

Once the cause is confirmed, the assistant shows inspection, removal, and installation steps from the right shop manual for that vehicle.

Parts Identification and Labor Estimation

The solution links each repair to the vehicle's parts catalogue, part codes, Falcon damage codes, and flat-rate labor operations with estimated hours. Technicians can move from diagnosis to repair planning without extra lookups.

Unified Technical Reference Library

A single portal with Microsoft sign-in gives direct access to shop manuals, DTC codes, parts catalogue, labor times, damage codes, warranty information, VIN lookup, and quality reports.

Help Desk Support

Technicians can raise a Help Desk ticket from the assistant. The vehicle details, question, and AI response are added to the ticket automatically.

Responsible AI Framework

Used Retrieval-Augmented Generation (RAG) to base every answer on approved shop-manual content, with the technician confirming the probable cause. This keeps responses accurate and reliable.

Scalable Enterprise Architecture

Built a layered, cloud-based platform that can be easily maintained and extended as new documents, data, and features are added.

Challenges Faced

Business Challenges

• Technical Information Spread Across Multiple Sources

Shop manuals, parts catalogues, fault code lists, Falcon code references, and labor files were all kept separately. Technicians had to check several of them to understand one vehicle issue.

• Fault Diagnosis Dependent on Individual Expertise

Finding the likely cause of a fault meant reading diagnostic codes, understanding symptoms, and choosing the right repair procedure. This relied heavily on the technician's experience.

• Diagnosis Disconnected from Repair Requirements

After finding a faulty component, technicians still had to look up its parts, damage codes, and labor operations in other sources that were not linked.

• Inconsistent Access to Technical Knowledge

Finding the right information depended on each technician's own skill, so the process varied from person to person.

Technical Challenges

• Fragmented Data Sources and Complex Mapping

Vehicle details, manuals, diagnostic codes, parts, Falcon codes, and labor operations were not linked. They had to be mapped together so that one query could return vehicle-specific results.

• Data Availability & Standardization

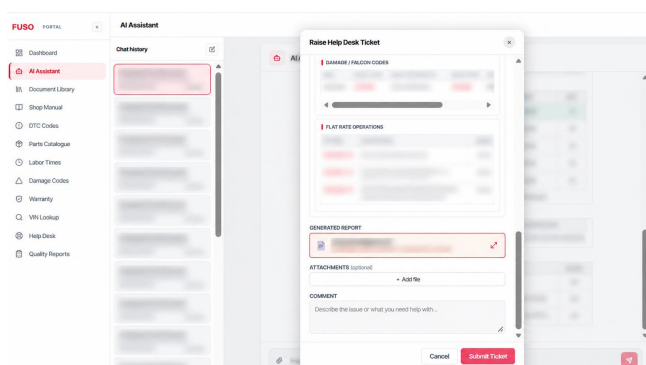
Some data was missing, and some arrived in formats that could not be used directly. Extra work was needed to find the gaps, organize the data, and build reliable links.

• Grounded & Reliable AI Responses

The assistant needed to understand the vehicle and base every cause and procedure on the correct shop manual, rather than give general answers.

• Evolving Business Requirements

Expected outputs were not fully clear at the start. Regular reviews with FUSO were needed to define how the assistant should handle different faults, link causes to parts, and show repair information.



Business Outcomes

Unified Technical Information Access

7 → 1 Portal

Seven separate references consolidated into one portal, so every technician works from the same VIN-mapped shop manuals, DTC codes, parts, damage codes, labour times and warranty information.

Faster Issue Resolution

80%+

Reduction in time to find repair information, from 25 minutes to under 5, with AI-retrieved answers delivered in seconds.

Time Saved Per Technician

220 hrs

Reduced manual searching and cross-referencing saves each technician about 1 hour a day, or 5 working weeks every year.

Quicker Repair Turnaround

30-60min

Reduction in diagnosis and repair-planning time per repair, returning vehicles to service sooner and making better use of workshop resources.

Improved First-Time Fix Rate

Fewer Repeats

Repair decisions grounded in the correct shop manual and parts data resolve more faults first time and improve service quality.

Key Areas of Expertise Demonstrated

• Enterprise Generative AI Solutions

Built enterprise Generative AI solutions that turn complex domain knowledge into easy-to-use, conversational support for specialist teams.

• Human-in-the-Loop AI Design

Designed AI experiences that keep experts in control of key decisions, balancing automation with trust & accountability.

• Data Engineering & Knowledge Integration

Brought together scattered, inconsistent, and incomplete data into one connected base for AI.

• Domain-Driven Solution Delivery

Turned changing business needs into working features through regular reviews with stakeholders, keeping solutions aligned with real workflows.

• Enterprise Platform Development

Built secure, scalable, cloud native applications with enterprise sign in, system integration, & containerized deployment.

ABOUT CUBASTION

Cubastion helps global companies run their mission critical systems and operations while modernizing IT, optimizing data architectures, and ensuring security and scalability across platforms. Some of the world's largest companies and Indian Public Sector Undertakings trust Cubastion to deploy services to drive new levels of performance, competitiveness, and customer experience.

Over 18 years, Cubastion has built solutions that impact over 500+ million people around the globe working in different demographics across different cultures. Learn more about Cubastion at www.cubastion.com

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